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TEACHERS' PERCEPTIONS AND TEACHING EXPERIENCES ON DISTANCE EDUCATION THROUGH SYNCHRONOUS VIDEO CONFERENCING DURING COVID-19 PANDEMIC

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ABSTRACT

This study aims to investigate perceptions and teaching experiences of the teachers on the distance education during the Covid- 19 pandemic. The case study design was applied in this study. This study was carried out with 15 teachers. The data was obtained through a semi-structured interview form. For analysis, the content analysis was conducted. According to the results, most of the teachers perceived distance education as a technology-oriented process rather than a new teaching model. Engagement of students had a key role in teachers' satisfaction. The teachers kept traditional teaching techniques during distance courses. For the teachers distance education was less successful than formal education because of lack of communication and interaction quality. Perceptions affect behavior and the quality of distance education applications affects the perceptions so, determining the perceptions of the teachers and

taking the necessary measures in this direction is crucial to enhance quality of the system.

Keywords: Distance Education, Teacher, Online Teaching, Video Conferencing, Synchronous

INTRODUCTION

The pandemic has spread all over the world, and it has affected humanity regardless of nationality, level of education, revenue or gender. Social, economic and political life has been impacted owing to precautions taken by governments to prevent the spread of the outbreak (Callaway, Cyranoski, Mallapaty, Stoye, & Tollefson, 2020). Definitely, the education sector was no exception. As the societal disruptions from COVID-19 spread, there is a question for every country, what about education? In an attempt to cut off the spread of the pandemic, most countries including Turkey, China, Italy, Spain and Japan (Handoyo, 2020) around the world have closed educational institutions for a limited time, which have impacted over 90% of the world's student population (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020).

SOLUTIONS FOR CONTINUITY OF EDUCATION DURING THE COVID-19 PANDEMIC

During this crisis, children and young people need to continue their education process somehow. The world leaders have taken urgent steps for continuity of education. For continuity of educational institutions, it is an undeniable fact that there is no better option than distance education. To abate impacts of school closures and provide educational opportunities for students and teachers at home, education should be maintained for everyone through distance education (UNESCO, 2020). Schleicher (2020) stated that we could

mitigate the impact of pandemic on education for students, parents and teachers by reshaping education and curricula through open online educational resources and digital learning platforms, digital learning; in other words we could switch from school environments to digital environments. On the other hand, it is possible the school closure during Covid outbreak may expand learning disparities for students who do not have equal opportunities. The technological possibilities of countries and readiness of students and teachers to learn and teach online have been one of the most important problems in this process. The results revealed by the OECD's Programme in International Student Assessment (PISA) in 2018 showed education systems of the most countries were not at the desired level to provide online education for students, which the evidence promotes the potential for opportunity gap in education during the Covid-19 pandemic.

Most countries worldwide have identified several solutions so as to continue the education process such TV broadcasts, online libraries and video lectures as during the pandemic (Basilaia & Kvavadze, 2020). For example, in China, COVID-19 epidemic broke out, in order to reduce the impact of the pandemic on teaching, Chinese Ministry of Education declared school closure until the spring of 2020 and initiated the teaching process for students' online learning and encouraged teachers to be active in process (Cheng, 2020). The process was regarded as "School's Out, But Class's On" during the postponed period (Cheng, 2020). Colleges and universities began to design and implement online teaching system as a result of urgent decisions made by education departments at all levels and they carried out the large-scale long-distance web-based teaching activities via web based teaching resources to students and national cloud platform (Zhang, 2020). Argentina has provided online teaching materials. In Belgium, educational programmes have been broadcasted. With the slogan "My class at home" virtual classes have been formed in France. In Hungary, education has switched to digital platform. In

Italy which the pandemic has damaged badly, the ministry of education has provided video tutorials and virtual meeting places for students and teachers (OECD, 2020).

To prevent the spread of the Covid- 19 pandemic to educational institutions and mitigate its effects on teaching, Republic of Turkey Ministry of National Education (MONE) suspended all types of education until April but has prolonged until beginning of May. MONE encouraged the teachers, students and parents by declaring “Not holiday distance education”. MONE has shifted the education process from traditional to distance learning via online platform and TV broadcasts on “Digital Education Platform (EBA)”. In response to school closure, MONE has also designed some TV channels called “EBA TV”. The curriculum from elementary to high school has been broadcasted on EBA Elementary School TV, EBA Secondary School TV and EBA High School TV and also online portal by using EBA. Towards the end of April, MONE has taken action for synchronous online (Zoom) teaching. It is the first time for teachers to teach online and take part in distance education (MONE, 2020).

DISTANCE EDUCATION

The definition of the term “distance” cannot be limited only by being far away from the teaching environment like school since the majority of students in distance education are close to their schools and can access teaching materials through electronic media. That’s why “distance” in physical sense is not an essential factor in the perspective of education (Rumble, 2019). Kaya (2002) regarded distance education as a discipline which provides lifelong education for anyone who wants to solve the inequality of opportunity, as well as contributing to the realization of a number of individual and social goals of education and based on self-learning. Uşun (2006) defined distance education

as a planned and systematic educational technology application. Moore and Kearsley (2011) used the term “distance education” instead of “distance learning and teaching” because education was more comprehensive term that including both learning and teaching in accordance to just learning or teaching and according to Moore and Kearsley (2011), distance education was both teaching and learning process that take places in the separation in space and time; requires elements of interaction via use of technologies. Distance education can also be defined as the transmission of information electronically to a remote place via satellite, video, sound, computer, multimedia technology and similar tools, or as an education system where the teacher and the student are located in different places (Tuncer & Tanaş, 2011). Given all the definitions above, it is seen that the concept of distance education emerges as leaning and teaching model in independent of time and space and provides educational opportunities through technologies.

ENHANCING QUALITY OF DISTANCE EDUCATION

To enhance the quality of distance education, it is necessary to determine objectives and content of education programs, teaching strategies and responsibilities of learners through the process as well as technology for delivery of knowledge. The strategic plan including answers of the questions “to whom, what, why and when” requires collaboration and coordination among teachers, students and principals of the educational institutions (Andrade, 2020). As the corner stone of distance education, teachers and learners should be ready to take part in the process. The factor can be called as “readiness”. The concept of readiness relates to stakeholders in the distance education system and refers to experience and knowledge in use of technology and the extent to which stakeholders benefit from technology and the use of ICT in this process. In order to be successful in distance education, Gök (2015) stated that the instructors should be adequately prepared with the teaching

strategies and techniques required to teach and conduct effective distance education courses / programs and the students should need to take their own responsibility for distance learning. It is necessary to determine what kind of courses and content will be given, as well as how the trainings will be designed. Human interaction, technical problems such as audio, picture and internet are also crucial for effectiveness of distance education. Birişçi (2013); Grant and Cheon (2007); Turgut (2011); Woods (2005) pointed out technical problems during distance education process had negative impacts on students' views on distance education and pull their motivation down. Another factor that enables learning in distance education is interactive process (Thamarana, 2016). Like the presentation phase of distance education, which course materials are designed and delivered, the phase "interaction" between teachers and students is critical as well. The quality of interaction can change in accordance with subject, content, age group of students and technology preferences as synchronous and asynchronous (Moore & Kearsley, 2011). Tuncer (2007) stated there were problems in distance education due to teacher qualities such as preparing quality materials in distance education, creating appropriate learning environments, communication and presentation. The findings of Marsh, Mitchell, and Adamczyk (2010) suggested the factors such as sound, image, communication problems, low interaction, body language used by teachers and duration of lessons in distance education process affected students' perceptions of distance education.

VIDEO CONFERENCING IN DISTANCE EDUCATION

Synchronous conferencing offers two way of communication; students and teacher hear each other (Oranburg, 2020). For better video conferencing, it is essential to consider the quality of video and audio, official time, teaching strategies, and opportunities for face-to-face meeting (Grant & Cheon, 2007). In the literature, there are some studies which concluded positive and negative

results of video conferencing related to interaction, success and views of students and teachers. These studies proved that video conferencing had positive effect on education (Candarli & Yuksel, 2012; Turgut, 2011); improved potential of interaction (Pattillo, 2007); increased attitude of students (Townsend, Demarie, & Hendrickson, 2001); on the other hand; video conferencing in distance education negatively affected students' attitude due to technical problems like audio and visual (Candarli & Yuksel, 2012) and it didn't enable students and teachers to have effective teaching and learning (Knipe & Lee, 2002).

The Purpose of the Research

The teachers are key players to effectively implement distance education. Perceptions affect behavior, so determining teachers' perceptions is also important for effective distance education (Miglani & Awadhiya, 2017). The quality of distance education applications affects the perceptions about distance education (Demirli, 2002). Determining the perceptions of the teachers and taking the necessary measures in this direction are crucial to enhance quality of the system (Birişçi, 2013). The implementation with video conferencing (online live) in primary, secondary and high schools has been put into practice for the first time, that's it is the first experience for most teachers. For this reason, teachers' perceptions should be determined and the system should be evaluated in order to make the applied system more convenient. This study aims to evaluate teachers' perception of distance education; teaching experiences (use of material and lesson preparation), stakeholders' responsibilities, readiness and technological competencies of teachers and effectiveness of distance education. It is thought the conclusions will shed light on distance education applications to improve the teachers' success, motivation and eagerness and to organize in-service training activities for teachers on distance education tools and practices. In this study, the

research question is “What are the teachers’ perceptions and teaching experiences on distance education through video conferencing?” The sub-research questions are:

1. How do teachers define the concept “Distance Education”?
2. What are the technological readiness (knowledge, skill and attitude) levels of teachers in response to distance education?
3. What are teachers’ motivational profiles to engage in distance education?
4. What are teachers’ opinions about behaviors and attitudes of the stakeholders?
5. How do behaviors and attitudes of the stakeholders affect teachers’ satisfaction with distance education?
6. What are teachers’ opinions about their technological pedagogical knowledge?
7. What are the opinions of teachers about the effectiveness of distance education they implemented?

METHOD

RESEARCH DESIGN

The case study in qualitative research methods was conducted in this study. A case study research involves the examination of a topic that is explored in one or more cases (i.e. an environment, a context) in a limited system and it is qualitative research method in which researchers make in-depth research about an event, activity, process or individual (s) and describe the situation as it exists (Creswell, 2007). Case studies may be used when enquirers aim to seek an in depth understanding of a social phenomenon and be interested in “how, what and why” questions (Ellinger, Watkins, & Marsick, 2005).

RESEARCH GROUP

In the process of selecting sample of this study, convenience sampling strategies was applied. In convenience sampling, while determining sample of this study, one can access to individuals who are conveniently available, easily and fast (Patton, 1990). During outbreak of the pandemic, interviews were carried out by video conferencing due to social distance restriction. The 15 teachers who have delivered distance course via video conferencing (zoom and live chat) participated in this study. Patton (1990: 184) stated that qualitative researches' sample size is determined in accordance to the purpose, what will be useful and credibility; what can be done with the time and resources inquirers have; that's why there is no formula for a sample size in qualitative researches. The participants were coded as "P1, P2, P3....P15".

DATA COLLECTION TOOL

The semi structured-interview was applied as data collection tool in this study. The semi-structured interview includes both questions with fixed options and open-ended questions to go deeply in the relevant field; but not a formalized list of questions. With opportunities for the interviewees to express themselves the respondent has the right to revise and edit the questions partially (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017; Sönmez & Alacapınar, 2016). The data collection tool was created on six themes teachers' perceptions of distance education, technology readiness, behaviors and attitudes of stakeholders, teachers' motivational profiles, technological pedagogical knowledge and effectiveness of distance education. The data collection tool is presented in Table 1.

Table 1: The questions of the semi structured interview

Questions	Structures
1. In which words do you explain the thoughts that distance education arouses in you?	Perception of distance education
2. Your level of knowledge and skills in using ICT and making use of distance education technologies; Can you evaluate how experienced you are with the process?	Technological readiness
3. What motivates you to take part in distance education?	Motivational Profiles
4. What are the behaviors and attitudes of your institution and stakeholders like teachers, students and parents you work with for the distance education process? To what extent have these attitudes and behaviors affected your satisfaction with the distance education process?	Stakeholders' behaviors and attitudes; teachers' satisfaction
5. What kind of preparations do you conduct in order to create a highly productive lesson environment in the distance education process in distance education?	Technological pedagogical knowledge
6. What do you think about your level of knowledge and skills regarding the use of technologies specific to your field in creating an effective lesson environment in the distance education process?	

7. Would you evaluate the level of achievement Effectiveness of of the targeted students' target behaviors Distance according to the face-to-face education Education environment? What are the plus or minus aspects? In your opinion, what aspects of distance education are the main reasons that make up this difference?
-

In the process of the interview form, the related literature was investigated and then the interview form was developed in the light of these studies. The experts' explicit instructions were taken so that construction validity of the interview form was ensured. The interviews were carried out online by using videoconferencing systems because of the pandemic and simultaneously recorded into digital platform (laptop or desktop).

DATA ANALYSIS

Before data analysis, audio taped interviews were transcribed in order to work with data easily by means of NVIVO 11 program. The identities of individuals were concealed and code numbers were given to each individual. Content analysis method was used to analyze the data obtained from these interview texts. In this analysis, the content of the document is examined, then the data is categorized; upper and lower classifications are made (Sönmez & Alacapınar, 2016). By analyzing the data obtained from the interviews with the content analysis, the codes were created first and then the similar codes were brought together and categories were created. So as to get accurate and reliable findings, coding and categorization process was carried out several times by an expert.

FINDINGS

In the interviews, firstly the question “In which words do you explain the thoughts that distance education arouses in you? was asked and the findings obtained from the analysis of the answers given by the teachers to this question are presented in Table 2.

Table 2: Teachers’ Perceptions of Distance Education

Theme	Sub-themes	Participants	<i>f</i>
Teachers’ perceptions	Support Education	P2, P11, P14, P13	4
	The necessity of technology	P4, P15	2
	Continuing the education process	P1, P9	2
	Technology based education	P10, P4, P5, P8, P1, P13,	6
	Learning without feelings	P3, P6, P8	3
	Keeping in touch with the students	P5, P7, P12	3

When Table 2 was analyzed; teachers’ perceptions on the concept “Distance Education” were represented by 6 different codes: "Supporting for students' educational processes, necessity of technology, continuing education process and technology based education, learning without feelings, keeping in touch with the students". It was seen that distance education was perceived as a support education in the education process of the students by 4 of the participants, as necessity of technology by 2 participants, as continuing the education process by 2 participants, as processing technology-based education by 6 participants, as learning without feelings by 3 participants and as keeping

in touch with students by 3 participants. The teachers' perceptions of distance education are as follow:

“I regard distance education as a lesson that can be taught for reinforcement. It can be used for reinforcement.” [P2]

I think of it as reinforcement training besides formal education. It is utilized as reinforcement training for formal education” [P11].

“The first thing that comes to my mind in this process is to be in need of technology. A period when technological pedagogical knowledge came to the fore” [P15]

The opinions of the teachers on their knowledge and skills in ICT and in utilizing distance education technologies in the distance education process; attitudes towards distance education and how they are experienced are presented in Table 3.

Table 3: Teachers' technological readiness for distance education

Theme	Sub-themes	Participants	<i>f</i>
Teachers' technological readiness	Being ready for distance education	P1, P2, P5, P9, P10, P12, P14, P15	8
	Being unready for distance education	P3, P4, P6, P7, P8, P11, P13	7
	Having no technological devices	P4	1
	Feeling uneasy about distance education	P4, P7, P11	3

Having prior experience in distance education	P1, P12, P15	3
Having inexperience in distance education	P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P13, P14	12

According to table 3, 12 of the teachers expressed that they had no experience in distance education neither as a teacher nor as undergraduate students but 3 of the teachers stated that they gained experience as undergraduate student in the past. When investigated the indicators in relation to teachers' level of technological readiness for distance education, more than half of the teachers (8) expressed that they were ready for the process both technology and knowledge and skills how to apply digital platform but 7 of the teachers were not. One of 7 teachers expressed that s/he did not have technological hardware like laptop and desktop. Other opinion was to feel uneasy in the beginning of the process; 3 teachers had difficulties in getting accustomed to the change and that's why they felt uneasy and worried about the process. Some expressions of the teachers are presented from their answers below one to one quotations.

"I am keen on usage of technology. I've done different things before. I did online practice tests for my students; analyzed the results and shared with my students. I have never done an online synchronous video conference lesson before. However, I have recorded my courses and shared but this is not synchronous. My readiness for the process was high." [P12]

"I had no experience before. I am not very good in terms of knowledge and skill." [P3]

“When the process started, our readiness was not very high, it was about 25%. We did not foresee such a thing in advance. 4 weeks have passed since the process started. The readiness is now 50% because now we have learned how to use programs.” [P6]

“It is the first time that distance education has been employed at the primary level. That’s why I was not very ready for distance education.” [P8]

“At first, I was not ready, I was hesitant and anxious. I was not ready. I am not good at computer technology, but I learned by doing it. I think that I am better now. My motivation has increased since the process started.” [P7]

“This is the first time I have been doing distance learning. It is my first experience. I am technically novice. I don't have a laptop, for example. I have lack of knowledge. I did not know how to share screen in the first lesson. At first, my readiness was zero.” [P4]

To identify the teachers’ motivational profiles to engage in distance education, the question “What motivates you to take part in distance education based synchronous video conferencing?” was asked in the interview. The motivational profiles of teachers obtained from the answers are presented in Table 4 below.

Table 4: Teachers’ motivational profiles to engage in distance education

Theme	Sub-themes	Participants	<i>f</i>
Teachers’ Motivational Profiles	New technological software in education	P1	1
	Relieving exam anxiety for senior students	P4, P5, P11, P14	4

Ensuring the continuity of education	P1, P2, P3, P4, P6, P9, P10, P11, P12, P14, P15,	11
Relieving psychological distress of students	P2, P4, P8, P13, P14	5
As a matter of conscience	P3, P7, P12, P14, P15	5

According to Table 4, ensuring the continuity of education (11) came to the forefront among other motivational profiles the teachers explained. Other given motivational profiles are as below respectively, relieving psychological distress of students (5), as a matter of conscience (5), relieving exam anxiety for grade 8 students (4), and new technological software in education (1). The expressions of some teachers are as follows.

“Indeed, it is a new technology and an inevitable technology. It will be used in every field soon. These technologies will be an integral part of our lives, so these kinds of technologies increase my motivation. That the students engage in education during pandemic and also increase success and their awareness motivates me. Besides, new technologies motivate me.” [P1]

“Requirements of being a teacher motivate me. What will children do? Minimizing anxious of children who will take the exam “LGS” and not leaving children alone in this process motivates me.”[P14]

“In this process, I aim to provide the continuity of education for my own students in their education. I want them to facilitate their education at home and keep in touch with them. I encourage them

to take part in education process in order to continue their education.” [P14]

“The feeling of standing by the students pushes me to give lessons. There is no obligation to ask whether you have completed or not...” [P4]

“I have about 80 students who are all very good and successful students and we have known each other for three years. Before we started distance education, we had been in communication through what’s up. The fact that students are successful and we have known each other for a long time motivates me. I can’t ignore my students. I am conscientiously involved in the process.”[P12]

To determine the views of the participants’ about the behaviors and attitudes of their institution (school) where they teach and stakeholders like teachers, students and parents they have cooperated with for the distance education process, question 4 was asked to the participants. The findings are presented in Table 5 below.

Table 5: Students, parents, school and teachers’ behaviors and attitudes

Theme	Sub-themes	Participants	f
Behavior s and attitudes	Attaching importance to the process	P9, P10, P11, P4	4
	School Attaching no importance to the process	P14, P2, P3	3
	Student Having a positive attitude	P14, P10, P12, P13, P3, P4, P7,	7

	Having a negative attitude	P15, P9, P11, P2, P13, P6, P5, P8	8
Parents	Giving support to the process	P14, P10, P12, P3, P4, P7, P1, P13	8
	Giving no support to the process	P15, P9, P11, P2, P6, P5, P8	7
Teachers	Cooperating	P12, P3, P12,	3
	Not cooperating	P15	1
	Promoting my job satisfaction	P14, P10, P3, P4, P7, P1	6
	Lowering my job satisfaction	P15, P11, P13, P2, P6, P5, P8	7
	Not changing my job satisfaction	P9, P12	2

In regard to the school, only 7 participants gave their opinions but the rest did not have a comment on the school's behaviors and attitudes. Among 7 participants, the majority stated that their schools attached importance to the process and fulfilled their responsibilities for employing distance education effectively. However, 3 participants stressed that their schools remained passive and did not care about the process. With relation to students' behaviors and attitudes towards distance learning, the participants stated the students had a positive attitude towards distance courses and attended actively to the courses (7); on the other hand, majority of the participants (8) explained that the students had a negative attitude and they did not attend classes at the desired level. On parents' attitudes and behaviors, it was seen that the number of parents who supported and cared for the process was higher than the number of parents who did not support and ignored the process. In this sense, 8 of the participants emphasized that the parents displayed a positive attitude, while 7

participants expressed the opposite opinion. The least mentioned of these sub-themes was about teachers' attitudes and attitudes. Only 4 participants expressed their opinions about their colleagues. While 3 of these participants stated that they cooperated with other teachers, 1 participant stated that they did not cooperate. The rest did not mention anything clearly about teachers they work with. Some of the statements about stakeholders are as follows:

“First, parents' attitude is shocking me. I created what's up group with parents. I included the parents, but they left the group. I wanted them to take part in the training. The parents' economic level is low. Parents do not want to hear anything about the education of their children. The number of participant is about 9-10. Students' perspective is much better than parents. I do not know teachers' attitude, since I could not meet with teachers much. However, we collaborate with teacher friends outside the school.”[P15]

The administration is doing their best for the system and they support the process. Students do not show much interest. The number of participants is low. Some students have technological problems and the rest do not want to attend. I think most of them are reluctant. Those who do not have the internet cannot also enter the system. Parents are not very active. They do not support the process. I think they are very uninterested.”[P11]

The attitudes of parents and students do not satisfy me. The number of participants is not satisfactory but it derives from technological infrastructure I think this is not an excuse. However, I think this is not the same in every school. Older students are less reluctant than younger students. I think the socioeconomic level is

a crucial factor. The number of participations is related to age of students.”[P7]

“The school administration is making official notifications. Parents are trying to support the process as much as possible. Even if the students have an interest, most students can’t attend lessons because of the technological possibilities. The technological knowledge of parents is also effective. They want but they can't enter. The number of students who has computer and internet is low.” [P9]

“We have kept in touch with teachers via what’s up since the process started. Most teachers are unwilling and the reason can be technical connection problems. The process started very fast, we were unprepared. There are not many materials to use in EBA. I think students’ parents are not very sensitive. If parents had been supportive, participation would be higher now. Students are unwilling.” [P6]

The teachers’ opinions on the extent to which the attitudes and behaviors of the stakeholders affected their satisfaction are presented in Table 5 above. In accordance with the teachers’ views, it was identified that 6 of the participants was positively affected by the stakeholders. They stated parents’ support, positive attitudes of students; school administrations’ devotion improved their satisfaction with the distance education process. On the other hand, some participants (7) were negatively affected by stakeholders and they stated that stakeholders’ behaviors and attitudes towards the process lowered their satisfaction with distance education. 2 of participants explained they disregarded stakeholders’ effects on their satisfaction and the event did not change their satisfaction. Some of the expressions about satisfaction are presented below:

“Parents' attitudes lower our motivation. Even if there was a student, I would do the same thing, but if we had obtained a respond from the students, it would be a better process now. Education level and socioeconomic level of parents is a direct factor.” [P15]

“The willingness of the students enables me to be more eager and I try to prepare better.” [P10]

“The more the number of students increases, the more I teach enthusiastically” [P4].

“This does not affect my motivation. Even if there was a student, I did my lesson with the same motivation.” [P12]

The next question is about their level of technological pedagogical level and how to prepare for course on videoconferencing platform. In this sense, two questions were asked to the teachers. The teachers' views are in Table 6 as follow.

Table 6: Technological pedagogical levels of teachers

Theme	Sub-themes	Participants	<i>f</i>
Teachers' Technological Pedagogical Level	Using visual sources	P14, P9	2
	Creating presentation in Powerpoint	P15, P7, P8, P1	4
	Using interactive book	P15, P9 ,P11, P12, P13, P4, P6, P5, P7, P1	10
	Preparing my own notes	P2, P3	2

Having knowledge and skills on how to employ the technologies	P15, P9, P10, P12, P2, P5, P8, P1	8
Being inadequate to use technologies for comprehensive education	P14, P11, P13, P3, P4, P6, P7	7
Being suitable for my branch	P2, P6, P7, P8	4
Being unsuitable for my branch	P10, P11, P2, P4, P6, P12	6

According to table 6, using interactive book came first among materials the teacher applied during preparation process. Other views are as below in turn, creating presentation in PowerPoint (4), preparing my own notes (2) and using visual sources (2). For teachers' technological pedagogical level, the majority of the teachers (8) stated that we had required knowledge and skills on how to employ the technologies for efficient and effective online course. But, 7 teachers stated they were inadequate for technological usage and untrained. 6 of the teachers pointed out their branches were unsuitable for distance education and they had difficulties in preparing materials and teaching. These were numerical field teachers. 4 of the participants revealed that they had no problems in teaching because their fields did not include problem solving and numerical problems. Some statements from the teacher opinions are as below:

“I give importance to remarkable teaching materials. I have lots of textbooks and pdf sources and I use them as well as presentations. I benefit from the videos on the internet. I can

actually access more effective resources than the opportunities in the school. I can offer multiple media.” [P1]

“I don't think the lessons are very efficient because it is necessary to write constantly, Math is not a verbal lesson which you teach verbally. I trying to use a mouse like a pen and it is very difficult. Usually the lesson is carried out by question and answer teaching method, and it displeases the students. I usually use pdf and z books in the process. I think video conferencing is not very suitable for the education process my field has” [P11]

“If I had a graphic tablet, I would use it. I regard myself as adequate to use technologies for education but we just have lack of hardware.” [P2]

I cannot design any materials. I use readymade teaching materials like Z books and Pdf resources. I use interactive resources. In preparation, my field is appropriate but not difficult. The application can be done in some way. It's easier when we compare English with Math.”[P]

I consider my technological pedagogical competence is sufficient. However, the zoom is newer to me. In my own lesson, it is very difficult to solve the problem solution. “[P12]

In question 7, it was aimed to learn teachers’ teaching experiences in distance education process and their views on effectiveness of distance education. For this purposes, “Would you evaluate the level of achievement of the targeted students' target behaviors according to formal education? What are the plus or minus aspects? What aspects of distance education are the main reasons that make up this difference?” were asked to the teachers. Teachers’ opinions are presented in Table 7 below.

Table 7: Comparing effectiveness of distance education with formal education

Theme	Sub-Themes	Participants	<i>f</i>
Comparing effectiveness of distance education	Distance Education is ineffective	P9, P10, P3, P6, P5, P7, P8, P1, P14, P12, P4, P13, P2	1 4
	Fail to make eye contact	P14, P15, P11, P13, P6, P7, P8, P1	8
	Ineffective communication	P14, P9, P11, P2, P6, P5, P8	7
	Ineffective Classroom Management	P14, P9, P2, P3, P6, P5, P7, P8	8
	Not getting feedback	P15, P10, P11, P12, P3, P7	6
	Impossible to learn by doing	P13, P4	2
	Internet Access	P2	1
	Both are effective	P15	1
	As support education after pandemic	P9, P12, P13, P4, P7, P1	6

According to Table 7, the majority of the teachers (14) expressed was ineffective and only one teacher stated distance education was as successful as formal education. When the reasons of failure of distance education were questioned, some teachers (8) pointed out we failed to make eye contact and 8 of the teachers stated that they had no opportunity to observe students for classroom management. Other opinions are as below respectively ineffective communication (7), not getting feedback from the students (6), impossible to learn by doing (2), internet access (1). Less than half of the teachers (6) pointed

out they could deliver distance education for reinforcement after pandemic.

Some expressions of the teachers are as below:

“The exchange of emotions such as love, resentment and anger do not take place in distant education. There is no sharing of emotions, no socialization and no socialization. Success in formal education is higher.” [P1]

“If I compare it with face to face education, the level of success in distance education is lower due to lack of communication and being unable to see them. The students see me but I do not see them during lessons. I can't make eye contact with the students. The feedback cannot be provided. Not being able to see is another factor because what is s/he doing during the lesson? I do not know.” [P7]

“It is a mistake to compare distance education and formal education. We can provide some training in distance education, but it is not a substitute for face-to-face education in terms of teaching. Lack of communication in distance education and no opportunity to observe the class at the same time lower the success. The students are physically there but they do not attend the lessons actively.” [P6]

Success is lower in distance education. The most important disadvantage is that we don't have a white board. We are not ready for distance education due to lack of hardware and equipment. 25% of students have an internet connection; it is the biggest problem, which causes inequality in education. Distance education can be used for doing practice test, but not suitable for lecturing. Students are not ready. There are some problems in terms of classroom management. I cannot see what the student is doing while I am teaching because the cam is off. We don't know

ifs /he is playing computer games. There is a problem in terms of communication. Classroom management is different from formal education. The process could worsen educational inequality.” [P2]
“It is necessary to do experiment and teaching by doing activities and demonstrating. In distance education, we only lecture on a subject. There is no sincerity and communication in distance education. That we are just exposed to hearing conversation is not enough. It is necessary to talk face to face with the child.” [P4]

DISCUSSION AND CONCLUSION

It was observed that the teachers defined distance education as "needing technology, continuing education, a callous education, communicating with students". The prominent of these answers was the technology-based training response. Distance education was regarded as a support education by some teachers; some teachers used negative expressions about distance education and a few teachers' expressions did not fully reflect on distance education. It can be said that the teachers did not consider distance education as a new method teaching but continuation of formal education. According to Kaya (2002), distance education is a separate type of education that cannot be considered as a substitute for traditional face-to-face education. It can be thought that the teachers' implementation of distance education for the first time, lack of knowledge and experience about distance education and the technical problems they faced in this process played an important role in perceiving distance education. In addition, inadequate student participation, expectations of the teachers, having difficulties in preparing and presenting materials in their own fields and being used to face to face education may be other factors that affected their perceptions of distance education. It is important to define instructor perspectives in order to perform the distance education process effectively and efficiently (Dooley & Murphrey, 2000). In

the literature, many studies suggested that teachers did not have clear information about distance education (Alakoç, 2001); the dimension of knowledge that teachers had about distance education (Ateş & Altun, 2008); lack of experience (Li, 2009); previous experiences (Şimşek, İskenderoğlu, & İskenderoğlu, 2010); factors such as voice, image and connection problems and quality of communication (Marsh et al., 2010) affected the perspectives of teachers about distance education. In this sense, the quality of distance education affects their perception of distance education (Demirli, 2002); these perceptions affect the process and the level of success (Offir, Barth, Lev, & Shteinbok, 2003).

It is crucial to evaluate the readiness of the teachers for online teaching since it plays important role in effectively delivering online education (Miglani & Awadhiya, 2017). On teachers' technological readiness (knowledge, skill and attitude) for distance education, it was concluded that more than half of the participants teachers were ready and had required ICT skills and knowledge; nearly all of them except 3 participants had no prior experiences. The participant teachers' inexperience in distance education and lack of knowledge can be main factors that determine their perspectives about distance education; so as to provide qualified distance education, teachers' perceptions should be developed and necessary trainings should be provided in pre-service training and [in-service training activities](#). The closeness and readiness of the teachers to the system during the education process is an important input of the teaching system. The necessary technological equipments and hardware and lack of knowledge should be eliminated as much as possible so that teachers develop positive perceptions of distance education. Gök (2015) stated that instructors had to have knowledge and skills required to conduct more effective distance courses.

It was observed that the most important reason for teachers to engage in the distance education process was the continuation of the usual education

process. The other motivational profile was the conscientious obligation of the teaching profession and the psychological relief of the students in this process. In this sense, it can be interpreted that the teachers did not see distance education as a new field of education in this process because they switched to distance education quickly, and they considered that distance education was equivalent to formal education and embed it as its continuation.

Bolliger and Wasilik (2009) categorized possible factors that affected teachers' satisfaction in online learning environments as students, teachers and institutional factors. In the result of this study, some teachers emphasized that students' attendance and engagement are lower than they expected, it caused dissatisfaction with distance education; some teachers stated in contrast. In relation to the institutional support, majority of the participants did not make any comments; it can be said that they had no idea what the institution had to do during the process. It is concluded that the behaviors and attitudes of parents, the institutional, students and teachers made the teachers more effective and productive and vice versa. This conclusion is in compliance with Bolliger and Wasilik (2009), students' participation and attitudes; their performances in classes; cooperation of teachers with other teachers affected teachers' perspectives on the process and their satisfaction with the process. It was observed that most of teachers emphasized they suffer from students' engagement and attitudes the most. The reason for inadequate engagement of students can be thought that socio economic level of families and potential to reach technological possibilities and support students receive from their families. The sample statements of some teachers corroborated conclusion that the extent of participation may be directly related to the socio-economic levels of the students. The socio-economic level refers to be the lack of necessary technical equipment and technical problems. Johnson (2008) pointed out students' not being accustomed to the new learning process and not having the necessary competencies for e-learning one of affected participation and

performance of the students dramatically. This suggestion is in compliance with findings of Johnson (2008).

Some studies investigating students' attitudes towards distance education in the literature revealed that students did not have a positive attitude towards distance education systems and technologies (Candarlı & Yuksel, 2012; Şimşek, İskenderoğlu, & İskenderoğlu, 2010; Ural, 2007). In the researches on synchronous distance education through video conferencing, it was stated that students' connection problems, some technical problems such as audio and video caused the students to be distracted from the lessons (Candarlı & Yuksel, 2012; Grant & Cheon, 2007; Woods, 2005). Bilgiç and Tüzün (2015) argued that low level of technological literacy and lack of technical equipment affected the students' interests in the lessons. Gürer, Tekinarslan, and Yavuzalp (2016) explained that teachers' interacting with other colleagues and the value given by teachers to the distance education and the support they give to teachers affected the satisfaction of teachers. The participants in Gürer et al. (2016)'s study, indicated that the instructors, who offered common compulsory courses online, stated that the participation, interest and performance of students in the online courses remained low. The reasons for the students' disinterest in the lessons can be seen as not having the necessary features for distance education, and being accustomed to face to face education (Golladay, Prybutok, & Huff, 2000).

On the expression of the teachers about lesson preparation for effective process, it was seen that majority of them used readymade materials and a few teachers designed original materials. Although more than half of the teachers said that we had technological pedagogical competence, the number of the teachers who designed teaching material was not substantial. The most important reasons for the situation can be the teachers' perspectives and approach, students' engagement, prior experiences, not giving up traditional teaching technique and not implementing teaching strategies and techniques

to conduct effective course. Tuncer (2007) noted the teachers experienced problems in the preparation of quality materials in distance education and the creation of an effective learning environment. Koloğlu, Kantar, and Doğan (2016) indicated that teachers implemented a new teaching method, that's why they had to make spadework and the factor that teachers kept traditional teaching techniques resulted in undesirable situations. The study by Cronjé (2001) revealed that not using effective methods in designing lessons and developing materials affected success in distance education. Lloyd, Byrne, and McCoy (2012) pointed out lack of teachers 'teaching experience in distance education and change in their usual roles frustrated teachers to design effective courses. It can be said that technicians, instructional and material support should be given to teachers for more effective distance education courses. It can be stated that pedagogical support and material support could improve performance of teachers (Lloyd et al., 2012); increasing the quality of the course materials could minimize teachers' negative thoughts (Seaman, 2009). Besides, the branches of teachers may be another reason for not preparing innovative and creative materials. The teachers in numerical lessons emphasized they had difficulties in establishing an effective educational environment due to their branches. Horzum (2003) advocated the idea that social lessons will be taught more effectively with distance education compared to science lessons.

On evaluating effectiveness of distance education, nearly all teachers pointed out distance education do not met their expectations adequately. According to Knipe and Lee (2002), distance education through video conferencing and classroom training did not offer the same quality of teaching. Majority of the teachers confirmed human interaction and communication opportunities were not as effective as face to face education. It was observed that teachers attributed the ineffectiveness of distance education to the problems caused by lack of face to face interaction between teacher and student. It was expressed

video conferencing conducted by teachers provided for synchronous listening but not watching; the students could see their teachers but the teachers could not. In spite of that, some students were reluctant to attend the class by opening audio. That's why some student remained passive; the teachers were not able to make eye contact with the students. Some teachers indicated that they did not get feedback from the students during courses. The findings are in compliance with limitations of distance education in the literature: not facilitation of face-to-face educational relations easily, preventing students from socializing, ineffective in performing behaviors related to skills and attitudes and lack of practical lessons (Kaya, 2002). McLean (2006) revealed that the lack of direct feedback and personal face-to-face communication in many online learning environments affected many teachers, and caused their interest to decrease. There are many studies in the literature expressing the deficiencies and problems in distance education. In the literature, some studies stated the main problems arising in distance education were low interaction between student-teacher and student-student due to lack of face-to-face interaction (Li, 2009; Rasheed, 2007; Woods, 2005); absence of quick feedback (Woods, 2005); technology not being used correctly and effectively. It is thought technical problems both teachers and students faced caused lack of communication. It is known that both teachers and students had problems in entering the system. Birişçi (2013) in the result of his study revealed that the students who stated that the technical problems experienced in the video conference system constituted an obstacle in the communication between the teacher and the student in the course of the lectures, and that they had some negative thoughts in the form of not being face to face with the teacher and not being motivated towards the lesson. Some studies revealed that paying attention to interaction in distance education and solving student's problems in the fastest was a variety that has a significant impact on success and distance

education in distance education. (Golladay et al., 2000; Wheeler, 2002). These conclusions fit to the findings of this study.

In conclusion, the findings showed that teachers' inexperience had an impact on teachers' perception of distance education. It was also obtained that the teachers regarded distance education as an education supporting formal education and but not as a new teaching method. Engagement of students was crucial to promote teachers' satisfaction with distance education. The teachers kept keeping traditional teaching techniques in designing lessons and developing materials. Lack of social interaction and eye-contact with students; absence of feedback lowered the effectiveness of distance education.

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INFLATION AND GROWTH WITH THE MIU APPROACH AND THE EQUATION OF EXCHANGE

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Abstract

The purpose of this paper is to study a relationship between growth and inflation on the basis of the Tobin growth model. We deviate from the Tobin approach by determining money demand with the money-in-utility (MIU) approach. The utility is affected by money holding. The utility function is applied by an alternative approach proposed by Zhang. The wealth accumulation a key determinant of economic growth. The government supplies money which is described by the traditional equation of exchange. The velocity of money is determined as a function of the rate of interest as in the Baumol-Tobin model. We build the dynamic model and simulate the motion of the model. We carry out comparative dynamic analysis in various parameters.

Keywords: inflation; Tobin growth model; equation of exchange; Baumol-Tobin model; MIU approach.

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1 Introduction

Relations between inflation and growth have been a key issue in theoretical and empirical economics. As with regards to relationship between almost any two closely related variables at any point of time. In a recent comprehensive review on the literature of the relationship between economic growth and inflation in developed and developing economies, Akinsola and Odhiambo (2017) show that researchers find varied relations between inflation and growth. They list up four conclusions from the literature: i) inflation does not have any impact on economic growth (e.g., Sidrauski, 1967a; and Cameron et al., 1996); ii) inflation is positively related to economic growth (e.g., e.g., Benhabib and Spiegel, 2009); iii) inflation is negatively related to economic growth (e.g., e.g., Friedman, 1956; Stockman, 1981; Fischer, 1983); iv) inflation affects economic growth in terms of specific thresholds (e.g., Aydin et al., 2016). The purpose of this study is to address issues related to relations between growth and inflation by building a monetary growth model with microeconomic foundation. The model is based on the quantity theory of money, the money in utility approach, and neoclassical growth theory.

This study is concerned with dynamic interdependence between growth, money, and inflation within neoclassical growth framework. The seminal contribution in the theory of monetary growth within the framework of neoclassical growth theory was published by Tobin (1965). He studies an isolated economy in which the outside money issued by the government competes with real capital in the portfolios of agents within the framework of the Solow model. The real sector is the same as in the Solow growth model. Nevertheless, money demand in the Tobin model is not built on microeconomic foundation. An approach to money demand with microeconomic foundation is the so-called money in utility (MIU) function approach. In this approach money yields some services and just directly enters into the utility function (Eden, 2005: Chap. 2). The approach was applied

initially by Patinkin (1965), Sidrauski (1967) and Friedman (1969). Since then economists apply the approach to address various issues related to money and inflation. Sidrauski (1967a) challenged Tobin's non-neutrality result. In his specified framework, he found that money is superneutral in steady state and changes in the inflation rate have no effect on all the real variables in the economy. Wang and Yip (1992) show that Sidrauski's superneutrality is invalid if leisure is introduced into the utility function. There are many other issues and models related to interactions between monetary policy and economic growth (e.g., Feenstra, 1986; Gomme, 1993; van der Ploeg and Alogoskoufets, 1994; Jones and Manuelli, 1995; Dotsey and Starte, 2000; Chappell and Matthews, 2001; Meng and Yip, 2004; and Handa, 2009; Burdett *et al.* 2017; Araujo and Hu, 2018; Boel, 2018; and Kraft and Weiss, 2019). This study is based on the MIU approach. But we deviate from the literature in that we use an alternative utility function to modeling household behavior. The rest of the paper is organized as follows. Section 2 defines the monetary growth model with wealth accumulation. Section 3 identifies the two differential equations for describing movement of the system and simulates the model. Section 4 carries out comparative dynamic analysis with regards some parameters. Section 5 concludes the study.

2 The monetary growth model with education

Many aspects of this model are similar to those in the Tobin monetary growth model (Tobin, 1965; Nagatani, 1970), except that the money demand and supply are determined with mechanisms different from those used in the Tobin model. In describing economic production, we follow neoclassical growth theory (e.g., Solow, 1956; Uzawa, 1961; Burmeister and Dobell, 1970; Azariadis, 1993; Barro and Sala-i-Martin, 1995). The economy produces a homogenous commodity. Firms use capital and labor as input factors. Exchanges take place in perfectly competitive markets. Factor markets work well; factors are inelastically supplied

and the available factors are fully utilized at every moment. The economy has two assets, money and capital stock. The household may hold two assets.

Labor supply

There is a homogenous population denoted by \bar{N} . Let $T(t)$ stand for the work time of a representative household and $N(t)$ for the flow of qualified labor services used at time t for production. We have $N(t)$ as follows:

$$N(t) = T(t)\bar{N}. \quad (1)$$

Production sector

We use a conventional production function to describe a relationship between inputs and output. There two production factors, capital $K(t)$ and labor $N(t)$, which are assumed to be fully employed. We use the following production function $F(t)$ to describe a relationship between inputs and output:

$$F(t) = AK^\alpha(t)N^\beta(t), \alpha, \beta > 0, \alpha + \beta = 1, (2)$$

in which A , α , and β are positive parameters. Markets are competitive; thus labor and capital earn their marginal products. We neglect possible money input in the production function. This implies that economic growth is attained by labor and capital (e.g., Snowdon and Vane, 2005). The rate of interest $r(t)$ and wage rate $w(t)$ are determined by markets. Hence, for any individual firm $r(t)$ and $w(t)$ are given at each point of time. The production sector chooses the two variables $K(t)$ and $N(t)$ to maximize its profit. The marginal conditions are given by:

$$r(t) + \delta_k = \frac{\alpha F(t)}{K(t)}, \quad w(t) = \frac{\beta F(t)}{N(t)}, \quad (3)$$

where δ_k is the fixed depreciation rate of physical capital.

Disposable income

We apply the concept of disposable income and utility proposed by Zhang (1993, 2005). Consumers make decisions on choice of consumption level of commodity, saving, and money holding. In this study, we follow Zhang (2008) in modeling choice of money. The preference over current and future consumption is reflected in the consumer's preference structure over education, money, consumption and saving. Money is introduced by assuming that a central bank distributes at no cost to the population a per capita amount of fiat money $M(t) > 0$. Let $P(t)$ stand for the price of money. The scheme according to which the money stock evolves over time is deterministic and known to all agents. The government (positive or negative) expenditure in real terms per capita, $\tau(t)$, is given by:

$$\tau(t) = \frac{\dot{M}(t)}{P(t)}.$$

We will provide a mechanism to determine $\dot{M}(t)$. Per household current income from the interest payment $r(t)\bar{k}(t)$, the wage payments $T(t)w(t)$, the cost of holding money $\pi(t)m(t)$, and the income from government $\tau(t)$ is given by:

$$y(t) = r(t)\bar{k}(t) + T(t)w(t) - \pi(t)m(t) + \tau(t), \quad (4)$$

where $\pi(t)$ is the inflation rate and $m(t) \equiv M(t)/P(t)$. The wage income is given by $W(t) = T(t)w(t)$. The total value of wealth of the representative household is $a(t)$ where:

$$a(t) \equiv \bar{k}(t) + m(t).$$

Here, we do not allow borrowing for current consumption. We assume that selling and buying wealth can be conducted instantaneously without any transaction cost. This is evidently a strict consumption as it may take time to draw savings from bank or to sell one's properties. The disposable income of a household is defined as the sum of the current income and the wealth available for purchasing consumption goods and saving, $\hat{y}(t) = y(t) + a(t)$. That is:

$$\hat{y}(t) = \bar{k}(t) + m(t) + r(t)\bar{k}(t) + T(t)w(t) - \pi(t)m(t) + \tau(t). \quad (5)$$

The disposable income is used for saving, consumption, and money holding.

Denote $\bar{T}(t)$ the time spent on leisure. Let the (fixed) total available time be denoted by T_0 . The time constraint is expressed by:

$$T(t) + \bar{T}(t) = T_0. \quad (6)$$

Insert (6) in (5)

$$\hat{y}(t) = \bar{y}(t) + m(t) - \pi(t)m(t) - \bar{T}(t)w(t), \quad (7)$$

where

$$\bar{y}(t) \equiv \bar{k}(t) + r(t)\bar{k}(t) + T_0w(t) + \tau(t).$$

Utility function and optimal behavior

The household's utility function for enjoying leisure, holding money, consuming goods, and making saving is represented by the following utility function:

$$U(t) = \bar{T}^{\sigma_0}(t) m^{\varepsilon_0}(t) c^{\xi_0}(t) s^{\lambda_0}(t), \quad \sigma_0, \varepsilon_0, \xi_0, \lambda_0 > 0, \quad (8)$$

where σ_0 is the propensity to enjoy leisure time, ε_0 is propensity to hold money ξ_0 the propensity to consume, and λ_0 the propensity to own wealth. This utility function is applied to different economic problems. A detailed explanation of the approach and its applications to different problems of economic dynamics are provided in Zhang (2005, 2008).

The disposable income is spent on holding money, consumption of the good, and saving. We have:

$$(1 + r(t)) m(t) + c(t) + s(t) = \hat{y}(t). \quad (9)$$

Insert (7) in (9)

$$w(t)\bar{T}(t) + \bar{\pi}(t) m(t) + c(t) + s(t) = \bar{y}(t), \quad (10)$$

where

$$\bar{\pi}(t) \equiv \pi(t) + r(t).$$

Here, $\bar{\pi}(t)$ is the opportunity cost of holding money. The consumer problem is to choose current money, leisure time, consumption, and saving so that the utility is maximized. Maximizing $U(t)$ subject to (10) yields:

$$w(t)\bar{T}(t) = \sigma \bar{y}(t), \quad \bar{\pi}(t) m(t) = \varepsilon \bar{y}(t), \quad c(t) = \xi \bar{y}(t), \quad s(t) = \lambda \bar{y}(t), \quad (11)$$

where

$$\sigma \equiv \rho \sigma_0, \quad \varepsilon \equiv \rho \varepsilon_0, \quad \xi \equiv \rho \xi_0, \quad \lambda \equiv \rho \lambda_0, \quad \rho \equiv \frac{1}{\varepsilon_0 + \xi_0 + \lambda_0 + \sigma_0}.$$

It should be noted that in the well-known Baumol-Tobin model (Baumol, 1952, Tobin, 1956; Romer, 1986), the demand for money is given by:

$$\frac{M}{P} \equiv \left(\frac{C Y}{2 r} \right)^{1/2},$$

where C is the fixed transaction cost per transfer and Y is disposable income. Our demand function is quite similar to the Baumol-Tobin model, even though they are derived from different mechanisms.

Wealth dynamics

The change in wealth is saving minus dissaving:

$$\dot{a}(t) = s(t) - a(t). \quad (12)$$

Money supply

We use $\mu(t)$ to stand for the growth rate of the money stock $M(t)$:

$$\mu(t) = \frac{\dot{M}(t)}{M(t)}.$$

In the literature of monetary economic growth theory, it is traditionally assumed that μ is a positive parameter, called inflation policy. The variable $\mu(t)$ is decided

by the government. The government expenditure in real terms per capita $\tau(t)$ now becomes:

$$\tau(t) = \frac{\dot{M}(t)}{P(t)} = \frac{\mu(t) M(t)}{P(t)} = \mu(t) m(t). \quad (13)$$

The representative household receives (or is taxed away) $\mu(t) m(t)$ units of money from the government.

From $M(t) = P(t) m(t)$, we have

$$\pi(t) = \frac{\dot{P}(t)}{P(t)} = \mu(t) - \frac{\dot{m}(t)}{m(t)}. \quad (14)$$

The quantity theory of money assumes that the general price level of goods and services is proportional to the money in circulation. Being influenced by this theory, we assume that money supply is determined so that the following equation is satisfied:

$$V(t) M(t) = P(t)c(t). \quad (15)$$

where $V(t)$ is the velocity of money. For a moment, we just consider $V(t)$ a time-dependent variable. We will consider it a function of the rate of interest. The velocity of money is a market-determined variable, which is influenced by many factors, such as inflation rate, market sizes, and technologies of transaction (Anderson, et al., 2017). The government supplies the money which the equation of exchange is satisfied. This is a simplified behavior of the government's monetary policy. There are other rules to determine behavior of the government's monetary policy. For instance, the government might directly decide the money

supply by optimizing inflation rate (e.g., Finocchiaro, 2018; and Oikawa and Ueda, 2018).

We have thus built the dynamic model. We now examine its dynamics.

3 The Dynamics of the Economic System

We first show that the dynamics are determined by two differential equations. We introduce a variable as follows:

$$z(t) \equiv \frac{r(t) + \delta_k}{w(t)}.$$

The following lemma is proved in the appendix.

Lemma

The motion of the economic system is described by the following two differential equations with $m(t)$ and $z(t)$ as the variables:

$$\begin{aligned} \dot{m}(t) &= m(t)\varphi_m(z(t), m(t)), \\ \dot{z}(t) &= \varphi_z(z(t), m(t)), \end{aligned} \quad (16)$$

where φ_m and φ_z are functions of $m(t)$ and $z(t)$ defined in the Appendix. All the other variables are determined as functions of $m(t)$ and $z(t)$ by the following procedure: $r(t)$ and $w(t)$ by (A2) $\rightarrow \bar{k}(t)$ by (A15) $\rightarrow K(t) = \bar{k}(t)\bar{N} \rightarrow M(t)$ by (A6) $\rightarrow P(t)$ by (A8) $\rightarrow \bar{y}(t)$ by (A4) $\rightarrow F(t)$ by (A3) $\rightarrow N(t)$ by (A1) $\rightarrow T(t)$

by (1) $\rightarrow \pi(t)$ by (A8) $\rightarrow c(t)$, $s(t)$, and $\bar{T}(t)$ by (13) $\rightarrow \mu(t)$ by (A6) $\rightarrow \tau(t)$ by (A13).

The Lemma is important as it tells us how to follow the motion of the economic system, given proper initial conditions. With computer it is straightforward to reveal the motion of the dynamic economic system. As the expressions are too tedious, we cannot easily explicitly interpret the analytical results. For illustration, we simulate the model. We specify the velocity of money as follows:

$$V(t) = V_0 e^{a_0 r(t)},$$

where $V_0 > 0$ and a_0 are parameters. The specification implies that if $a_0 > 0$, then the velocity is positively related to the rate of interest. A positive relation between the velocity and rate of interest is derived by Baumol (1952) and Tobin (1956).

We specify the parameter values as follows:

$$\bar{N} = 100, T_0 = 24, \alpha = 0.35, A = 1.5, V_0 = 1, a_0 = 2, \lambda_0 = 0.8, \xi_0 = 0.1, \sigma_0 = 0.2,$$

$$\varepsilon_0 = 0.01, \delta_k = 0.05.$$

The population is 100. The total available time is 24. The velocity parameter is 2. The propensity to save is 0.8. The propensities to consume goods and use leisure time are respectively 0.1 and 0.2. The propensity to hold money is 0.01. We demonstrate that with the above specified parameters, the system has a unique equilibrium point. The equilibrium values of the variables are as follows:

$$\begin{aligned}
F &= 3519.3, N = 1024.9, K = 10923.3, V = 1.134, w = 2.23, r = 0.063, \pi \\
&= 0.051, \\
m &= 13.54, \bar{k} = 109.2, a = 122.8, c = 15.35, T = 10.25.
\end{aligned}$$

The long-run inflation rate is 5.1 percent. This also implies that if the government increases money supply at 5.1 percent in steady state, the system will remain stationary. The two eigenvalues are:

$$\{-160.9, 0\}.$$

The equilibrium point is neutral. We specify the following initial conditions:

$$z(0) = 0.05, \quad m(0) = 13.3.$$

The changes of the variables over time are plotted in Figure 1. The system becomes stationary in the long term. The national output falls over time from the initial state. Similarly, the other variable variables fall, except that the consumption level rises slightly over time. The velocity of money rises in association with rises in the rate of interest. The inflation rate falls. The money change rate is negative initially and positive in the long term.

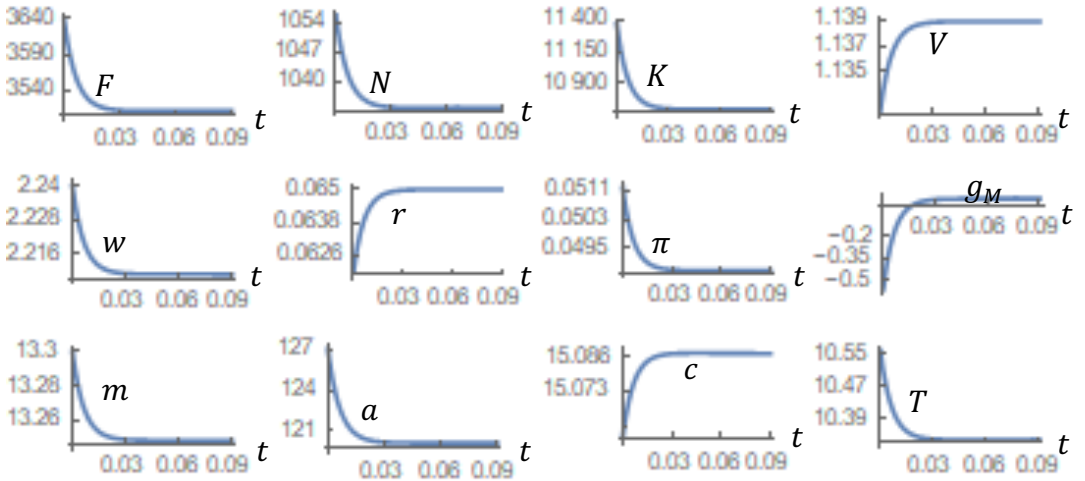


Figure 1. The Motion of the System with Money and Division of Labor

4. Comparative Dynamic Analysis

The previous section identified the equilibrium point of the dynamic economy and demonstrates that the economic system is neutral. This section examines impact of changes in some parameters on the dynamics of the system. First, we introduce a symbol $\bar{\Delta}$ to stand for the change rate in term of percentage due to the parameter change.

4.1. The velocity of money is more strongly affected by the rate of interest

We now study what happen to the economic system if the velocity of money is more strongly affected by the rate of interest as follows: $a_0 = 2$ to 2.5. The simulation result is given in Figure 2. The change values are compared with the values of the corresponding variables in Figure 1. The velocity is increased due to the change in how the rate of interest affects the velocity. The inflation rate is increased. The money change rate is increased (comparing the corresponding value of g_M in Figure 1). The household works less hours and the national labor

supply falls. The national capital and national output fall initially and rise in the long term. The wage rate is increased. The household holds more real money. The household has less wealth initially and more in the long term. The consumption level rises. We conclude that if the household's money holding more strongly reacts to the rate of interest, the macroeconomic real variables and household's wealth and consumption are improved in the long term, even though the short-run reactions are positive for some variables and negative for other variables.

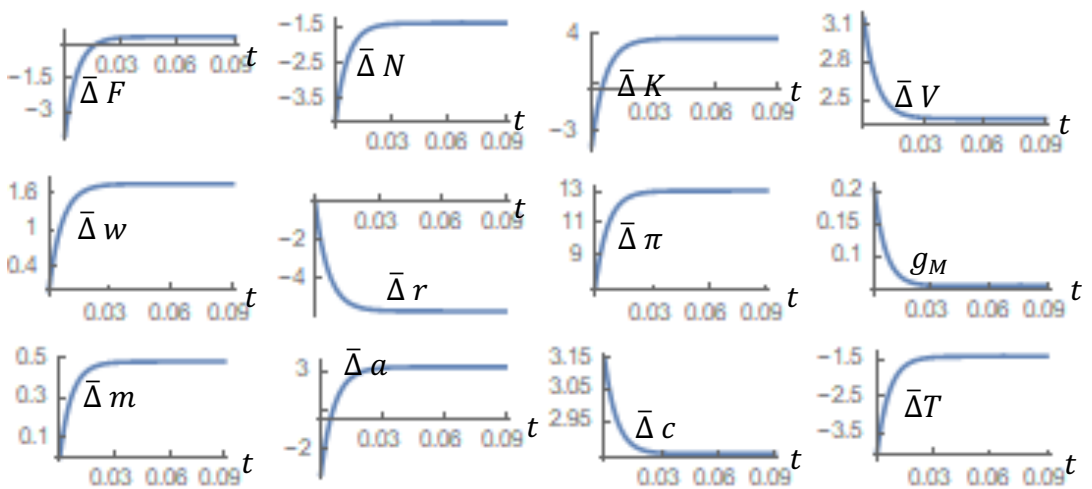


Figure 2. The Velocity of Money is More Strongly Affected by the Rate of Interest

4.2. The total factor productivity is enhanced

We now examine the impact of the following technological change: $A = 1.5$ to 1.55 . The simulation result is given in Figure 3. The national output is increased. The household works more hours and the national labor supply is increased. The national capital is increased initially but is reduced slightly in the long term. The household has more wealth initially and less in the long term. The household holds less real money. The rate of interest and velocity of money are increased. The change rate of money is slightly faster. The wage rate is increased.

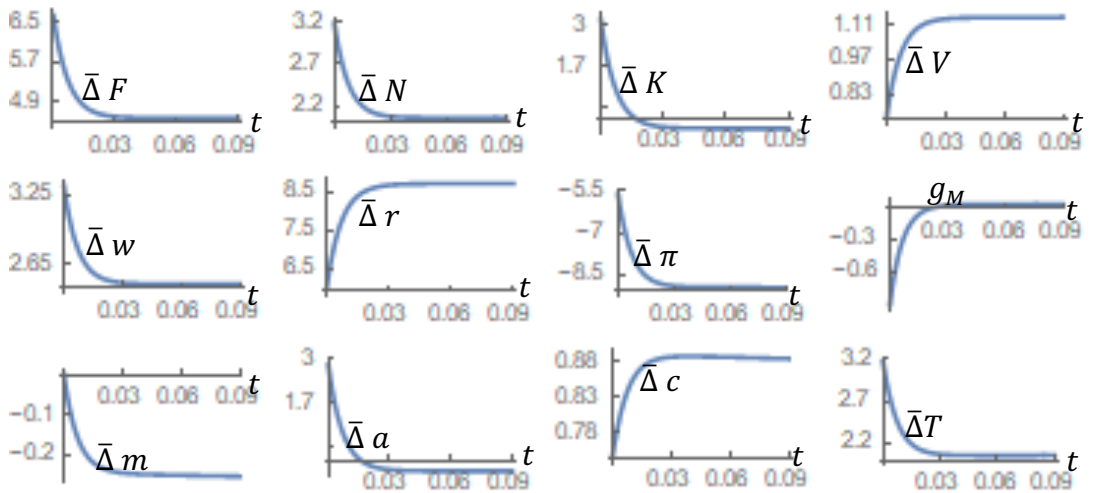


Figure 3. The Total Factor Productivity is Enhanced

4.3. The propensity to hold money is increased

We now examine the impact of the following change in the propensity to hold money: $\epsilon_0 = 0.01$ to 0.011 . The simulation result is given in Figure 4. We see that as the household desires to hold more money (with the given disposable income), the real variables in the economic system are affected, but the inflation rate and the change rate of money are changed. The wage rate, rate of interest rate, and the velocity of money are invariant.

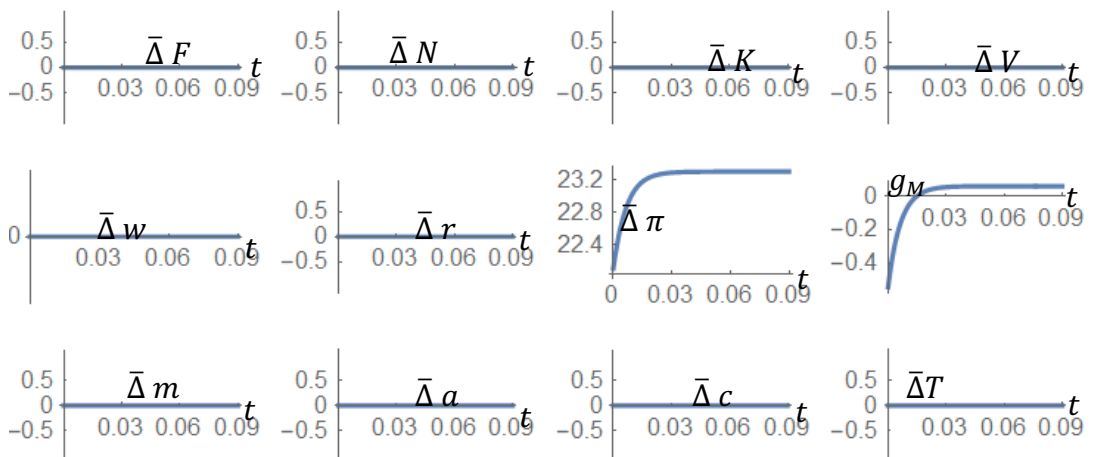


Figure 4. The Propensity to Hold Money is Increased

4.4. The propensity to save is enhanced

We now examine the impact of the following rise in the propensity to save: $\lambda_0 = 0.08$ to 0.81 . The simulation result is given in Figure 5. The household has more wealth. The national capital stock is enhanced. The national output is increased. The household works more hours and the national labor supply is increased. The household holds more real money and consume less. The rate of interest falls and velocity of money is reduced. The inflation rate is increased. The wage rate is increased. The money change rate is increased.

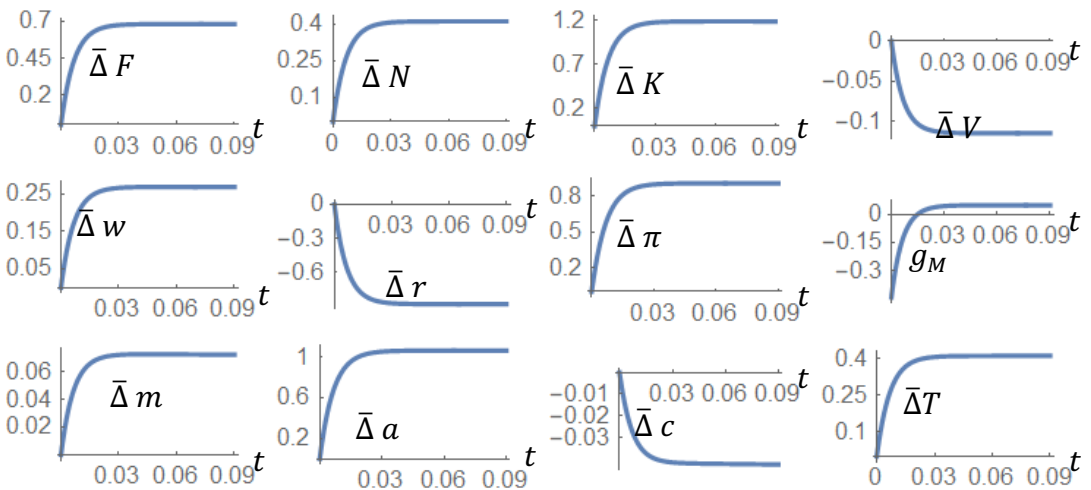


Figure 5. The Propensity to Save is Enhanced

4.5. The depreciation rate of physical capital is increased

We now study what happens to the economic system if the depreciation rate of physical capital is increased as follows: $\delta_k = 0.05$ to 0.055 . The simulation result is given in Figure 6. The national capital rises initially and falls in the long term. The household initially works more hours but does not change the work time in the long term. The national labor supply is not affected in the long term. The

output is increased initially and enhanced slightly in the long term. The inflation is increased. The rate of interest and the velocity of money are reduced. The wage rate falls. The household has more wealth initially and less in the long term. The consumption level of the household is reduced. The household holds less money.

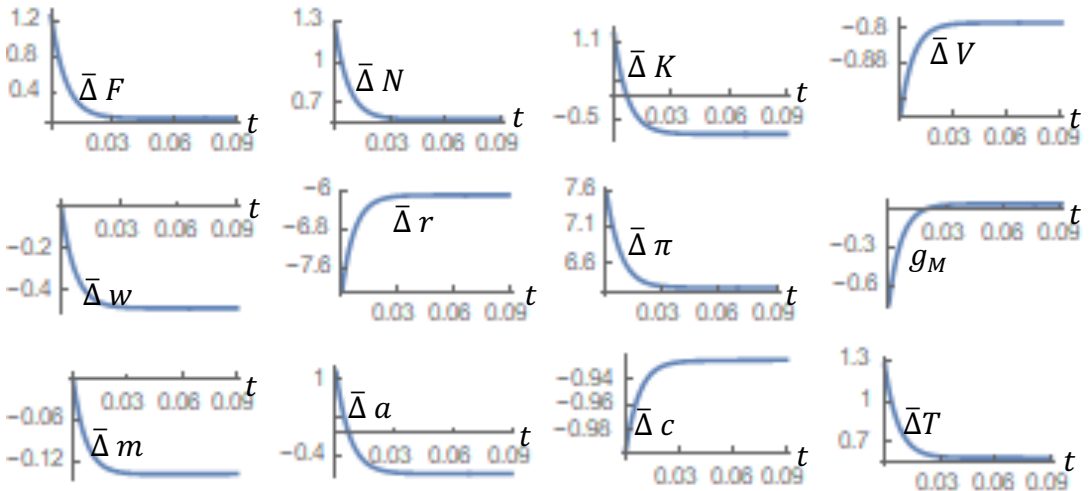


Figure 6. The depreciation rate of Physical Capital is Increased

4.6. The output elasticity of physical capital is increased

We now study what happens to the economic system if the output elasticity of physical capital is increased as follows: $\alpha = 0.35$ to 0.36 . The simulation result is given in Figure 7. The household initially works more hours. The national labor supply is increased. The national capital rises. The output is increased. The inflation rate is reduced. The rate of interest and the velocity of money are increased. The wage rate rises. The household has more wealth and consumes more. The household holds less money.

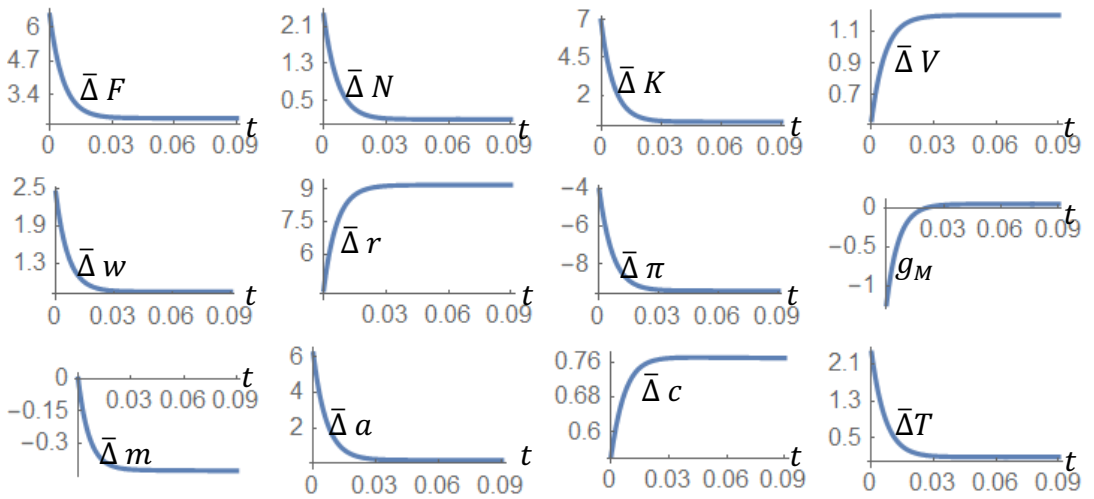


Figure 7. The Output Elasticity of Physical Capital is Increased

5. Conclusions

Following the well-known Tobin model, we introduce money in the individual saving portfolio and as medium of exchange to neoclassical growth theory. We built the monetary growth model with microeconomic foundation. Our model is based on the quantity theory of money, the money in utility approach, and neoclassical growth theory. The wealth accumulation is the key determinant of economic growth like in neoclassical growth theory. Money is introduced to neoclassical growth model by assuming that the utility is affected by money holding. The government supplies money which is described by the traditional equation of exchange. The velocity of money is determined as a function of the rate of interest as in the Baumol-Tobin model. We first built the dynamic model and then simulated the model. We also carried out comparative dynamic analysis in various parameters. Our comparative analysis provided some insights into relations between growth and inflation over the whole dynamic process rather than only with regards to the steady state as in most of the theoretical literature of monetary growth. For instance, after comprehensively and extensively reviewing

the literature of both empirical and theoretical researches on growth and inflation, Akinsola and Odhiambo (2017) show that there is an “overwhelming support in favour of a negative relationship between inflation and growth, especially in developed economies.” From the figures of the comparative dynamic analysis we see that different relations between inflation and growth are possible. Our conclusion hints on why there are some different opinions on relationships between inflation and growth. It is well known that one-sector growth model has been generalized and extended in many directions. It is not difficult to generalize our model along these lines in the literature. It is straightforward to develop the model in discrete time. We may analyze behavior of the model with other forms of production or utility functions. It is not difficult to integrate the ideas in this paper into a multi-regional economy with the Taylor rule (Zhang, 2017, 2019).

Appendix: Proving the Lemma

From (3), we obtain:

$$z \equiv \frac{r + \delta_k}{w} = \frac{\bar{\beta} N}{K}, \quad (A1)$$

where $\bar{\beta} \equiv \alpha/\beta$ and the time index is suppressed wherever no confusion. From (A1) and (3), we obtain:

$$w = \beta A \left(\frac{\bar{\beta}}{z} \right)^\alpha, \quad r = z w - \delta_k. \quad (A2)$$

We note that r and w are uniquely determined as functions of z by (A2). From (3) the definition of \bar{y} , we have

$$F = \frac{w N}{\beta}. \quad (A3)$$

From (7) we have:

$$\bar{y} = R \bar{k} + T_0 w + m \frac{\dot{M}}{M}, \quad (A4)$$

where $R \equiv 1 + r$. From (15) and (11), we have:

$$\frac{V M}{\xi P} = \bar{y}. \quad (A5)$$

From (A4) and (A5), we have:

$$\frac{\dot{M}}{M} = \frac{V}{\xi} - \frac{R \bar{k}}{m} - \frac{T_0 w}{m}. \quad (A6)$$

From (A6) and (A4), we have

$$\frac{\dot{P}}{P} = \frac{\varepsilon V}{\xi} - r. \quad (A7)$$

From (A6) and (A7), we have:

$$\frac{\dot{m}}{m} = \frac{\dot{M}}{M} - \frac{\dot{P}}{P} = \varphi_m(z, m) \equiv \frac{(1 - \varepsilon)V}{\xi} - \frac{R \bar{k}}{m} - \frac{T_0 w}{m} + r. \quad (A8)$$

From (12) and (11), we have:

$$\dot{\bar{k}} = \lambda \bar{y} - \bar{k} - m - \dot{m}. \quad (A9)$$

Insert (A8) and (A5) in (A9)

$$\dot{\bar{k}} = \lambda_R \bar{k} + (1 + \lambda) T_0 w + \lambda m \frac{\dot{M}}{M} - \left(R + \frac{(1 - \varepsilon)V}{\xi} \right) m, \quad (A10)$$

where

$$\lambda_R(z) \equiv \lambda R - 1 + R.$$

Insert (A7) and (A6) in (A10)

$$\dot{\bar{k}} = r \bar{k} + \lambda_m, \quad (A11)$$

where

$$\lambda_m(z, m) \equiv T_0 w - R m - \frac{(1 - \varepsilon - \lambda)V m}{\xi}.$$

From (11) and (6), we have:

$$T = T_0 - \frac{\sigma \bar{y}}{w}. \quad (A12)$$

Insert (A12) and (A1) in (1)

$$\frac{z \bar{k}}{\bar{\beta}} = T_0 - \frac{\sigma \bar{y}}{w}, \quad (A13)$$

where we use $\bar{k} = K/\bar{N}$. Insert (A6) in (A13):

$$\bar{k} = \varphi(z, m) \equiv \left(T_0 - \frac{\sigma V m}{\xi w} \right) \frac{\bar{\beta}}{z}, \quad (A14)$$

where we also use (A6). Take derivatives of (A14) with respect time:

$$\dot{\bar{k}} = \frac{\partial \varphi}{\partial z} \dot{z} + \varphi_m \frac{\partial \varphi}{\partial m}, \quad (A15)$$

where we also use (A8). In (A15), we do not provide explicit expressions of $\partial\varphi/\partial z$ and $\partial\varphi/\partial m$ as it is straightforward to do so but the expressions are tedious. From (A15) and (A11), we solve:

$$\dot{z} = \varphi_z(z, m) \equiv \left(r\varphi + \lambda_m - \varphi_m \frac{\partial \varphi}{\partial m} \right) \left(\frac{\partial \varphi}{\partial z} \right)^{-1}. \quad (A16)$$

Equations (A9) and (A17) are composed of two differential equations with two variables. We thus can determine $z(t)$ and $m(t)$ by (A9) and (A17). Once we determine the values of $z(t)$ and $m(t)$, we determine the rest variables by the following procedure: $r(t)$ and $w(t)$ by (A2) $\rightarrow \bar{k}(t)$ by (A15) $\rightarrow K(t) = \bar{k}(t)\bar{N} \rightarrow M(t)$ by (A6) $\rightarrow P(t)$ by (A8) $\rightarrow \bar{y}(t)$ by (A4) $\rightarrow F(t)$ by (A3) $\rightarrow N(t)$ by (A1) $\rightarrow T(t)$ by (1) $\rightarrow \pi(t)$ by (A8) $\rightarrow c(t)$, $s(t)$, and $\bar{T}(t)$ by (13) $\rightarrow \mu(t)$ by (A6) $\rightarrow \tau(t)$ by (A13). In summary, we proved the Lemma.

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CHARACTER BUILDING IN STUDENTS' DEVIANT BEHAVIOR AT SMA NEGERI 1 KUTALIMBARU, DELI SERDANG, INDONESIA

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Abstract

The objective of the research was to find out and to interpret the social construction of character building in families and schools of the students at SMA Negeri 1 Kutalimbaru, Deli Serdang. In-depth interviews were done with some informants – students, teachers, school principal, vice-principal, and students' parents. The result of the research showed that the students who got problems were usually concerned with lack of character building from their families with various reasons, and one of them is lack of social interaction between the students and their families related to economic problems. Parents usually relied on school management in their children's character building while the school provides it through subject materials. The imbalanced and disharmonious relationship between school and students' parents has caused the construction of the children's character-building to be inadequate.

Keywords: Character Building, Social Construction, School, Family, Student

INTRODUCTION

A school is an educational institution which is intended to increase young people's knowledge so that it will be able to have their high competitiveness in the global era. In organizing the process of education, school management uses a curriculum provided by the Ministry of Education, *Kurikulum 2013*. In this curriculum, the school is demanded to put forward character not only students' knowledge but also their character building so that they will be more productive, creative, and innovative (Nelliarti, 2019). Character, as it is mentioned by Cronbach, is not an entity that separates habits and ideas. It is the aspect of behavior, belief, feeling, and action which are interrelated one another so that if someone wants to change certain characters, he needs to reorganize his basic character elements (Rokhman, Hum, Syaifudin, & Yuliati, 2014). One of the implementations of the character buildings can be seen from students' social deviation.

Social deviation done by students is their action and behavior which are contrary to the rules imposed by the school. Deviant behavior in the classroom increases the stress level of teachers and at the same time changes the classroom dynamics. Few cases of students' deviant behavior includes unlawful races, consuming alcoholic beverages, extramarital sexual relations (Mantri, 2014), smoking in school area, fighting with friends, gambling, playing truant during class hours and going to an internet cafe, disobeying teachers, stealing money, stealing cell-phones, coming late to school, not wearing full badges of school uniforms, growing long hair for men, even doing obscene activity (Yuniati, Suyahmo, & Juhadi, 2017) (Siringoringo, Ismail, Manurung, Siregar, & Sitorus, 2018). Even the deviance done by students is identical and committed repeatedly without any deterrent effect. Some reasons why social deviation occurs in students, among others, are peers, reluctance

to go to school, family background, and lack of parents' attention (Chikwature, Oyedele, & Ganyani, 2016). Some authors even consider that when a child lives in a family environment in which violence prevails, he/she has certain characteristics towards the appearance of deviant behavior or abuse (Nicolescu, 2019). Bolu Steve, in his research, points out that the management of a school do some strategies to cope with deviant behavior done by students by providing free counseling in modifying the management strategy of students' deviant behavior, providing training for counselors, establishing school counseling center, and discussing curriculum in educating students' behavior (Esere, 2017).

Nevertheless, character building is not only the task of a school but also the task of a family. However, the phenomena which occur in Indonesia today indicate that parents often forget that a school is only "the second" education in constructing a child's behavioral values. There is an assumption that parents are the ones "who take the responsibility" for fulfilling the only livelihood while a school is the first and the main and strong place for establishing a child's character (Farhatilwardah, Hastuti, & Krisnatuti, 2019). Sokol Katz, in his research, points out that children's character building should start within a family because to shape children's micro character in a family as the smallest society unit will depend on what parents teach at early age which is related to other components such as school and its surrounding environment which are absolutely necessary for successful character building (Hasanah, Deiniatur, & Training, 2018). Sokol Katz, in his research, points out that if children and parents develop positive parent-child relationships, or students and teachers develop good teacher-student relationships, deviant behavior cannot be significantly improved. There are a number of studies on the correlation between the parent-child relationship and deviant behavior (Cheng, 2012). The objective of this research was to find out and to explain character building

done by parents and schools for children who did deviant action at SMA Negeri 1 Kutalimabaru.

LITERATURE REVIEW

Family and school become inter-social actors in constructing children's character building. This idea is based on the concept that a child's character at school is not automatically constructed since there are some aspects which constitute the background of it that is often ignored by the school management. Therefore, it is necessary to have a deep understanding of character building based on the concept practiced by some experts which state that character is a special characteristic which is inherent in a person, family and a community. It is a consistent and predictable characteristic showed by the tendency of behavior. The behavior does not stand alone, but it is integrated with the attitudes and values. Character development starts with the formation of attitudes based on certain values, such as religious values, culture, and the State's ideology (Fahmy, Bachtiar, Rahim, & Malik, 2015).

Character building is a process of instilling a certain character, especially in going through a period of one's life. In other words, students not only understand education as the form of knowledge but also use it as part of their lives and consciously live based on that value. Concerning character education, education terminology is called as a process of accumulating good knowledge, attitude, and action. It begins with building awareness, feeling, caring, intension, knowledge, beliefs, and habits formation (Rokhman et al., 2014).

In the implementation of character education at schools, every stakeholder of learning must be involved in the process, including the education components, which are the curriculum, learning and evaluation process, relationship quality, lesson handling or management, school management, co-curricular activities implementation, facilities using,

funding, and performance of any and all school's components (Agung, 2018). School as an educational institution is one of the important resources. While evaluating your educational institution concerned, it is important to develop a curriculum that explicitly includes character building. Recognizing that individual characters cannot be formed only through one or two activities only, then prepare a draft program of sustainable development and integrated character in learning, where the process also involves all teachers, staffs, and other agencies in educational institutions, so that the benefits of character building can be felt (A. Kamaruddin, 2012). Family is the primary moral educator of a child. Parents are the children's first moral teachers, and they are also the most enduring influence. When children do not have a close relationship with their parents and identification with family values, they are more vulnerable to peer pressure. Family and school are two major, effective, and formative institutions in valuing education. If character building is only enforced in the classroom and not at home, students will be confused about what is bad or what is good. When character building continues at home, values become more meaningful in children's lives. Therefore, for consistent and meaningful values of education, family and school should be cooperated (Yaşaroğlu, 2016).

METHODOLOGY

The objective of this research was to interpret social construction of children's character building in families and schools. The research was conducted at SMA Negeri I Kutalimbaru, Deli Serdang Regency and the main subjects were students. The data were gathered by conducting in-depth interviews with the students who had the history of deviant behavior at school. In-depth interviews were also conducted with the Principal, the Vice-Principal, four teachers, two homeroom teachers, and a student's parent. Besides that, observation and documentation were also conducted to complete

the data. Guided interviews were divided into three parts in which the questions distributed to the students were different from one another. Interviews with the students consisted of several questions which were aimed to find out their reasons to do deviant behavior. Meanwhile, interviews with the teachers, the staffs, and the Principal were done to find out what action and method used by the school management in settling the students' deviant behavior and to construct character building for the students. Guided interview with a student's parent was done in order to find out the character building and the function of parents in "bringing up" their children. The initial finding showed that in many cases parents seemed to ignore summons from the school that would discuss their children's behavior which deviated from moral values. The data were analyzed by using triangulation data through in-depth interviews, observation, and documentation via theoretical study.

The Role of Parents in Educating their Children

Some interesting findings were found during the gathering of data in the field. There was an assumption that when a child was at school, it was the responsibility of the school management. There is even an indication that a school is the main place for a child's education which is, of course, different from the fact that a family is the main place in constructing a child's education. One of the reasons why parents entrust their responsibility to the school for educating their children is their activity in earning their daily life. It was stated by the student's parent in the in-depth interview as follows:

"We really don't have any time. If we don't work, we won't be able to fulfill our daily needs. We can't do anything if the school management sends our child away from school, we can do nothing. We are focused on earning our living. Let alone our child, Melisa, is naughty

and stubborn. We asked her to be with us selling goods in the market, but she refused. She likes to play. We hope she can change. She is stubborn and lazy. We hope you or the school can educate her.”

From the data, it was found that most of the students’ parents were farmers and vendors. These data were supported by the data on the occupation and average earnings of the students’ parents at SMA Negeri 1 Kutalimbaru, Deli Serdang Regency.

Table 1. Occupation of Students’ Parents

Occupation	Total (%)	Earnings/ Month	Total (%)	Level of Education	Total (%)
Government Employees	5 %	<IDR. 200,000	3 %	Elementary School/No School	15 %
Army/Police	1 %	IDR. 201,000 IDR. 400,000	30 %	Junior High School	15 %
Private employees	25 %	IDR. 401,000 IDR. 600,000	45 %	Senior High School	25 %
Farmers	50 %	IDR. 600,000 IDR. 1,000,000	17 %	College/ University	10 %
Vendors	15 %	>IDR. 1,000,000	5 %	-	-
Fishermen	-	-	-	-	-
Others	4%	-	-	-	-

Source: Secondary Data, 2018

A family as a social structure has dialectic process between parents and (their) children (students). A family institution which actually should meet physical, mental and psychological needs is often neglected. The values of the sense of togetherness, solidarity, and transparency have become faded if the internalization of these values is not constructed. Since the very beginning, parents should be able to bring up their children through continuous interaction. This case was in accordance with what had been undergone by H a Grade XII student. She lacked of education in her family so that she often escaped and was absent from school.

Various measures had been taken by the school management in handling problematic students such as visiting the students' homes. Some of the students' parents were at home, but some others were not because they were somewhere else, earning their living. The result of the observation showed that, on the average, the students' parents at this school had low-level economic condition. Some of them even had uninhabitable houses. Various obstacles faced by the school management became a challenge in settling the cases of problematic students, especially the students as the victims of broken home. The Principal of SMA Negeri 1 Kutalimbaru pointed out that several students came from broken home families. Therefore, the management of the school attempted to anticipate every deviant action done by the students since the deviant action could have the impact on the values internalized into the students' characters which were mostly influenced by environment and social interaction.

Eating Together Ritual

Every community has its own tradition of eating together among friends, relatives, or neighbors. In the context of the Indonesian people, this tradition is owned by every community. There are, for examples, some traditions of

eating together: *Makan Basamo, Bancakan, Megibung, and Maka Patita*. In the United States, there is also a kind of eating together which is called Potluck. The intensity of social transformation in a family in this globalization era is rapidly decreasing. Many parents give their reasons for these changes such as being full of activities and having no time. These reasons were revealed in the result of interviewing one of the students' parents (Mr. G) when he explained a patterned ritual with various arguments. One of the interesting things explained by him was as follows:

“Our custom at home, you know, is that he who is hungry will eat first. All my children are busy with their own activities. Some of them are watching TV, some of them are playing in the neighborhood, and we, their parents, are tired after going home from work.”

This pattern is interesting to be heeded since social interaction between children and their parents is very limited. The values which should be established in a family are often neglected. There is an assumption that parents are responsible for only their children's physical needs, therefore, they do not pay any attention to the psychological need of their children.

This situation has made each of the family members eat his meal by himself. Messages are only attached on the doors of refrigerators instead of conversation done during meals. Each family member who comes home will warm up food which has been cooked, sit down in front of a television set or a computer, or play games on the cell-phones. It seems that this social trend cannot be changed even though the tradition of eating together among family members provides a special opportunity for parents to pay attention to their children's emotional prosperity. A dining-room table is “the real place for children to get their parents' regular attention in a relaxing time,” said Miriam Weinstein in her book, *The Surprising Power of Family Meals*. She further

says, "...family's dinner time may not be the solution for all problems, but it seems that it is a relatively an easy way out."

Another benefit of having dinner together is to establish communication among the members of a family. The objective of communication in a family interaction, viewed from parents' interest, is to give information, to advise, to educate, and to make the children happy. Children communicate with their parents in order to get suggestions, advice, and input, or to give response to their parents' questions. The objective of communication among the family members is to get a harmony among them, and each communication in a family can change in the behavior of family members in keeping a harmonious relationship among them.

Social Construction in Character Building at School

In the process of character internalization, cooperation among all stakeholders is needed since it is not entirely the responsibility of schools. The process of internalization becomes the responsibility of the government, schools, teachers, students, and students' parents. It is not done instantly or only once; it has to be done continuously and sustainably. Understanding students' development is needed to instill character building in them. A good teacher will understand his students' development. By understanding his students' development, a teacher will be easier to convey character building to his students.

Implementation of Learning Character Building

Every school can develop the uniqueness and the specific characteristics through school culture caused by cultural variation owned by each school. Cultural development in every school can be adjusted to the aspects which are considered important such as the school visions, condition, and potency. A

number of schools emphasize more on school culture which is focused on encouraging the achievement of academic performance. However, a number of other schools are focused on non-academic aspects. Character is related to moral and positive connotation. Education for character building basically includes developing substance, process, and atmosphere or environment which stimulates, encourages, and enables a person to develop good habit. A character is inside and outside which means that a behavior which develops to be a good behavior occurs because of internal encouragement and not because of external coercion (Dwiningrum & Purbani, 2012). The variations of character value which can be developed through school culture, among others, are anything which is favorable for developing religious values, democratic values, discipline, reliability, amiability, non-violence, and so on.

The activities of learning from *preliminary* activity, essence (exploration, elaboration, and confirmation), and closing remarks are chosen and implemented in order that students can practice the targeted character values. Teachers' behavior during the learning process is also a model of the implementation of values for students.

1) Preliminary Activities

Based on the processing standard, preliminary activities in the teaching-learning process consist of:

- Preparing students psychologically and physically to participate in learning process;
- Submitting questions relating previous knowledge to materials which are going to be learned;
- Explaining the objective of learning or basic competence which will be achieved; and
- Conveying the coverage of materials and explaining activities according to syllabi.

There are a number of methods which can be done to introduce values, develop caring for values, and help internalize values or character in the stage of learning. The example of values instilled in the learning process in the preliminary activities such as discipline (teachers come to class on time and they check students' attendance) and religious tenets (praying before the class begins), and so on. Minimum measures which should be fulfilled in the preliminary activities are orientation, perception, motivation, giving reference, and dividing groups.

2) Core Activities

Based on the Decree of the Minister of National Education No. 4/2007, the learning core activities were divided into three stages – exploration, elaboration, and confirmation. It can be simply stated that in the exploration stage the students are facilitated to get knowledge, skill, and attitude development through learning activities with students as the center. In the elaboration stage, students are given the opportunity to get knowledge, skill, and further attitude development through sources and other learning activities so that their knowledge, skill, and attitude will be broadened and deepened. In the confirmation stage, students get feedback on the truth and the feasibility of knowledge, skill, and attitude they have obtained from education.

a) Exploration

In the exploration activities, teachers involve students in searching for broad and profound information about topics/themes they are studying. In this case, the instilled values are independency, logic thinking, creativity, and cooperation). After that, they use various teaching approaches, teaching media, and other teaching sources by instilling creative values and hard work. They then facilitate interaction among students and between students and teachers, environment, and

other learning sources; in this case, the instilled values are cooperation, mutual respect, and caring for environment. The next step is by involving students actively in every learning activity; in this case, the instilled values are self-confidence and independency. Teachers also facilitate student to do any experiments in the laboratory, in the studio, or in the field; in this case, the instilled values are independency, cooperation, and hard work.

b) Elaboration

In the stage of elaboration, teachers habituate students to reading and writing anything through certain meaningful assignments; in this case, the instilled values are love for science, creativity, and logic thinking). They then facilitate students by giving the students assignments, discussions, and other activities to obtain new ideas, either orally or in written form; in this case, the instilled values are creativity, self-confidence, being critical, mutual respect, and politeness. They also give students an opportunity to think, to analyze, to settle any problems, and to do something without any fear; in this case, the instilled values are creativity, self-confidence, and being critical. In facilitating students to do cooperative and collaborative learning, the instilled values are cooperation, mutual respect, and responsibility.

Facilitating students to compete healthily in order to increase their learning performance; in this case, the instilled values are honesty, discipline, hard work, and respect. The next step is facilitating students to make explorative report orally or in written form, individually or in groups; in this case, the instilled values are honesty, responsibility, self-confidence, mutual respect, independency, and cooperation. After that, facilitating students to present the achievement of individuals and groups; in this case, the instilled values are self-confidence, mutual respect, independency,

and cooperation. Facilitating students to do exhibition, tournament, festivals, produced products, and any activities which can cause their pride and self-confidence; in this case, the instilled values are self-confidence, mutual respect, independency, and cooperation.

c) Confirmation

In the confirmation activities, the stages which are done are by giving students positive feedback and confirmation in oral form, written form, gestures, and reward for the students' success; in this case, the instilled values are mutual respect, self-confidence, politeness, being critical, and logic thinking. The next step is by giving confirmation to student's result of exploration and elaboration through various sources; the instilled values are self-confidence, being critical, and logic thinking. Facilitating students to do reflection in order to obtain learning experience; in this case, the instilled values are understanding self-advantages and disadvantages.

In facilitating students to get broader/deeper/further knowledge, skill, and attitude, teachers can function as facilitators and source persons in answering the questions of students who get troubles; in this case, the instilled values are caring and politeness. When teachers give references to students so that the latter can check the result of the exploration, the instilled values are being critical, when teachers give information about how to do further exploration, the instilled values are love for science, and when teachers give motivation to students who lack or have not done active participation, the instilled values are caring and self-confidence.

3) Closing Activities

In the closing activities, the stages of activity, among others, are teachers and students, or teachers themselves make the

summary/conclusion of the lesson. In this stage, the instilled values are independency, cooperation, being critical, and logic thinking. Teachers then make an assessment and/or reflection on any activities which have been done consistently and programmed; in this case, the instilled values are honesty and knowing advantages and disadvantages. Teachers give feedback on the process and the result of learning; in this case, the instilled values are mutual respect, self-confidence, politeness, being critical, and logic thinking. The next step is that teachers plan the follow-up in the form of remedial teaching, enrichment program, counseling service, and/or giving individual or group assignments according to the learning result and conveying what should be learned in the next lesson.

From the series of learning activities which consisted of Preliminary or Opening, Core Activities, and Closing Activities, it could be concluded that the values instilled in the process of learning activities were discipline, politeness, religious tenets, independence, self-confidence, logic thinking, creativity, cooperation, hard work, mutual respect, caring for environment, responsibility, understanding self-advantages and disadvantages, love for science, being critical, and honesty.

Evaluation of Learning Character Building

In order to determine whether the objective of education is achieved or not, it is necessary to make an attempt or assessment or evaluation. Evaluation or assessment is basically giving balance or values based on certain criteria. Learning process is a process which has its own objective which is stated in the formula of students' behavior after they have gotten through their learning experience.

Class based-evaluation is divided into three domains – knowledge

(cognitive), attitude (affective), and skill (psychomotor). These three domains should be assessed proportionally according to the nature of the related subjects. The function of evaluation in learning can be carried out in two phases; first, short term phase in which the evaluation is done by teachers by the end of the teaching-learning process which is called, formative evaluation, and the second phase is long term phase.

In the assessment or evaluation in teaching, teachers should be able to organize the grade processing and the result of learning sustainably. They should do evaluation or processing effectiveness, learning result, and using information about evaluating learning result and evaluation to design remedial and enrichment program. Learning evaluation can be done by teachers with the following steps: teachers organize grading device which is in accordance with the objective of learning to achieve certain competence as it is written in the RPP. Teachers do the evaluation after formal evaluation is carried out at school. They announce the result and its implication to students about the level of understanding the subject materials which have been and will be learned.

After that, they analyze the result of the evaluation to identify basic and difficult topics/competence so that students' strength and weakness can be identified for remedial and enrichment. The next step is that teachers use the input from students and reflect it to increase the next learning. It can be proved through records, learning journals, teaching design, supplementary materials, etc. Finally, they use the result of the evaluation as the materials for the next learning.

CONCLUSION

This research was the result of findings in the field according to the situation and facts at SMA Negeri 1 Kutalimbaru, Deli Serdang. The object of this research was to understand character building constructed by the school

management and students' parents for deviant behavior of the students. In this research, character building was viewed from two aspects – character building in families and character-building at schools. The result of the findings showed that families had not done their function well, especially in doing character building for their children. Their reason was that they were very busy earning their living so that they had no time to educate their children. Consequently, they had no communication and interaction with their children. They then delegate their tasks to school management. Meanwhile, the school management does character building through class activities. These teaching activities were done in stages: preliminary stage, core activities (exploration, elaboration, and confirmation), and closing activities. They were selected and carried out so that the students could practice the targeted character values. Teachers' behavior during the learning process could also become the model of implementing values for students. However, in the process of character internalization, collaboration among all stakeholders was highly needed since it was merely the responsibility of schools. This internalization process became the responsibility of the government, schools, teachers, students, and students' parents.

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**PREVALENCE AND CONSEQUENCES OF
ALCOHOL USE ON SCHOOLING AMONG
ADOLESCENTS IN GENDER-SPECIFIC
SECONDARY SCHOOLS IN ONITSHA EDUCATION
ZONE, ANAMBRA STATE**

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Abstract

This study was carried out to determine the male students' brands of alcohol, the prevalence of alcohol use and consequences on schooling among adolescents in gender-specific secondary schools in Onitsha Education Zone. The descriptive survey design was adopted for the study. The study was carried out in Onitsha Metropolis and all the boys public secondary schools were used in the study. The population consisted 936 senior secondary class 2 (SS2) male students in the 4 boys secondary schools in Onitsha Metropolis. Through random sampling technique, 50 students were sampled from each of the 4 schools giving a total sample size of 210. A researcher-developed instrument was used for data collection titled "Alcohol Use Questionnaire (AUQ)". Validity of the instrument was determined by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of

the instrument was determined using the Cronbach Alpha and an alpha coefficient of 0.81 was obtained which was considered high, therefore, the instrument was considered reliable for use. Results indicated that even at secondary level of education, male students have choice brands of alcoholic drinks. Though most of the students indicated that they are low to moderate drinkers, alcoholic consumption was perceived to have negative impacts on the students' attention to their studies. It was recommended that parents, counsellors and the media should be involved in the fight against alcohol use among secondary school students through productive intervention program.

Keywords: *alcohol use, brands, prevalence, consequences on schooling, adolescence*

Introduction

Schooling is one of the fundamental rights of the citizenry in Nigeria. The Nigeria's philosophy of education is aimed at bringing up individuals with sound moral background, and the equalization of educational opportunities for all citizens (Federal Government of Nigeria, 2013). This aims at getting the citizenry trained to be useful to themselves in particular and the society at large. The National Policy on Education specified that secondary education aims at preparing adolescents for useful living within the society as well as getting them prepared for higher education (FGN, 2013). Schooling involves teaching and learning which prepares one for a purposeful living which is one of the aims for establishing secondary schools. The desire of all the stakeholders especially the parents is to produce adolescents with sound education and good character during their secondary school education.

Adolescence is generally perceived as the stage in human growth and development that spans between childhood and adulthood. It is a transitional but a critical period in human growth and development. There is no consensus

among authors on the exact age range that could form this stage. This is because, the age range and duration of the adolescence varies in different societies and cultures. For instance, in Nigeria, while some assume that the age range between 10-19 years is appropriate, others suggest 10 to 24 years (Unachukwu, Ebenebe, & Nwosu, 2019). However, Unachukwu, et al (2019) have noted that these variations in age range as suggested by different authors are yet to have empirical studies to back them up in Nigeria, but it assumed that once an individual can vote and be voted for, the person has left the adolescence stage. Adolescence has also been considered as a period of storm and stress. It is observed as a period of tremendous behavioural, psychological and social changes with lots of challenges (Akanwa, 2016). Nwikpo, Okeke and Unachukwu (2016) considered the period of adolescence to be a rebellious period. During this period, adolescents tend to break away from dependence on family and begin to form affiliations and friendships with peers. They strive for peer acceptance and could take risks in order to avoid peer rejection. It has been established that adolescents yield to the influence of their peers (Moldes, Biton, Gonzaga, & Moneva, 2019). In other words, adolescents are known for trying out risky and or unhealthy behaviors; and alcohol use is one of them.

Alcohol is the most widely used psychoactive drug (Ajayi, Owolabi, & Olajire, 2019). Its usage is considered normal by most societies and cultures especially if not consumed excessively to the point of intoxication (Amaechi, Ekeh, & Oparaji, 2016). In Nigerian, especially in the Southeast, alcohol use seems to be part of most of the cultural festivals and celebrations. Alcoholic drinks form part of the requirements for celebrations such as traditional marriage, new yam festival, child naming ceremony among others. As leisure, some adults form the habit of visiting bars to enjoy the company of friends while gulping alcoholic drinks. This habit has resulted to alcohol use among adults without restrictions. To buttress this, Dumbili and Henderson (2017) decried that there is a high rate of alcohol use among Nigerians without any

checks on the producing industries or regulations guiding sales to neither adult nor youth consumers. As adults consume alcoholic drinks in the places of celebrations, festivals and for leisure, it will no doubt attract the attention of adolescents.

Research revealed a high significant relationship between parents' drug use and adolescent drug use (Onukwufor & Echendu, 2016). Out of curiosity to try out the escapade, adolescents could model alcohol usage from the unsuspecting adults and significant others. Apart from copying alcohol usage from significant adults, another avenue found to expose adolescents to alcohol use is the media, both mass and social media (Wakoli, 2018). In this contemporary age of technological advancement, companies reach out to their targeted audience through the media. The media through well packaged advertisements sell the message of their products to one's bedroom not just to doorstep. Most times, the media makes use of celebrities in their advertisements for alcoholic drinks to get their desired impact on the unsuspecting adolescents. Adolescents could fall prey to the antics of the media through vicarious learning and might begin to use alcohol.

Social learning theory by Albert Bandura posits that children learn by merely observing the behaviour of their social model, committing into memory actions observed, and imitating or reproducing such behaviours when similar occasions demand. Applying this theory to this study, it is assumed that adolescents could learn to consume alcohol by observing their models engage in it. This seems to be the reason behind the use of celebrities in most advertisements portraying alcoholic drinks. Similarly, peers could be models to adolescents. This is because they copy each other's style and other methods of life and play along in order to belong without been rejected by one's peers (Anierobi, Nwikpo, Okeke & Unachukwu, 2018). By implication, having friends who drink is likely to increase the tendency that young people will drink too.

Research has revealed that there are many types of alcoholic drinks consumed in traditional societies in Nigeria and Anambra State in particular. Some of the alcoholic drinks are made with ethyl such as beer, wine, toddy, whisky, brandy, rock, rum, arrack or locally prepared liquor (Amaechi, Ekeh, & Oparaji, 2016). Some of the traditionally produced alcoholic drinks consumed in Anambra State include palm wine, burukutu, ogororo, orijin. According to Lasebikan and Ola (2016), there are indications that there has been a rapid increase in alcohol production and importation in Nigeria as well as its consumption across all age groups. This seems to account for high sales of alcoholic drinks by dealers.

Though alcohol is the most widely used psychoactive drug with a rapid increase in its production, it has many attendant risks when it becomes a part of life. This is to say that excessive use of alcohol has many side effects and health risks. It has been considered a health problem to addicts (Ivaniushina, Titkova, Alexandrov, 2017). Problematic alcohol use among students is strongly associated with social phobia, lifetime use of any substance, peer pressure (Mekonen, Fekadu, Chane, & Bitew, 2017). Others linked alcohol use to mental health, death, aggressiveness and self-harm (Gakidou, 2018; Peltzer, Pengpid, & Tepirou, 2016). Stress, anxiety, traumatic events and depression are also related to binge drinking (Kuntusche, Kuntusche, Thrul & Gmel, 2017). Other researchers connect alcohol consumption with poor academic performance (Enyi, Kpurkpur, Onah, Omenka, Iorkpiligh, Igori, Eru & Jato, 2017). According to Witkiewitz, Litten and Leggio (2019), the damaging effects in connection with alcohol are largely as a result of high rates of alcohol abuse among the consumers. Dworkin (2019) reported that students get addicted to alcohol given the fact they think that it makes them sexier, facilitates bonding among peers, facilitates sexual opportunities, and enhances social activities. Many studies have examined the prevalence, predictors, correlates and health risks of

alcohol consumption among students in Nigeria (Ajayi, Owolabi & Olajire, 2019; Lasebikan & Ola, 2016). However, none considered its consequences on schooling of adolescents which this study sought to determine.

Statement of the Problem

Secondary school students should as a priority, actively engage in academic activities thereby forming good study habits for academic excellence to enable them prepare for university education. They should form healthy peer friendships which could influence them positively. However, most adolescents are caught in the web of alcohol use courtesy of factors ranging from peer group influence; modelling adult's drinking pattern and also through influence from social media. Alcohol use has also been revealed to have negative effects on health. This has led students being unserious with their studies resulting in poor academic performances among them. Some engage in examination malpractice, truancy, violent behaviours, display unnecessary aggression towards self, peers and teachers. Others get depressed and exhibit suicidal ideation. In spite of the fact that cases of this nature abound in secondary schools in Nigeria, literature has shown that there is dearth of research on the brand, prevalence and consequences of alcohol use on schooling among adolescents in secondary schools especially in Anambra State. This gap in literature prompted this study. The aim of the study therefore, was to determine the male students' brand of alcohol, prevalence and consequences of alcohol use on schooling among adolescents in secondary schools in Anambra State. This study was guided by the following three research questions:

1. What are the brands of alcohol of male secondary school students in Onitsha Education Zone?
2. What is the prevalence of alcohol use among adolescents in secondary schools in Anambra State?

3. What are the consequences of alcohol use on schooling of the male adolescents in Onitsha Education Zone?

Method

The study was conducted using a descriptive survey design. A descriptive survey aims at collecting data on and describing in a systematic manner the characteristics, features and facts about a given population (Akinlua, 2019). This design is appropriate for this study which collected and analyzed data to explain a pertinent educational issue of concern among adolescents. The study was carried out in Onitsha and it covered all the boys' public secondary schools. The population consisted 936 senior secondary class 2 (SS2) male students in the 4 males only secondary schools in Onitsha. Through random sampling technique, 55 students were sampled from each of the 4 schools giving a total sample size of 210. The choice of gender-specific male secondary schools is predicated upon the fact that male adolescents are more likely to hang out with friends and dare risky behaviours as show off of "big boyism" than female adolescents. Three research questions guided the study. A researcher-developed instrument titled "Alcohol Use Questionnaire (AUQ)" was used for data collection. The instrument has two sections. Section A was designed to elicit information on the students' brand of alcohol and the prevalence of use. Section B contained 8 items to elicit information on the consequences of alcohol use on schooling among the participants. The instrument was a 4-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The decision rule is that items with mean that is 2.50 and above shows agreement while those with mean that is below 2.50 shows disagreement. Three experts in the Department of Educational Foundations (Two in Educational Psychology and the other in Measurement and Evaluation) Nnamdi Azikiwe University, Awka, validated the instrument. The reliability of the instrument was determined using Cronbach alpha with overall reliability coefficient of 0.81. Four trained

research assistants were engaged for data collection. After data collection, 10 copies of the questionnaire were not properly filled in and hence were not used for data analysis. Only 210 respondents were used for data analysis. The research questions were answered using the Mean, Standard Deviation and Percentages.

Results

Results are presented in Tables in line with research questions.

Research Question 1: What brands of alcohol are used by secondary school male students?

Table 1: Frequency and percentage of male secondary school students' brands of alcohol

S/N	Brands of Alcohol used by students	F	%
1	Hero	19	9.05
2	Star	13	6.19
3	Star Radler	40	19.04
4	Smirnoff	23	10.95
5	Heineken	4	1.90
6	Life	16	7.62
7	Orijin	5	2.38
8	Palm wine	11	5.24
9	Stout	23	10.95
10	Rock	2	0.95
11	Burdweizer	20	9.52
12	Tiger	24	11.43
13	Nil	10	4.76

Table 1 shows the frequency and percentage of alcohol use among the male adolescent students in Onitsha Education Zone. The Table revealed that the students drink these brands of beer: 9.05% to Hero, 6.19% to Star, 19.04% to Star Radler, 10.95% to Smirnoff, 1.90% to Heineken, 7.62% to Life. 2.38% were addicted to Orijin, 5.24% to palm wine, 10.95% to Stout, and 0.95% to Rock, 9.52% to Burdweizer, 11.43% to Tiger. However, 4.76% were not addicted to any alcoholic drink.

Research Question 2: What is the prevalence of alcohol use among adolescents in secondary schools in Anambra State?

Table 2: Frequency and percentage of the prevalence of alcohol use of male secondary school students

S/N	Prevalence of alcohol use among male adolescents	f	%
1	Never	10	4.76
2	Sometimes	120	57.14
3	Often	80	38.10
	Total	210	100

Table 2 shows that out of the total participants of 210, 4.76% never use alcohol, 57.14% use alcohol sometimes and 38.10% use alcohol often.

Table 3: Mean and Standard Deviation of the consequences of alcohol use on schooling among adolescents

S/N	Consequences of alcohol use on schooling among adolescents	X	SD	Remarks
1	gets me sick and consequently skip classes	3.30	1.84	Agree
2	distort my reasoning and affect my retention of studied materials	3.00	1.73	Agree
3	pushes me into aggression and violence with peers	3.10	1.76	Agree
4	makes me to develop poor study habit	3.50	1.87	Agree
5	scare serious students away from me	2.80	1.67	Agree
6	leads me into temptation to smoke	2.60	1.61	Agree
7	makes me to develop negative attitude towards school	2.60	1.61	Agree
8	negatively affects my academic performance	3.40	1.84	Agree
	Cluster Mean	3.04		

Table 3 shows that mean ratings of the male students ($X=3.04$) on the consequences of alcohol use on their schooling. The Table revealed that all the items (1, 2, 3, 4, 5, 6, 7 and 8) were agreed on by the male students because their mean scores were above the criterion mean of 2.50. The mean of mean scores of 3.03 concludes that alcohol usage has negative consequences on schooling of male students in the area of study.

Discussion

The study was carried out to examine alcohol use among adolescents in gender-specific secondary school in Onitsha. Research question one sought to determine the brands of alcohol, the students use. Result as presented in Table 1 revealed that the students have specific brands of alcohol they use even at secondary school level. The commonest brands among the adolescents are Star Radler, Tiger, Stout, and Burdweizer. Similar studies have been conducted by Siegel, et al. (2011); Siegel, et al. (2013) and Tanski, McClure, Jernigan, and Sargent (2011). These studies showed that adolescents and youths have preferred brands. Though the studies were conducted in cultural context different from the one of the present study, there appears to be an agreement among the authors that adolescents' brands are likely to cluster around particular brands. In the studies Burdweizer appear to be a popular brand among peers. Flowing from these findings, the result could be explained using social learning theory by Bandura. Adolescents are part of the society where alcohol consumption is common and could abuse its use as a result of behavioural manifestations of significant persons such as peers, parents, teachers and other adults who are seen as models to them. By merely observing the behaviour of their social models, adolescents commit into memory actions observed, and imitating or reproducing such behaviours when similar occasions demand. This is true when it comes to alcohol use among adolescents. The has been supported by the findings of Wakoli, (2018) that media equally influence adolescents into choice of alcohol brand, and Moldes, Biton, Gonzaga & Moneva, (2019) that adolescents engage in risky behaviours as a result of peer influence. Adolescents cherish the association with peers and could do anything to avoid peer rejection.

Research question two sought to determine the prevalence of alcohol usage among the students. Table 2 showed that out of the total participants of 200, only 5% never use alcohol but 55% use alcohol sometimes and 40% use

alcohol often. In Anambra State where this study was carried out, alcohol consumption is considered normal especially if not consumed excessively to the point of intoxication (Amaechi, Eke & Oparaji, 2016). This is true because alcohol consumption seems to be part of most of the festivals and celebrations in the cultural milieu in Anambra State. As leisure, some adults form the habit of visiting pulp to enjoy the company of friends while gulping alcoholic drinks. This result is supported by the findings of Lasebikan and Ola (2016) that there has been a rapid increase in alcohol production and importation in Nigeria as well as its consumption across all age groups. This could account for high sales of alcoholic drinks by dealers. Similarly, the findings is supported by Dumbili and Henderson (2017) that there is a high rate of alcohol use among Nigerians without any checks on the producing industries or regulations guiding sales to neither adult nor youth consumers.

Research question three sought to determine the consequences of alcohol use on schooling of the male adolescents. Table 3 showed that mean ratings of the male students on the consequences of alcohol use on their schooling. The mean rating ($X=3.04$) could be interpreted that the alcohol use has negative consequences on male adolescents' schooling in the area of study. The students consume their brand alcohol despite the negative consequences of their behaviour on their schooling. This findings agrees with the findings of Mekonen, Fekadu, Chane, & Bitew, (2017) that problematic alcohol use among students is strongly associated with social phobia, lifetime use of any substance, peer pressure. Similarly, the findings is supported by the findings of Enyi, Kpurkpur, Onah, Omenka, Iorkpiligh, Igori, Eru & Jato (2017) that poor academic performance is associated with alcohol use.

Conclusion

The study concludes that adolescents in gender-specific secondary schools in Onitsha consume certain brands of alcohol. The study also concludes that alcohol use has negative consequences on schooling of male adolescents in gender-specific secondary schools in Onitsha Education Zone.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Stakeholders should engage in massive enlightenment campaign on the consequences alcohol intake on the mental health and academic achievement of adolescents in secondary schools.
2. Government should ban the sale of alcohol to adolescents and minors. Government should make and implement laws against alcohol use by adolescents and minors. Defaulters should be punished to serve as deterrents to others.
3. Government should also sponsor programmes such as seminars, workshops in order to reorient adolescents and encourage them to stay away from alcohol and other addictive substances. The media and celebrities should be used to enlighten the youth on dangers of alcohol use.
4. Parents should limit their alcohol consumption to serve as models for their children.
5. School authorities and guidance counsellors should use education as a tool for teaching adolescents the dangers of alcohol use in order to enhance general well-being and development.

Suggestions for Further Studies

In view of the use of a particular Education Zone in Anambra State as well as the use of close ended structured questionnaire, there is need to be cautious in generalizing the findings to the entire population of secondary school students in Nigeria. Consequently, the researchers suggest the following for further studies:

1. A replication of the study in Anambra State using mixed method which will entail the collection of both qualitative and quantitative data. This will the finding more robust.
2. A similar study should be carried out using both male and female students in Anambra State. This will give a picture of the position of female adolescents in alcohol use.
3. A comparative study should be carried on alcohol use among adolescents in secondary schools in all the Education Zone in Anambra State. The findings will provide empirical evidence to stakeholders of education on where to focus more on tackling the issue of alcohol use among students.
4. There should be a study on the prevalence and consequences of alcohol use on sexual behaviour among in-school adolescents.

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ACCREDITATION RANKING IMPROVEMENT STRATEGY (A CASE STUDY AT IAIN AMBON)

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Abstract

Accreditation is a fundamental thing for every study program. Because, accreditation becomes one of quality benchmark for study programs. Nonetheless, every study programs commence every strategies and efforts to improve their accreditation. This study aims to (1) to reveal the effort of *Shariah* Economy study program in improving their maximum accreditation ranking, (2) to find obstacles that prevent *Shariah* Economy study program in improving their maximum accreditation ranking, (3) to reveal effective and correct strategy for *Shariah* Economy study program in order to improve quality and achieve maximum accreditation ranking. This study applies several concepts which are strategy, analysis, SWOT, university, accreditation, and nine criteria of study program accreditation. This study is field research type with case study approach. Next, in order to determine the informant, snowball technique is applied. Meanwhile, data collection technique uses observation, interview, documentation, and literature study. To analyze data, the study applies EFE Matrix, IFE Matrix, and SWOT Matrix technique. The result of study shows that (1) there are several factors that

prevent *Shariah* Economy improvement, (2) total amount of EFI matrix 2,806 and EFE matrix 2,902. It means that *Shariah* Economy program study of IAIN Ambon takes quadrant V rank, it is on secure and defend strategy, (3) based on EFI and EFE matrix, *Shariah* Economy program study of IAIN Ambon takes quadrant V rank. It means the study program is on integration and development stage.

Keywords: Improvement strategy, accreditation, Islamic institute, study program.

Introduction

Accreditation is one of indicator used to determine the quality of education institution, including study program¹. Even accreditation becomes a fundamental measurement acquired by a study program, the unaccredited study program or low accreditation ranking will be determined as poor quality institution among society. Thus, every study programs will effort to increase their accreditation rank. In improving accreditation, there must be several strategies to achieve it. In one hand, in Indonesia context, accreditation is one of public accountability². Government regulation Number 19 of 2005 about National Standard of Education stated that accreditation will be governed by BAN-PT³.

¹ Sutopo., Sugiyono., and Setiadi. (2019). Analysis of the accreditation grade of study programs of higher education in Indonesia. *Advances in Social Science, Education and Humanities Research*, 335, 96.

² Ministry of Research, Technology and Higher Education. (2004). Long-term education strategy 2003-2010: Creating high quality college institutions. Jakarta: Ministry of Research, Technology and Higher Education, p. 25.

³ Available documents of the study programs are (1) Book I – academic documents of bachelor level of study program accreditation; (2) Book II – standard and procedure of bachelor study program accreditation; (3) Book IIIA – study program *Borang* ; (4) Book IIIB – faculty/college *Borang*; (5) Book IV – *Borang filling guidebook*; (6) Book V – bachelor study program accreditation guidebook instrument; (7) Book VI – bachelor study program

Since 2016, *Shariah* Economy study program of State Islamic Institute (IAIN) Ambon earned “fat” B rank given by BAN PT. That result is not yet satisfying. Within the amount of 801 active students, this study program becomes one of best major in IAIN Ambon. In accordance, it is a vision of every colleagues to get better mark. Such vision is already stated by the rector of IAIN Ambon, Hasbolah Toisuta asked for maintenance and synergy to achieve “A” accreditation. Thus, effective strategy to improve accreditation is urging.

According to the background of study above, there are several points that need to be answered, as follow, (1) How *Shariah* Economy study program improve their maximum quality and accreditation ranking? (2) What are the obstacles experienced by *Shariah* Economy study program in order to achieve maximum accreditation ranking? (3) What is the effective strategy for *Shariah* economy study program to achieve maximum accreditation ranking?

Theoretical Framework

(1) Strategy

Furthermore, the basic strategy concept is an ability to mixture strength of keys which are focused into a target. In the context of education. In this case, strategy is defined as a way to develop and improve students’ competency and keep them happy while learning⁴. Meanwhile, in Great Dictionary of Indonesian Language, strategy defines as knowledge and art using every source of nation to commence particular policy in war. Meanwhile, another study defines strategy as generalship. Generalship means

accreditation matrix assessment; (8) Book VII – assessment guidebook of bachelor study program instrument; and (9) bachelor study and college evaluation guidebook.

⁴ Wongwanich, S., Piromsombat, C., Khaikleng, P., and Sriklaub, K. (2015). Policy delivery strategies for education reform: A formative research and development. *Procedia Social and Behavioural Science*, 171, 1367

the ability to lead in military atmosphere⁵. It means every effort of leaders or heroes who build successful plan to face enemy in the middle of war.

From opinions above, it could be concluded that strategy planning must consider its target that will be hit in future. Beside, an organization must perform daily interaction with the setting of the target, which is why the strategy will be in same line with current situation and condition of internal and external ability which are strength and weakness of the organization itself. Thus, strategy is a mission broadening to serve as a bridge between organization and environment. Strategy is known to overcome strategic issue, whereas strategy will explain responds of organization toward current primary policy. In general, strategy will be futile when organization has no consistency with its words, efforts, and performances.

(2)SWOT Analysis

Wicaksono defines SWOT as one of internal and external analysis instrument of popular company⁶. It is also a prevalent method used in management to create strategy⁷. A strategy is a manipulating plan to finish a mission. The mission must be planned in parameters of Strength and Weakness of organization, Opportunities and Threats of the environment^{8,9}. The analysis on the strategy is based on assumption that an effective strategy

⁵ Purnomo, S. H., & Zulkifrimansyah. (1998) strategy management; an introduction concept, Jakarta: Lembaga Penerbitan Fakultas Ekonomi UI, p. 8.

⁶ Wicaksono, A. (2019). Analysis of Vision, Mission, Swot and Strategy to Win Competition among Private Colleges (case study of formation academy of Surabaya). *Journal of INOVASI*, 21(1), p. 24.

⁷ Kowalik, K., and Klimecka-Tatar, D. (2017). SWOT-TOWS analysis as a planning tool of process improvement based on PDCA cycle in service enterprise. *Zeszity Naukowe: Quality, Production, Improvement*, 1(6), 153

⁸ Hong, J., Jung, S., Jung, C., Jung, J., Shim, D. H. (2018). A general-purpose task execution framework for manipulation mission of the 2017 Mohamed Bin Zayed International Robotics Challenge. *Journal of Field Robotics*, 36, 149-169.

⁹ Lundberg, D. E. (1997). *Economy Tourism*. Jakarta: Gramedia Pustaka Utama, p. 17

will minimize weakness and threat. If it is correctly applied, such simple assumption will have great impact toward a well-planned strategy¹⁰.

Next, Rangkuti defines SWOT analysis is identification of several factors in systematic ways in order to form company's strategy¹¹. Such analysis uses logic where by maximizing strength and opportunity, it will minimize weakness and threats at the same time. Strategy decision making process will always be connected to mission, aim, strategy, and company's policy. Emet and Merba suggest that strategic planning is a way to help an organization be more productive by helping guide the allocation of resources in order to achieve goals¹². Thus, strategy planning must analyze factors of company's strategy (strength, weakness, opportunity).

Strength and weakness parameters could be found in company's internal, while opportunities and threats could be found in external of company environment. Thus, SWOT analysis is a strategic instrument for analysis stage. The effectiveness of SWOT is determined by company's management to maximize the strength, use every opportunities to minimize weakness of company and wipe out threats that must be faced in future¹³.

There must be an important consideration for SWOT analysis to diagnose strategic privilege and make clear identification of strength and weakness of current *Shariah* Economy study program. Meanwhile, in order to ease analysis technique of external environment, EFE (external factor evaluation) will be applied, while internal environment analysis will display

¹⁰ Wicaksono, A. (2019). Analysis of Vision, Mission, Swot and Strategy to Win Competition among Private Colleges (case study of formation academy of Surabaya). *Journal of INOVASI*, 21(1), p. 24.

¹¹ Rangkuti, F. (2006). *SWOT analysis; overcoming business case techniques*. Jakarta: Gramedia Pustaka Utama, p. 6

¹² Emet, G., & Merba, T. A. T. (2017). SWOT Analysis: A Theoretical Review. *Journal of International Social Research*, 10(51), p. 994.

¹³ Robinson, P. (1997). *Strategic management formula, implementation and control*. Jakarta: Binarupa Aksara, p. 231

strength and weakness of SW of the organization. In order to ease analysis technique of internal environment of SWOT, IFE (Internal factor evaluation) will be applied. Thus, before executing SWOT, EFE and IFE must be commenced first known as EFE and IFE matrix. Freddy Rangkuti called it as IFAS (internal strategic factory analysis summary).

(3)College

Law number 12 of 2014 about college stated that higher education is an education after high school that includes diploma, bachelor, magister, doctor, profession program, and specialty profession program, which is administrated by college based on Indonesian culture. Meanwhile, college is an education institution that administrates higher education.

Wicaksono stated that higher education is one of important pillar that is expected to carry a better revolution for a nation¹⁴. Higher education does not only use bachelor program to improve human resource¹⁵, but also learning process of higher education is one of media for society to find better cognitive to present such democratic society. The local, national, regional, and international phenomena, in last decade, are the improving moment for higher education portion.

Higher education as a center for the development of science and technology and in accordance with its function is obliged to increase its strategic role in educating and improving the welfare of the community through its Tridharma. The quality of a tertiary institution is related to its

¹⁴ Wicaksono, A. (2019). Analysis of Vision, Mission, Swot and Strategy to Win Competition among Private Colleges (case study of formation academy of Surabaya). *Journal of INOVASI*, 21(1), p. 24.

¹⁵ Rafiei, N., and Davari, F. (2015). The role of human resources management on enhancing the teaching skills of faculty members. *Mater Sociomed*, 27(1), p. 36

input¹⁶. The diversity of the quality of input among tertiary institutions is clearly seen between state and private tertiary institutions, the diversity seen from the average score of prospective students, universities that have high preferences generally accept students with a high cutting score when compared to other tertiary institutions which have lower preferences. The effect of the large number of tertiary institutions opened, including majors, study programs at the diploma, undergraduate, postgraduate level, is the decline in the quality of higher education, and the quality of graduates.

Higher education law (UUPT) number 22 of 1961 already give mandate to all higher education institution to perform evaluation and accreditation, it was updated with even clearer and firm regulation stated in law of national education system (UU-SISDIKNAS) number 20 of 2003 and also government regulation about national education standard stated that quality control over education is a must, both internal evaluation (self-evaluation) or external (accreditation). All of this efforts are meant to perform supervision and guiding higher quality of education and to guarantee of good quality served among society.

Regulation of Ministry of research, technology, and education of Indonesia number 32 of 2016 about study program accreditation and college stated that accreditation is an assessment activity in order to determine the quality of a study program and college. Meanwhile, study program accreditation is an assessment over a study program to determine the quality of a study program.

From the explanations above, it could be concluded that the aim of accreditation is to assess and determine quality of study program and its higher education institution within circumstance of national standard of higher

¹⁶ Kromydas, T. (2017). Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential. *Palgrave Communication*, 3(1), p. 5

education. Higher education accreditation also aims to secure society policy and students to receive an excellent quality of education. However, LED criteria must contains all nine criteria of accreditation which are: 1) vision, mission, aim, and strategy, 2) administration, governance, and corporation, 3) students, 4) human resource, 5) finance, infrastructure, 6) education, 7) research, 8) society devotion, 9) achievement toward *Tridharma*.

Research Method

This research belongs to field research, by using case study approach is to describe empirical reality that occurred during case study in depth analysis, systematic, and completed. As the research is focused on “Accreditation Ranking Improvement Strategy of *Shariah* Economy Study Program Of Iain Ambon”, the empirical reality that try to be revealed are some accreditation instruments based on *boring* published by BAN PT, there are 9 criteria of standard accreditation which are already prepared or not yet prepared by study program, thus, it could be data that later will be analyzed each through SWOT analysis.

Sampling technique used by researcher is snowball, which is the first selected informant is the most important step that must be correctly completed. First informant of key informant is the head of *Shariah* economy major. Form first informant, recommendation of other informants will be provided such as head of institution, head of faculty, students, alumni and lecturer. Meanwhile, data collecting technique uses observation, interview, documentation, and literature study.

Data analysis used in this study applies company’s environment analysis from strategic management process in order to analysis accreditation strategy of *Shariah* economy major to achieve an “excellent” mark. That is

why EFE matrix, IFE matrix, and SWOT matrix technique are implemented. There are five stages which are, as follows¹⁷:

- a. Internal and external factor are gathered from identification result;
- b. Marks are displayed to each factors with numbers which are 1, 2, 3. Number 1 means less important factor. Number 2 means as important as other factor. Number 3 mean more important factor;
- c. Each factor has different rating. Rate of 4 means very powerful factor, number 3 means strong factor, number 2 means weak factor, and number 1 means very weak factor;
- d. The amount of marks are multiplied by the amount of rating from each factors. The result will be displayed in weighted score table;
- e. Weighted score of internal factors is summed to weighted score of external.

Result and Discussion

Shariah Economy Study Program at IAIN Ambon

Vision of economy *Shariah* study program of IAIN Ambon is “*To be Professional in Integrating Islamic, Scientific Sharia Economics, Technology and Culture Based on Multiculturalism in 2032 in Southeast Asian Region*”¹⁸. From the vision, the mission of study program will be, as follow: Carrying out education in the field of Sharia Economics in a professional manner in integrating Islam, science, technology and culture so as to produce works that are beneficial to civilization; Developing knowledge in the field of Islamic Economics, technology and culture that is integrally based on

¹⁷ Rangkuti, F. (2006). SWOT analysis; overcoming business case techniques. Jakarta: Gramedia Pustaka Utama, p. 21

¹⁸ Brainstorming for vision, mission, and aim of syariah economy study program, according to envisioning workshop that is implemented by using *FGD (focus group discussion)* by quality control institution (LPM) of IAIN Ambon in 2013. The brainstorming invites all masters and experts of the department, faculty, and college, user (Bank Syariah Mandiri, Bank Indonesia, and external expert user from *Goeverna Training and Consulting* Yogyakarta on 22 – 30 June of 2013 take place in Manise Ambon hotel.

multiculturalism; Conducting research in the field of Sharia Economics in a professional manner as well as being a center for education, study, research and development of Sharia Economics in Eastern Indonesia; Carry out community service in the field of scientific knowledge based on multicultural Sharia Economics; Synergize with Islamic financial institutions, banks and other stakeholders in developing, actualizing and communicating Islamic economics.

Next, aim of *Shariah* economy study program is stated in operational strategy and planning¹⁹: to produce *Shariah* economy experts who have good academic ability, master Islamic knowledge, *Shariah* economy knowledge, technology, multicultural based in order to make useful products for society; to produce scientific research of *Shariah* economy integrated with Islamic culture, knowledge, advanced technology and competitive; to state *Shariah* economy major of IAIN Ambon as the centre of *Shariah* economy development with multicultural based in eastern Indonesia; to produce products in *Shariah* economy knowledge that will be offered as devotion to society which is integrated with Islam, *Shariah* economy knowledge, technology, multicultural based culture; to perform cooperation with *Shariah* finance based institution, banking, government, and other stakeholders, both local and international scale.

To achieve vision and mission of study program, targets and achievement must be performed clearly in systematic way. Whereas, lecturer, students, officer, and society become the targets of vision and mission. Meanwhile, strategy to achieve target and deadline to complete vision and mission are already written in *Renstra* (strategic planning) of the faculty which is in accordance with *Renstra* (strategic planning) of the institution which is applied to *Renop* (operational planning) of *Shariah* economy study program.

¹⁹ Form of Accreditation and Self Evaluation of Shariah Economy of IAIN Ambon 2016, pp. 3

Effort of *Shariah* Economy Study Program to Achieve “Excellent” Accreditation

There are several efforts that have been done by *Shariah* economy study program of IAIN Ambon that is gathered by questionnaire observation, the result will be listed according to 9 criteria of 4.0 accreditation which are, as follows:

(1) Criteria 1: *Vision, Mission, Aim, and Strategy*

The efforts performed by *Shariah* economy study program to achieve this standard is by performing illumination of vision, mission, and aims of institution.

(2) Criteria 2: *Administration, Governance, and Corporation*

According to result of questionnaire, it is revealed that *Shariah* economy study program is increasing the governance ability working performance.

(3) Criteria 3: *Students*

To increase interest of new upcoming students, increasing working performance of office and alumni must be implemented by using: increasing quality of infrastructure and service toward students, compiling guidance to write *thesis*, offering short semester study by taking final project major on VII semester, holding *thesis* and scientific writing workshop, increasing *thesis* supervisor service quality, monitoring those who are near to drop out time and supervising their work of *thesis*.

(4) Criteria 4: *Human Resource*

General obstacle faced by *Shariah* economy study program of IAIN Ambon is standard of human resource on lecturer career development, the program also lack of human resource who master in *Shariah* economy major, that is why the office suggest their lecturer to continue

studying until doctorate level (two lecturers are studying in for doctor level right now), increasing lecturer's knowledge by sharing through *Shariah* economic forum in local, regional, or national scale, increasing lecturer's competency through research, educating and enormous amount of workshop and seminar, IT based learning process, and inviting experts who master in guiding lecturers or study program.

(5) **Criteria 5:** *Finance and Infrastructure*

Finance and infrastructure of *Shariah* economic study program are developing in order to achieve services and achievement of standard accreditation, thus it will turn the mark into "A".

(6) **Criteria 6:** *Education*

The efforts performed by study program to increase working performance of curriculum, teaching, and academic environment are varies, such as: curriculum revision, re-supervision and development of curriculum, formulating effective teaching material, IT based teaching, and workshops for lecturers.

(7) **Criteria 7:** *Research*

In research section, the office had motivated lecturers and students to do research both in local, national or international scale.

(8) **Criteria 8:** *Devotion to Society*

To increase performance of this criteria, there are several efforts done by study program such as: motivating lecturers to conduct society's devotion proposal in order to earn financial support from ministry of religion and other external financial support, also from internal support. Students must be involved in devotion act toward society.

(9) **Criteria 9:** *Tridharma Output and Achievement*

(1) Data and analysis reported in this paper are:

- a) Grade point average is 3.12

- b) Some achievements are several students who participate in *Shariah* economic contest held in Medan, North Sumatera and Makassar. Besides, there are several non-academics achievements.
 - c) Affectivity and productivity of education are (1) average time spent by students in college is 4 years, (2) percentage of on-time graduation is 85%, (3) percentage of successful study is not yet known.
 - d) Alumni Competitiveness
 - (a) Description of tracer study implementation is not yet started;
 - (b) Time alumni needed until they got first job is around three months and six months, some students even jobless for a year; and
 - (c) Percentage of students who got job suited with their skill is not yet reported.
 - e) Alumni Working Performance
 - (a) Description of tracer study is not yet commenced;
 - (b) Description of working place scale of the alumni is not yet known; and
 - (c) Satisfaction of alumni is not yet described.
- (2) The output of dharma research and devotion toward society could be described in (1) scientific article publication by students, (2) there are no scientific publication that has been done independently by students or with supervisor, (3) unavailability of products or services produced by students, (4) another output made by students.
- 3) User satisfaction that is not started yet.

Obstacles Factor that Prevent *Shariah* Economy Study Program in Achieving Maximum Accreditation

(1) Criteria 1: *Vision, Mission, Aim, and Strategy*

- a) In 2014-2019, development stage of Islamic business and economy faculty and serving better quality of competitiveness in eastern part of Indonesia by acquiring maximum accreditation mark of “A”, is not yet performed.
- b) In 2020-2025, national competitiveness stage (double degree initiation) and alumni could be accepted in market, lecturers’ research publication and students in national and international scale. For this stage, the alumni of *Shariah* economics of IAIN Ambon does not come into 50%. Lecturers’ research publication is still low. Students’ activity in national and international scale are low as well.

To compete in South East Asia market, *Shariah* economy study program must fix their strategy.

(2) Criteria 2: *Administration, Governance, and Corporation*

- a) Governance of study program does not concern about accreditation yet.
- b) Weak management leadership in study program scale.
- c) Governance of UPPS does not follow standard SOP.
- d) Good quality documentation aspect is not complete.
- e) Discontinuing quality control by monitoring and evaluation.
- f) Feedback from previous complains are not proceed yet.

(3) Criteria 3: *Students*

- a) Have no students and alumni database.
- b) Lack of infrastructure and facility
- c) Insignificant role from alumni at the last three years.

- d) Has no tracer study.
- e) Lack of students finance support.

(4) Criteria 4: *Human Resource*

- a) There is no guidance of human resource management.
- b) Lack of lecturers.
- c) Minimum major transcription for lecturer.
- d) Planning, evaluation, monitoring, and lecturers track record is unclear.
- e) Lecturers' academic participation is very low.
- f) Lecturers' achievement in academic is low.
- g) Quality and quantity of education is still low.
- h) Lack of career development for lecturers.

(5) Criteria 5: *Finance and Infrastructure*

- a) Lack of infrastructure.
- b) Lecturers' room are not suitable, it makes them leave the office.
- c) Financial support comes from students.
- d) Financial support for research is low.
- e) Financial use is not based on regulation of program.
- f) Very low operational financial aid.
- g) Lack of literature material.
- h) Lack of information system

(6) Criteria 6: *Education*

- a) Curriculum does not clearly state profile and competency.
- b) Practice amount of study is still low.
- c) Lecturers have low attendance (<70%).
- d) Education environment is not acquired as the absence of infrastructure.
- e) Lack of discussion among lecturers.
- f) Lecturers are not maximum in teaching process.

(7) **Criteria 7: Research**

- a) Amount of research and devotion to society by lecturers are low.
- b) The role of students in research is low.
- c) Lack amount of scientific publication.
- d) Has no administration, tracer, and report of scientific research system.
- e) Recent research could not produce a product or service.
- f) Lack of HAKI (Intellectual Property Rights).
- g) Lack of research financial aid

(8) **Criteria 8: Devotion to Society**

- a) There is no standard model devotion for *Shariah* economy.
- b) Lack of devotion financial aid.
- c) Unavailability of HAKI (Intellectual Property Rights).
- d) Lack of awareness of society devotion among lecturers.
- e) There is no workshop for scientific writing and publication for students.
- f) There is no exact criteria for students who graduate from institution.
- g) Jobless time after graduation had reached one year.

***Shariah* Economy Study Program Strategy to Achieve “Excellent” Accreditation**

The strategy which is applied to overcome problems while improving accreditation is based on each 9 criteria which is analyzed by using EFE and IFE which is started with analysis of company's environment (*Shariah* economy study program), both as internal and external. Next, the result analysis of IFE and EFE is formulated in detail through SWOT and IE matrix.

According to EFE matrix *Shariah* economy study program of IAIN Ambon has score of 2,758. The total score of 2,758 shows that *Shariah*

economy study program of IAIN Ambon is on the above average from all of its strategic position in taking all of external opportunities and avoid possible threats that may appear along the way. But, there is still much space to develop. Next, according to IFE matrix table *Shariah* economy study program of IAIN Ambon, it display score of 3,022. The total score of 3,022 shows that *Shariah* economy study program of IAIN Ambon is above average.

Next, SWOT analysis is applied. SWOT matrix is the tool used to manage company's strategic factors. The matrix will clearly display external opportunities and threats faced by company could be synchronized with the strength and weakness possessed by company. In future, this matrix will be used to assist development of four strategies, they are strategy of SO (strength-opportunities), strategy WO (weakness-opportunities), strategy ST (strength-threats), strategy WT (weakness-threat).

According to the formulation of SWOT, there are several priorities among those strategies, namely: (a) demands extra lecturer and staff; (b) use electronic and printed media to promote classes; (c) include stakeholders in conducting vision and mission; (d) performing extra communication with UPPS about office condition, it can be forwarded to rector if there is no further respond; (e) after conducting RKAKL in meeting, UPPS and study program must maintain it; (f) transparency in managing administration is a must; (g) commence MoU (*Memorandum of Understanding*) with every institution that could improve college; (h) budget based on accreditation; (i) curriculum based on study program competency; (j) students development based on competency both academic and non-academic on national and international scale; (k) demands for lecturer to do research and society devotion at least twice a year; (l) online based administration management.

Moreover, analysis by IE matrix is also completed. IE matrix or internal external is portfolio matrix which positioned company in nine cells.

Below, there is score total of IFE matrix marked as X and EFE matrix marked as Y in the case study of *Shariah* economy study program of IAIN Ambon.

Table 1. IE Matrix of *Shariah* Economy Study Program of IAIN Ambon

		Ife Total Weighted Score		
		STRENGTH 3,00 – 4,00 3	MEDIUM 2,00 – 2,99 2	WEAK 1,00 – 1,99 1
WEIGHENED SCORE	HIGH 3.00 – 4.00 3	I	II	III
	MEDIUM 2,00 – 2,99 2	IV	V	VI
	LOW 1,00 – 1,99 1	VII	VIII	IX

From result of external strategy factor analysis, it is revealed the total score is 2,902. That amount is above average which is 2,50, it means that the college has strategy that could take every opportunities and minimize threats/negative possibility from external factor, but it still needs more effective strategy because there is still external strategic factors which is responded in average amount by *Shariah* economy study program.

Conclusion

There are several obstacles factor that prevent the department, one of them is lack of working synchronization between faculty and department;

monopoly act performed by head of faculty who did not include *Shariah* economy department on some occasion; there is no synergy of *Shariah* economy on national scale. The curriculum is not yet focused; lecturers do not have good competency in real *Shariah* economy; the budget is not used based on accreditation and department working performance; lack of corporation, lack of infrastructures that support students competency to fulfil market demands; limited literature reference; lack of confidence from faculty to give some infrastructure regarding this department such as investment gallery and stock exchange; students' activity is not increasing their competency.

Next, total amount of IFE matrix 2,806 and EFE matrix 2,902, it means that the position of *Shariah* economic department of IAIN Ambon is in quadrant of V, it is in strategy of maintain and defend. Based on EFE and IFE matrix, department of *Shariah* economy is on V quadrant which means on integration and developing stage.

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A ROMANIAN AND ICELANDIC LANGUAGE STUDENT’S PROFILE FROM THE PERSPECTIVE OF EDUCATION FOR DEMOCRATIC CITIZENSHIP

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1. Introduction

In a global context marked by the need to uphold democracy and human rights, education for democratic citizenship (EDC) has increasingly emerged as a prerequisite for shaping active and responsible citizens for the decades to come. The importance of EDC is strongly acknowledged by the Romanian and Icelandic educational systems and it is integrated in school syllabi at all levels of education. However, despite the wide recognition and support for EDC, challenges in its putting into practice are still persistent. Against this background and capitalizing on complementary expertise, the University of Craiova, alongside with Bifrost University and the University of Iceland, has proposed a project that aims at moving beyond the traditional approach to EDC by addressing the transversal competences that lead to it, in order to

show how they can be developed in classes which are not specifically oriented towards topics related to democratic citizenship.

The project *A Comparative and Transferable Approach to Education for Democratic Citizenship (ACTA)*, developed from September 2018 to April 2020 and financed by the Iceland, Liechtenstein and Norway Grants, is underpinned by a comparative approach of EDC in two countries that are fundamentally different in terms of state of democracy and educational policies. Moreover, it holds a transdisciplinary focus, reinforcing the EDC role of all school teachers and integrating information and communication technologies (ICT) in problem-based teaching/learning for EDC. The utmost objective of the project is to design transferable educational resources for the development and assessment of transversal competences related to education for democratic citizenship (with a focus on future language teachers). Thus, this project complements previous research endeavours undertaken at the University of Craiova within international projects aiming at developing transversal skills.

A prerequisite for the transferability of educational resources is their adaptability to heterogeneous audiences and various national, identity and educational contexts. Furthermore, in the context of student-centred education, educational research is nowadays increasingly focused on how teaching practice can be tuned to the needs and expectations of students. Teaching outcomes should be effectively achieved only by duly taking into account the students' own motivations, aspirations and attitudes. Starting from this premise, the project team has designed a questionnaire to compare and analyse the standpoints of Romanian and Icelandic students in terms of education for democratic citizenship (EDC) and the competences that lead to it. The current research presents the answers provided by Romanian and Icelandic language students when asked to list up to 3 strong points and up to 3 weak points of the educational system in their country.

2. Research background

Successful and effective teaching activities take into account the students' own motivations, aspirations and attitudes, placing the student, as a key actor, at the core of the educational process. Hence, in the context of student-centred education (Weimer 2002; Machemer, Crawford 2007: 9), the educational process implies a thorough knowledge of the learner's profile (Glowa, Goodell 2016), and the educational act is nothing but an act of communication where the teacher delivers a message that should be efficiently and effectively received by the learner. Indeed, creating a learner's profile, understanding students better and getting to know their strengths and challenges help teachers and educational institutions shape a long-term vision of education.

While a significant amount of information on the Romanian and Icelandic education systems has been available historically (e.g. data provided by OECD 2010, Gallup Organization 2009), only a small number of studies have focused on comparisons between them (Brancu, Guðmundsdóttir, Gligor, Munteanu 2015; Tilea, Duță, Reșceanu 2017). To our best knowledge, to this date there are no available results of a previous research focused on a comparative approach of Romanian and Icelandic learner profiles. Furthermore, few studies are available on the views of Romanian students regarding the educational system. Hence, our approach aims at bringing together two countries that are fundamentally different in terms of state of democracy and educational policies and practices.

Additionally, it is worth emphasizing that language education bears major relevance to EDC, as language teaching functions as a mirror of its time, reflecting the multiple facets of the world we live in. Indeed, language learning is a favourable environment for education for democratic citizenship (Starkey 2002, Kramsch 2004). Against this background, today's language students at

the university level, who will be tomorrow's language teachers, must be fully aware of their importance in shaping citizens for the decades to come.

3. Research methodology

As previously mentioned, the data used for the analysis consists of the answers provided by Romanian and Icelandic language students when asked to list up to 3 strong points and up to 3 weak points of the educational system in their country. Statistically, it includes 864 units of content provided by 144 respondents, of which 120 Romanian respondents for a total of 3400 words and 24 Icelandic respondents for a total of 977 words. The Romanian respondents were enrolled in the study programmes of the Faculty of Letters of the University of Craiova aimed at training language teachers (83 in native language teaching and 37 in foreign language teaching) and the Icelandic respondents were enrolled in distance learning master programmes at the School of Education of the University of Iceland (the questionnaire was sent out to 24 students in bilingualism and literacy, 50 students in language development and 25 students in language development and literacy). At the University of Craiova, the questionnaire was administered in class, together with a facilitator (a teacher), and the answers were subsequently digitalized and translated from Romanian into English, while at the University of Iceland it was administered by e-mail, and the answers were collected in an online platform and then translated from Icelandic into English.

The raw data obtained from the students' answers was subjected to content analysis, so as to be able to identify recurring themes and coding categories, which would subsequently be interpreted accordingly. Content analysis is generally defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005: 1278) and basically refers to "any qualitative data reduction and sense-making effort that takes a

volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002: 453). Additionally, our research will also inform on the frequency of forms by means of a quantitative approach.

In order to obtain the coding terms for content analysis, a word frequency list was used, generated with the corpus analysis tool AntConc (<http://www.laurenceanthony.net/software/antconc/>), “a freeware corpus analysis toolkit for concordancing and text analysis”, included in a wider suite of “educational software for use by researchers, teachers, and learners in corpus linguistics” (Laurence Anthony, 2016). The original frequency list provided by the software was subsequently refined – irrelevant words were discarded – which resulted in a final word list (Figure 1 below). The three relevant terms ranking highest in the final word list – *teaching*, *education*, *students* – were identified as the main elements of the educational process and used as coding categories for the research; the other coding terms clearly subsumed to them (Figure 2 below).

#Word Types: 686		
#Word Tokens: 4047		
#Search Hits: 0		
9	77	teaching
13	55	lack
14	54	education
15	51	students
18	46	teachers
20	42	pupils
21	36	charge
24	32	schools
28	29	information
29	28	school
31	25	activities
33	22	system
36	19	educational
38	17	resources
40	16	curriculum
50	13	subjects
52	12	financing
53	12	children
55	12	learning
57	12	practice
58	12	schedule
59	11	computers
62	11	knowledge
63	11	methods
67	10	technology

Figure 1. The final word list

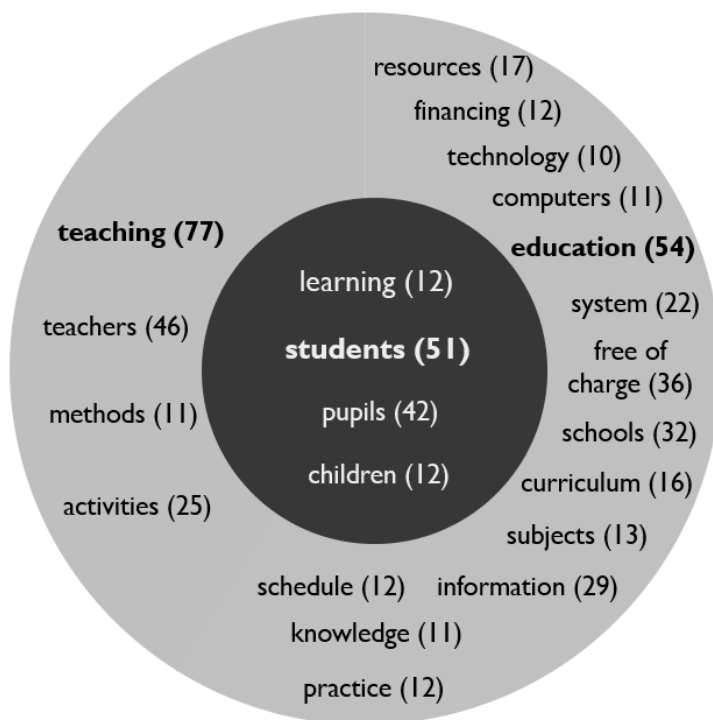


Figure 2. The coding terms grouped around the coding categories

4. Analysis

The students' perception regarding teachers is heterogeneous and subjective, as shown by the wide variety of suggestions synthesized in figures 3 and 4 below. The characteristic indicated by the highest number of students (25% Icelandic students, 31% Romanian students) is the good quality of the teachers' training, which emphasizes the relevance of the teachers' proper training for students from both countries. Also, both Icelandic and Romanian students outline the importance of the teachers' communication skills. The Romanian students place emotional skills at the core of both the strengths and weaknesses of teachers, suggesting that motivation and commitment are essential in order to achieve high quality teaching in an underfinanced educational environment. The Icelandic students point out that teachers need continuous training and indicate inclusive education, that is a general aspect of education, which suggests that they are more aware of general issues and

have a proactive approach to education. On balance, the Romanian students refer mostly to issues resulting from their own contact with the educational system, whereas the Icelandic students prove to be more objective towards their teachers. This different student-teacher relationship can be explained by the survey administration settings and the structure of the target group (face-to-face vs distance learning).

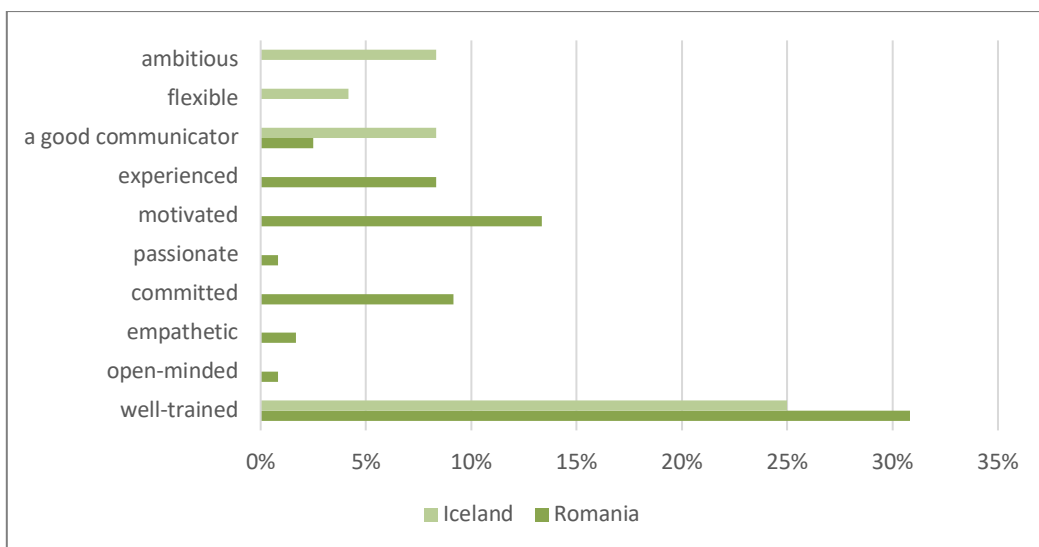


Figure 3. Positive characteristics of teachers in the opinion of the Icelandic and Romanian students

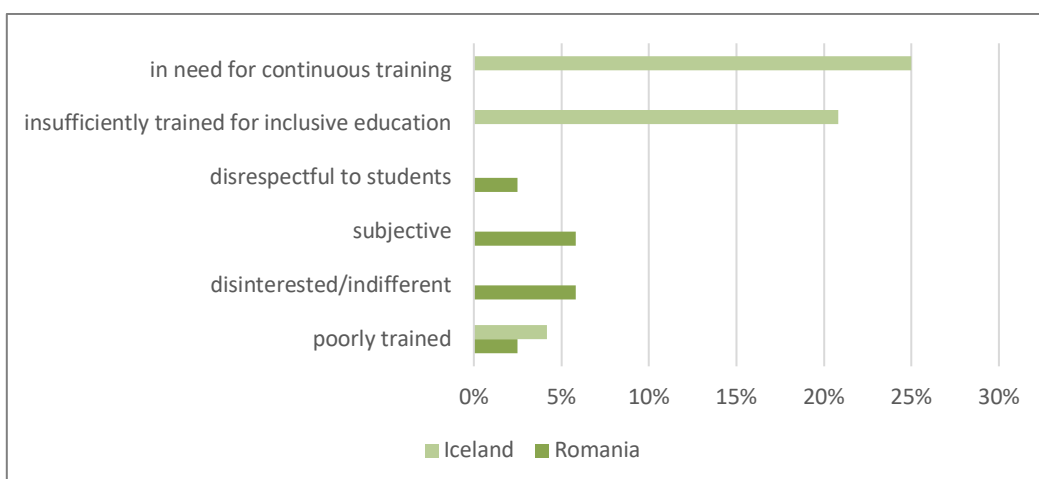


Figure 4. Negative characteristics of teachers in the opinion of the Icelandic and Romanian students

The fact that the teachers' characteristics are more important to students than the methods they use is seen in the low number of students (both Romanian and Icelandic) referring to teaching methods. The Romanian students emphasize the teachers' reluctance to change, which could be due to the insufficiency of continuous training or slow mindset change, and they qualify teaching methods as "obsolete", "rigid and non-interactive". On the other hand, the Icelandic students refer to teaching methods as "diverse" and point out the good quality teaching in vocational studies, but they still suggest more outdoor learning activities.

Neither the Romanian, nor the Icelandic respondents generally refer to students as actors in the educational process. They focus more on how they experience the educational activities and resources created by teachers and supported by the educational system. However, 10% of the Romanian respondents have listed strengths and weaknesses that directly refer to students: motivated students, good results in national and international competitions, but also low results in national assessments, lack of discipline and a low level of education.

In terms of education, four major factors stand out from the respondents' answers: curriculum and study schedule, resources, educational institutions and national policies.

Regarding the curriculum, both Romanian and Icelandic students emphasize the importance of foreign language instruction and sports, which is a relevant reflection of the mindset of today's society, focused on plurilingualism and health. Both Romanian and Icelandic students appreciate the diversity of subjects and quality of information, which suggests their awareness of the need to develop, to widen their horizons and opportunities.

Additionally, the Romanian students mention extra-curricular activities as a strong point, particularly relevant in the context of Romanian education, that focuses on knowledge rather than on practice. In terms of content, the Icelandic students are more interested in learning how to collaborate with their peers and in acquiring the level of financial literacy required by the society they live in. The Romanian students, on the other hand, complain that education is focused on hard skills (20%), it does not stimulate creativity and originality or digital skills, it does not encourage personal development, and evaluation only focuses on reproduction of knowledge, which fosters “learning by heart” (8%). Furthermore, the Romanian students consider that the study schedule lacks practical activities (15%) and that the curriculum is “bulky” (5%) and even “useless” (9%), as it focuses too much on theory to the detriment of practice. As for their schedule, the Romanian students complain about the overload of school work and 17% claim they have a “stressful”, “tight” schedule. The Icelandic students make no explicit comments on the schedule, but they refer to it when suggesting “shorter school days” or “to make the school system more family-friendly, e.g. final assignments not straight after Easter holidays”.

A significant number of Romanian students make direct reference to the resources allocated to the educational process, connecting the drawbacks of the system to the issue of underfinancing. Even though they point out some good aspects from this point of view, weaknesses clearly prevail, as shown in Figure 5 below. On the other hand, only 2 Icelandic students refer to resources, mentioning “good infrastructure” and the need for “more financial resources”, which is, in our opinion, a sign that they take educational resources for granted and that they are satisfied with them.

The Icelandic students do not refer to educational institutions in their answers. This may be due to the administration setting and the target audience of the questionnaire – since the respondents are enrolled in distance learning

programmes, they are less likely to refer to an institution that they do not perceive in all its concrete aspects. As for the Romanian students, 10% consider that a strong point of educational institutions is their involvement in international projects (Erasmus+ or others). A low number of students mention the cooperation of schools with the families and the community as a positive aspect. Additionally, the family-school relationship is evaluated heterogeneously, some qualifying it as a strength, and others as a weakness, which may be due to the respondents' personal experiences and may not reflect their opinion on educational institutions in general.



Figure 5. Opinions of the Romanian students regarding the resources allocated to education

Regarding national policies, the strengths and weaknesses pointed out by the Romanian and Icelandic students are summarized in Figure 6 below. As it can be seen, the Romanian students only reach partial consensus on two topics: free of charge education and bad management (for instance, one student provides the following comment: “Ministry of Education: educational policies not adapted to the national context”), and there is a significant divergence of opinions regarding the other strengths stemming from national policies. Furthermore, it is worth mentioning that both Romanian and Icelandic students acknowledge the importance of student-centred education, despite their diverging views on the implementation of this principle in their national context: 4 Romanian students and 3 Icelandic students see it as a strength, while 5 Romanian students refer to it as a weakness and complain about the “failure to adapt to the students’ needs”.

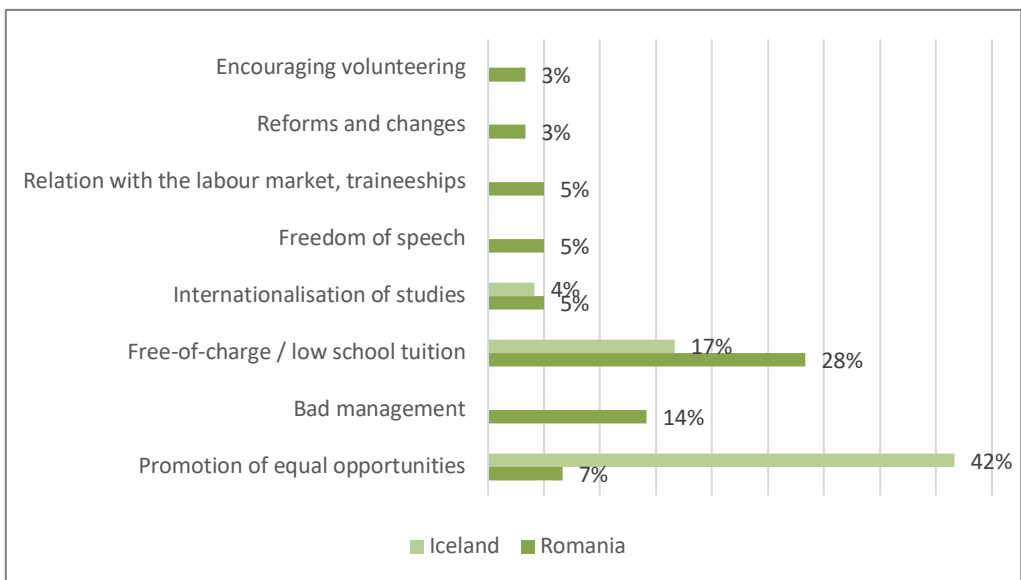


Figure 6. Aspects mentioned by the Romanian and Icelandic students regarding national policies on education

5. Conclusions

One of the aspects shown by this research is that, while the Romanian students express their discontent regarding evaluation from the point of view of both educational policies and teaching practices – they even indicate that some teachers *label* the students according to their marks, which is a prejudicial attitude in education, the Icelandic students formulate weak points of the educational system in their country as suggestions for improvement, which is a proactive, solution-oriented attitude. Moreover, the Romanian students and, to a lesser extent, also the Icelandic students emphasize the importance of the financing of education, a stringent issue that conditions the outcomes of the educational process in both countries.

Based on the answers analysed in this research, the Romanian and Icelandic learners emerge as aware observers, able to identify decisive factors of the educational process and aware of the contemporary issues faced by the society they live in. Furthermore, they are critical and complex thinkers, able to pinpoint the weaknesses of the educational system they are enrolled in, to question an existing order and to reflect on complex situations/processes. The learners are actively engaged in their learning activities, being aware of the importance of the teachers' role in the educational process and having well defined and clear opinions about various actors and elements of the educational process. They place a major focus on the diversity of school subjects, are mostly focused on personal experiences and are aware of the importance of foreign languages or sports and of the link between education and the national context, between schools and the economic and social environment, which proves that they are aware of their own needs and interested in the world they live in.

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A COMPARATIVE STUDY ON EDUCATION FOR DEMOCRATIC CITIZENSHIP (EDC) COMPETENCES IN THE ICELANDIC AND ROMANIAN CONTEXT

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Abstract

This comparative study has a two-fold aim. On the one hand, it provides a description of the national educational framework – legislative provisions, institutional strategies and policies – and the regional and local practices regarding the presence of Education for Democratic Citizenship (EDC) competences in the educational process. On the other hand, it brings together two educational systems that share a full commitment to European values and principles, but which are based on historically different and distant cultures. More specifically, this research starts from the presentation of EDC

in the two contexts, comparing the presence of the EDC competences in policy and strategy documents, academic curricula and syllabi of study programmes relevant for EDC, focusing on the role and importance of education as a site of learning for democratic citizenship. Overall, it capitalizes the results obtained in the joint research work carried out within the international joint project “*A Comparative and Transferable Approach to Education for Democratic Citizenship (ACTA)*”, funded under the EEA Grants - Financial Mechanism 2014-2021 and implemented during September 2018-April 2020 by the University of Craiova, in partnership with the University of Iceland and Bifröst University.

Keywords: *democracy, education, education for democratic citizenship (EDC), national educational policy, institutional strategy*

Introduction

Although being a topic in the earliest discussions on forms of government and citizenship in Ancient Greece, due to the fact that democracy as we know it is a relatively recent phenomenon in human history, democracy in education has been a salient topic for just about a century. One of the initial modern texts on the subject was written by that seminal figure in Western education, John Dewey (*Democracy and Education*, published in 1916), arguing that in order for society to be preserved, the young have to be initiated into its workings through education (Dewey, 1916).

With the rise of populist parties and politicians on both sides of the Atlantic it is a perception in today’s world that democracy, after having triumphed throughout Central and Eastern Europe at the end of the Cold War, is under threat. Surprisingly there are signs that democratic participation is on the rise (Democracy Index 2018). However, in some cases, the votes go to

parties that feed conspiracy theories, misinformation and uphold both an anti-democratic and anti-liberal rhetoric (Bergmann, 2018).

So it is in no way strange that there is a feeling in society and the media that democracy is in some way under threat. For the sake of the importance of the subject, it is prudent to look at education in order to understand how its ideas and functions are communicated to the young generation through the educational systems. A report published in 2017 on citizenship education in Europe by the European Commission mentions that in fact the relationship between citizenship education and democracy is bidirectional. So while a well-functioning democracy may depend on citizenship education to endow students and thus citizens with the necessary competences to think and act democratically, the relationship also goes the other way round. Citizenship education tends to flourish when it operates within the framework of a democracy (European Commission, 2017).

This paper discusses education for democratic citizenship in two European countries. One with an established democratic tradition, Iceland, a Nordic country with a small population, which has remained a democracy for over a century, and a country that has a more recent and, perhaps, a more fragile democracy, Romania, which during the Cold War was ruled by authoritarian communists and has been on the democratic trajectory since its revolution in 1989, joining the European Union in 2008, tackling significant challenges related to that history and political heritage.

1. The two democratic contexts

According to the above-mentioned EU Democracy Index 2018 (2019), which records how global democracy fared in 2018, Iceland ranks no 2 (falls between fellow Nordic Countries Norway in the first place and Sweden in the third) and is considered a “full democracy”, while Romania falls in the category of “flawed democracies”, together with all Eastern European EU

member states. The Democracy Index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Full democracies are those countries which in which not only basic political freedoms and civil liberties are respected, but which also tend to be underpinned by a political culture conducive to the flourishing of democracy, while flawed democracies have free and fair elections, but also significant weaknesses in other aspects of democracy. (Democracy Index 2018).

On the one hand, there is Iceland, arguably the world's oldest assembly democracy, with its oldest parliament extant, proving its stability with maximal scores in *electoral process and pluralism* and *political culture*. Its “full democracy” features include government based on majority rule and the consent of the governed; the existence of free and fair elections; the protection of minority rights; respect for basic human rights, and equality before the law, due process and political pluralism.

On the other hand, there is Romania, ranked closer to the bottom of the category of “flawed democracies”, because of its weak foundation for democracy, caused by growing public frustration and political unrest, difficulties in safeguarding the rule of law, corruption, and a preference for “strongmen who bypass political institutions” (Democracy Index 2018). In fact, the moment Romania joined the European Union in 2007 represented the beginning of an important, yet hesitant and irreversible process of democratic consolidation. Romania was at that time an ex-Communist democratic country which saw its ‘come back to Europe’ dream come true. In this context, the recent (dramatic) political, social and economic changes (the economic crisis of 2009-2011, the Brexit and the political unrest in well-established democratic countries and the success of non-liberal political actors) led to quite worrying trends that affect the quality of democratic government. Thus, the lack of trust in the political institutions, the decreased voter turnout in the

last elections and the low join rate in political parties are all consequences of this situation. What is even worse is that these trends are more and more common within the young generation, and this happens not only in Romania, but also in Europe (if not globally).

The question we should ask ourselves now is whether or not there is a profound crisis in democracy, marked by social, economic and technological challenges, a crisis which could bring down even the most robust democratic regimes. On the one hand, experts in democracy (Ronald Inglehart, Pippa Norris, Russell J. Dalton) keep their optimism and claim that these negative aspects are a sign of civic health, of progressive improvement of the civic awareness in the sense that the citizens become more critical towards the traditional political elites and more active in expressing their discontent/dissatisfaction (Norris, 2008 among others). On the other hand, there are voices stating that this current democracy/democratic crisis is so profound, that a rapid degradation is not impossible.

As mentioned above, Romania is no exception from these negative trends. Based on recent studies and World Values Survey (WVS) reports (the 2012 report being the most recent), Romania ranked second (after Russia) among the 30 countries included in the survey where people think that their own country should be ruled by a powerful leader with disregard for elections and parliament involvement and in which the young generation consider in a lesser extent democracy as a legitimate political regime.

Therefore, a solution to amend this present situation could be found in how we educate the young generations, especially in “how ideas and functions are communicated to the young through the educational systems and whether civic and democratic values are communicated in such a way as to reinforce societies which value them and place an importance on upholding them” (Audigier, 2000: 7).

2. Democracy and education

Democracy has been defined in many ways and much has to be in place in order for it to be categorised as well functioning. In its most basic form it is – opposed to dictatorial or authoritarian regimes – a form of government, where some kind of a constitution guarantees basic civil rights, fair and free elections, and independent courts of law. To this can be added important aspects as freedom of speech, even a free press, low or no corruption and a thriving civil society. But how to educate for democracy? How can citizens be educated such that they find it in their interest to participate in elections, in public debates and discussions and in the meantime respect the right of others to express their opinions in a non-violent, non-threatening manner?

Among the causes cited in the specialised literature (i.e. economic factors, institutional organization/design, historical factors, and in a lesser extent the cultural factors, used in the mediation between the other three categories), school education represents a prerequisite for creating a political culture beneficial for democracy. It is generally considered that certain attitudes, values and competences foster the development of civic awareness and political participation, and that education in school could contribute to the development of such attitudes.

Moreover, teachers' attitudes and values towards the society and the political situation (as well as towards their own profession) have a substantial role in educating the students to embrace democracy. Methodological theories built around the development of such competences support the idea that teachers' role in the classroom should transcend the compulsory (more restricted) curriculum and make references and connections to much larger domains. The way teachers interact with students determines the social involvement and the civic behaviour of their students in the community or society they belong to (Blazar&Kraft, 2016).

In other words, the fundamental values of democracy, such as freedom of choice, equity and justice, and even democracy itself should not be referred to or interpreted merely as abstract concepts, but as processes based on practice. To ensure the participation of its citizens, a country needs to cultivate these values through education (Zulu, 2001). Thus, school is seen as an educational venue that models the fundamental values in practice.

Therefore, teachers, together with administrators, and other staff members of the educational institutions, are responsible agents to impart knowledge to the country's young citizens, to provide them with skills, tools, opportunities and safe spaces to implement what they have learned about the process of decision making, problem posing about the uneven power, inequality and injustice that exist in school systems and in a society (Dewey, 1998; Freire, 2009).

3. Education for Democratic Citizenship (EDC)

The importance that the education decision makers attached to the development of competences related to Education for Democratic Citizenship (EDC) is reflected in the place allocated to EDC within the school curriculum across the European countries. Throughout its formulation and development phases, the EDC curriculum has also been influenced by prevailing education policies and developments in teaching and learning. More specifically, a major influence has been the European Recommendation of 2006 (Council of Europe, 2006), which included social and civic competences as part of the key competences each citizen should have for building the European knowledge society.

In the above-mentioned report on citizenship education in Europe (European Commission, 2017b), it is stated that “the detailed objectives and content of citizenship education vary across Europe, but the main aim of the subject area is generally to ensure that young people become active citizens

capable of contributing to the development and well-being of the society in which they live” (European Commission, 2017b: 13). Moreover, citizenship education is commonly understood to involve “not only teaching and learning of relevant topics in the classroom, but also the practical experiences gained through activities in school and wider society that are designed to prepare students for their role as citizens” (European Commission, 2017b: 11).

Although EDC is part of national curricula in all countries and all educational systems emphasise the importance of citizenship education and the acquisition of social and civic competences, the ways in which these systems have chosen to implement the subject area at school level differs from one country to another. According to the European Commission’s 2017 report, EDC is delivered in schools through three main approaches: as a stand-alone subject, as part of another subject or learning area, or as a cross-curricular dimension (European Commission, 2017b:13). Therefore, in the next two sections we will examine the status of EDC in official curricula in two European contexts, Icelandic and Romanian, with the aim to provide an overview of the different approaches used.

3.1 EDC in the Icelandic context

The main objective of education in Icelandic preschool, compulsory school and upper secondary school stated in the National Curriculum Guide is to provide their citizens with an education that encourages their active participation within the school walls, and outside in the society.

In the Icelandic National Curriculum (2014), democracy and human rights are included in one of the six fundamental pillars of competencies that are in practice in all three school levels (at all grades), starting at preschool, going on to compulsory school, then continuing in upper secondary school, as a cross-curricular theme (see Fig. 1 below).

Iceland

Cross-curricular theme	Six fundamental pillars: 'Democracy and human rights', 'equality', 'creativity', 'education for sustainable development', 'literacy in the broadest sense', and 'health and welfare'	4-7, 8-10
	Two fundamental pillars: Democracy and human rights are fundamental pillars	11-14 (general and IVET ⁽²⁹⁾)
Integrated into other compulsory subjects	Social studies	4-7, 8-10
Curriculum approaches	Themes/Subjects/Learning areas	Grades

Fig. 1 *Approaches to citizenship education according to the Icelandic national curricula for primary, general secondary education and school-based IVET (grades), in 2016/17*

(Source: European Commission (2017). *Citizenship education at school in Europe – 2017. Annexes: National Information and websites.*

<http://publications.europa.eu/resource/cellar/2fbe0e26-c846-11e7-9b01-01aa75ed71a1.0001.01/DOC_1>

The National Curriculum clearly defined and stated the process of implementation for these six competencies. They are to be evident in all school activities and in the content of school subjects and fields of study across all three school levels. The National Curriculum is based on the Preschool Act, No. 90, 12 June 2008, the Compulsory School Act, No. 91, 12 June 2008, and the Upper Secondary School Act, No. 92, 12 June 2008. The reference for these acts are, to name a few, the Act on Equal Status and Equal Rights of Women and Men, No. 10/2008, and other policies of international institutions of which Iceland is a member such as the United Nations Convention of the Rights of the Child, the Council of Europe policy on democracy and human rights, and UNESCO policy on general education of sustainability development. The pedagogical practices for democracy and human rights is based on critical thinking, reflection, scientific attitude and democratic values. Their learning process should be facilitated and modelled by the working methods of tolerance and equality, democratic cooperation and responsibility (Ministry of Education, Science and Culture, 2014).

The National Curriculum (2014) stipulates the role and responsibilities of teachers and also the criteria for teacher education. Therefore, institutions engaged in teacher education are responsible for providing teachers with competency in incorporating the six fundamental pillars in their teaching and developmental work (Ministry of Education, Science and Culture, 2014).

In the case of the University of Iceland, its website accounted for the four faculties in the School of Education that has the role of educating teachers, social educators, leisure professionals, sports and health scientists, and pedagogy and education studies. The courses offered in the faculties enrich students' knowledge and understanding subject related to human rights and democracy in education address issues such as multicultural education, student diversities, critical pedagogy, inclusive education, critical thinking, parent-teacher cooperation, children language proficiency and as language user, etc.

For instance, the focus of the course *Inclusive education and the irregular school and society* is on learners with disabilities. It introduces future educators to the history of (special) education, theories and perspectives from disability studies, stigma and othering, democracy and social justice. The aim of the course is to give its students a basic understanding of student diversity in classrooms and to provide them with tools to work with learners with special needs and their families in mainstream schools and society. However, disabled students represent only one of many different groups of student diversity in everyday classrooms.

Multicultural society and schools: Ideology and research, on the other hand, focuses on theories, ideology and research on issues related to refugees, immigrants and their children. The students acquire understanding about the development of multicultural societies from a historical and international perspectives, migration, the position of minority groups and refugees. It addresses attitudes, prejudice and governmental actions that infringes on

issues of human rights, equality, democracy and social justice in connection to this population.

The third course of equal importance that is available to the students is *Critical thinking and philosophical dialogue*. The course provides the students with the basic understanding of engaging in philosophical dialogue with children and adults. Its objective is to draw connections between the national curriculum of Iceland and the discussion about independent, critical thinking along with the purpose, creativity, tolerance, self-knowledge and preparation for life in a democratic society.

In conclusion, all the courses above are only to showcase course contents and objectives with the concepts of human rights and democracy explicitly in focus. However, implicitly teacher education is underpinned with the philosophical concepts of equality, human rights and democracy since it is in the law that the higher education institutions have the responsibility to prepare students for responsible participation in Iceland as a democratic society (Ministry of Education, Science and Culture, 2015)

3.2 EDC in the Romanian context: the national curriculum and beyond

In Romania, Education for Democratic Citizenship was seen as a means of addressing the unstable political situation and the apparent lack of civic responsibility, especially considering that the transition to democracy has been strongly influenced by the nature and characteristics of the political regime existing before 1989. The literature on democracy and citizenship related to the Romanian educational system point out that its inclusion in the curriculum represented a crucial step in tackling the reminiscent social and political unrest by instilling virtues in children for the purpose of ensuring civic cohesion and a healthy national political culture in the future.

In 1997, the Council of Europe set up the Education for Democratic Citizenship (EDC) project with the aim to find out which values and skills individuals require in order to become participating citizens, how they can acquire these skills and how they can learn to pass them on to others (Audigier, 2000). Accordingly, in the same year, Romania has changed the curriculum and introduced Civic education at secondary level and adjusted all the curricula for social sciences taught at pre-university level.

Moreover, in February 1999, the Romanian Ministry of Education issued a policy and development programme on Education for Personal Values and Democratic Citizenship. This document emphasized key themes regarding the individual responsibility and understanding the political processes, as well as the need for an effective programme of in-service training in order to achieve implementation (Ministry of National Education, 1999). One year later, in 2010, the Romanian Ministry of National Education updated the curriculum again and introduced Education for Democracy at high-school level, as an optional discipline, with a 1h time slot allocated per week.

However, despite all these initiatives related to EDC, the rather fragile educational system was faced at first with various obstacles left by a long period of communist control (i.e. a lack of classroom teaching materials; teachers with little or no understanding of democracy; teachers with little or no training in appropriate pedagogical techniques; teachers ill-equipped to teach about self-government; educational administrators with no professional training and little understanding of the implications of democracy for the operation of schools a.o.). Another drawback was also the substantial and lengthy task of training the teachers in Education for Democratic Citizenship.

At present, EDC is part of the Romanian subject-based formal curriculum, either as a compulsory separate subject at primary and lower secondary levels (Civic education), or as integrated in various separate optional subjects at each level of formal training (European education and

Education for society at primary level, Intercultural education at lower secondary level) as illustrated in Fig 2 below. For example, at the upper secondary level, it is integrated in other compulsory subjects at social sciences specializations (sociology, philosophy, history), and available as a separate optional subject (citizenship education, media competence, human rights, intercultural education, education for democracy, EU Institutions, international humanitarian law), based on curricula elaborated by the Ministry of Education (Curriculum for sociology, approved by Order of the Education and Research Minister 3252/16.02.2006; Curriculum for philosophy, approved by Order of the Education and Research Minister 5959/22.12.2006; Curriculum for social studies approved by Order of the Education and Research Minister 5959/22.12.2006; Curriculum for citizenship education, (Grade 3: 2004; Grade 4: 2005; grades 7-8: 2009) [Online] Available at: <<http://www.ise.ro/Departamente/Curriculum/Programescolare.aspx>>; Curricula for social and humanistic subjects at high-school level, [Online] Available at: <http://www.ise.ro/Departamente/Curriculum/Programescolare.aspx>> Invățământ Liceal>Ariacurriculară:Om și societate> Cultura civica_clasele a VII-a - a VIII-a.pdf.).

Curriculum approaches	Themes/Subjects/Learning areas	Grades
Romania (21)		
Cross-curricular theme	Embedded in the general objectives	10-12 (IVET)
Integrated into other compulsory subjects	Personal development	1-3
	Philosophy	13 (general)
Integrated into other optional subjects	Philosophy for children	4-5
	Humanitarian international law, education for intellectual property rights, education for development	10-13 (general)
	Sociology	12 (general)
Compulsory separate subject (22)	Civic education	4-5
	Civic culture	8-9
Optional separate subject	Education for society	1-3
	European education	4-5
	Civic culture, moral-civic education	6
	Civic culture, education for children's rights	7
	Intercultural education	6-9
	Civic education, competence in mass media, education for democracy, human rights, intercultural education, European Union institutions	10-13 (general)
	Social studies, children's rights/child protection services	13 (general)

Fig. 2 *Approaches to citizenship education according to the Romanian national curricula for primary, general secondary education and school-based IVET, in 2016/17*

(Source: European Commission (2017b). *Citizenship education at school in Europe – 2017. Annexes: National Information and websites*. <http://publications.europa.eu/resource/cellar/2fbc0e26-c846-11e7-9b01-01aa75ed71a1.0001.01/DOC_1>)

As mentioned in the previous section, teachers play a substantial role in educating the young to embrace democracy. On the one hand, they facilitate the development of EDC competences, and, on the other hand, they assess students in EDC. Thus, many initiatives related to an effective implementation of citizenship education in Romania have been aimed at providing adequate training and support to teachers in the form of seminars, workshops, specialization short-term courses, informative meetings a.o.

Furthermore, recent research on EDC in the Romanian context point out to the stringent need for motivated, well trained and fully competent teachers. For example, in order to find out what teachers understand by education for democracy, a study was conducted in 2018 to evaluate how democratic values and attitudes are cultivated and understood in Romanian schools (Bădescu et al. 2018). The data presented in the study came from two sources: a survey conducted in the form of a 35-minute interview of 1427 teachers from secondary school and high-school, randomly chosen from 140 schools. The data were collected by CC SAS during 10-24 November 2017. The other set of data was obtained from a qualitative research conducted on four focus groups of teachers, two groups from the rural areas (underdeveloped village and developed village) and urban areas (underdeveloped town and developed town). The interviews were conducted in March 2018 by CC SAS (cf. Bădescu et al. 2018:3). The teachers identified several essential attributes of a good and active citizen: respect, discipline, responsibility, seriousness, honesty, tolerance, compliance with rules and laws, loyalty and perseverance. Regarding the values that can be cultivated in school: good manners, teamwork and cooperation, responsibility, tolerance and respect, perseverance, hardwork, imagination, competitiveness, independence, altruism, be economical, religion, obedience (cf. Bădescu et al. 2018:12-13).

The conclusion of this study indicated that the teachers acknowledge the contribution of the school in educating students to be good citizens, but only if there is already a strong foundation provided by the family. In this sense, family has the duty to transmit important values that prepare the children to become better citizens (Bădescu et al. 2018). Regarding teachers' self-evaluation studies on how well they consider themselves prepared to develop education for democracy and active citizenship in their subjects, more than 80% of the teachers of foreign languages, for instance, declared that they

are prepared to incorporate democratic competences in their courses or in tutoring classes (Bădescu et al. 2018).

In other words, the Romanian teachers are prepared for EDC to be incorporated in other subjects as well, and thus to become a cross-curricular objective to be delivered by all teachers (this approach is already in use in many European countries, Iceland being one of best examples). In fact, the most recent proposal for the revision of the Romanian educational system entitled *România educată. Viziune și strategie 2018-2030 [Educated Romania. Vision and strategy 2018-2030]* (2018) is based on three pillars and twelve desiderata, the first of which is education for active citizenship (the educational system should train active citizens). This project also discusses the necessity to develop EDC competences at both pre-university and university levels. So far, at university level, EDC competences were only mentioned in institutional strategic documents (university charts), or in the syllabi of specialized courses, but not as a cross-curricular objective.

However, many recent initiatives have explored the current situation of developing transversal skills and competences at the university level, and also studied the possibility of identifying new methodologies aimed at raising awareness and mobilizing students in favour of developing such competences. For instance, a group of researchers from the University of Craiova promoted and implemented during 2014-2020 a series of international joint projects, in partnership with universities from Iceland (University of Iceland and Bifröst University), Norway (University College), Italy and France with the main objective of developing joint research and educational activities, in order to equip students with transversal skills and competences related to education for sustainable development and education for democratic citizenship (Tilea, Duta, Johansson, Murphy, 2015; Tilea, Duta, Reșceanu, 2017; Tilea, Morin, Duță, 2019).

In conclusion, education for democratic citizenship is effectively implemented in the Romanian educational system on the whole, but we have to conclude with a reaffirmation of the problematic and dynamic nature of *citizenship* and the need for continuous theoretical and practical reflection on this subject. There is no doubt that the issue of democratic citizenship will always be a topical one, especially in a context in which the relatively recent (re)emergence of the term ‘citizen’ attained a global, common understanding within ‘the education of living together’.

Conclusions

Overall, the challenges and limitations faced in this study were to weld together experiences, viewpoints and reflections that are lived and expressed in two different cultural and social settings, Iceland and Romania. That is why the concepts under research were seen in relation firstly with the Council of Europe’s reports and other publications, and secondly with the strategies, educational policies and study programmes related to Education for Democratic Citizenship in each country.

What Iceland and Romania also have in common, besides the common European guidelines and objectives included in the formal curriculum, is the need to complement it with informal learning. Students learn about democratic citizenship by taking part at informal activities related to citizenship education outside school and promoting projects between schools and the local community. In both countries, there are many national programmes and initiatives supporting citizenship education through extra-curricular activities and participation in school governance at all level of education. For example, in Romania, starting with the 2011/12 school year, all schools provide a week’s after-school activities devoted to citizenship education in partnership with the local community. The programme is called ‘Other Kind of School’ (*Școala altfel*) and is coordinated by the Ministry of Education, Research and

Youth. Other examples are the national programme *Different School – know more, be better!*, which supports a specific programme of extracurricular activities for each school and includes citizenship activities, and the *National Strategy of Community Action*, which is an extra-curricular educational programme that promotes social cohesion by connecting high schools with link organisations that work with children who have specific needs, such as schools, supported housing programmes, day centres or hospitals. In Iceland, since the new Youth Act entered into force in 2007, municipal authorities are required to promote the establishment of youth councils, whose role is, among other things, to advise municipal authorities on the affairs of young people in the community concerned.

These programmes and initiatives aim to build young people's understanding of diverse social groups and their specific needs, “broadening the life experiences of young people whose life experience is significantly different” (European Commission, 2017b: 93-94). Thus, students are given the opportunity to experience values and principles of the democratic process in action. It is a stated fact that the concept of education for democratic citizenship is an integral part of the action: they both stand in a dependent relationship to one another.

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CUMULATIVE DEVELOPMENT OF EDUCATIONAL RESEARCH AND INNOVATION COMPETENCES IN THE TRAINING OF PRIMARY AND PRE-SCHOOL EDUCATION TEACHERS

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Abstract

The article analyses, from multiple perspectives, the problem of developing the educational research and innovation competences of the future primary and pre-school education teachers, with a view to the integral development of the training dimensions. Our previous research and papers in the field of educational curriculum and the development of professional and transversal competences represent a consistent conceptual basis and a useful platform for curricular representations and concepts, which have been capitalized in the issue of reflections, hypotheses and in the development of the theoretical framework of the problem.

Starting from an analysis of the categories of professional and transversal competences formulated in methodological guides and institutional documents, we appreciated the legitimacy and the opportunity of explicitly introducing the educational research and innovation competences in the competence profile of the primary and pre-school education teacher. Our analyses reveal the possibilities of deriving and operationalizing these categories of competences, their ability to legitimize specific curricular structures, which will facilitate the development of the reflective-investigative-innovative dimension of the primary and pre-school education teacher. Also, our theoretical approaches converge towards asserting the comprehensiveness of the educational research and innovation competences, illustrated in a taxonomic system and it constitutes the support for further empirical and experimental research.

Keywords: *cumulative development of professional and transversal competences, educational research and innovation competences, cognitive competences, action-methodological competences, axiological competences, self-management competences of development in the field of educational research.*

1. The profile of professional competence for primary and pre-school education

The crystallization of the desirable competences for the teaching career during the initial training period and their manifestation in professional performances represents a strategic objective assumed by the academic institutions that manage didactic professionalization programs. The initial training for the didactic career is the first stage of the process of cumulative

development of professional and transversal competences, which represents “the systematic process of acquiring new competences or of perfecting them, in a rational manner, in formal contexts, through the curricular programs of the academic subjects and through professional internships, to ensure the accumulation of the necessary credits, as well as in non-formal and informal contexts, through activities outside the university environment and through self-training” (Bunăiașu, 2012, 8-9).

An analysis of the formulation and description of the profile of professional and transversal competences, at official level, reveals the taxonomic rigor. We can establish the increase of their degree of complexity, especially at the level of the generic descriptors of the professional competences, defined in the Matrix of the National Qualifications Framework for Higher Education (apud Bunăiașu, 2012, 11-12):

a) “Professional competences:

- at the knowledge level 1) Knowledge, understanding and use of specific language;
- 2) Explanation and interpretation.
- at the skill level: 3). Application, transfer and problem solving; 4). Critical and constructive reflection 5) Creativity and innovation”.

b) **Transversal competences (at the level of attitudes, values):** 6). Autonomy and responsibility; 7) Social interaction; 8) Personal and professional development.

The professional and transversal competences covered by the bachelor program *Pedagogy of primary and pre-school education, defined in the National Register of Qualifications for Higher Education* are (<http://site.anc.edu.ro/registrul-national-al-calificarilor-din-invatomantul-superior-rncis/>):

1. “ Professional competences:

C1 Designing training or educational programs adapted for different age/training levels and various target groups.

C2 Realization of the specific activities of the instructional-educational process in primary and pre-school education.

C3 Assessment of learning processes, outcomes and progress of pre-schoolers/young school children.

C4 Managerial approach of the pre-school/young school children group, of the education process and the age-specific learning/social integration activities of the target group

C5 Counselling, guidance and psycho-pedagogical assistance of the various categories of people/educational groups (pre-schoolers/young school children/students, families, teachers, employees, etc.).

C6 Continuous self-evaluation and improvement of professional practices and evolution in the professional career.

2. Transversal competences:

CT1 Applying the principles and norms of professional deontology, based on explicit value options, specific to the specialist in the educational sciences.

CT2 Effective cooperation in professional, interdisciplinary work teams, specific to the development of projects and programs in the field of education sciences.

CT3 Use of effective lifelong learning methods and techniques for continuous professional development and training”.

In the system of competences for the *Pedagogy of primary and pre-school education* we note the integrative character, relevant for the multidimensional structure of the profile of professional competence, finding component elements (specific knowledge, skills, habits/abilities, attitudes and professional values), for all the training plans: epistemological-cognitive (scientific, pedagogical, psychological), methodological-operational (pedagogical, didactic), managerial, counselling, psychosocial, personal and

professional development. But, also at this level, we point out the lack of categories of general competences, which, explicitly specified, legitimize and guide the curricular structuring of the process of developing the emotional, intercultural, educational research and innovation dimension. In our opinion, these dimensions represent strategic axes of professional training, in the spirit of affirming postmodernism in educational practices.

At another level, of the evolution in the didactic career by obtaining didactic degrees, the official documents reveal the characteristics of the stages of professional training in primary education, according to the regulations in force: “1) Initial training: analytical, fragmentary, disciplinary, dominantly cognitive; 2) Full-time professional degree: synthetic, interdisciplinary and complementary, holistic, unitary and integral, situational-experiential training; 3) Teacher certification degree II: action, reflective, decisional, interactional training; 4) Teacher certification degree I (Senior teacher): innovative, creative, attitude-reflective training” (Manolescu, Voiculescu, Albu, Ezechil, Ionel, 2007).

The characteristics of the evolutionary route reveal the cumulative development of the professional competences in relation to the specific of the curricular development for the didactic training, in the diachronic sense. This perspective highlights a separation of the dimensions of professional development between initial and continuous training. In our opinion, the cognitive dimension should not be exacerbated in the initial training, which leads to a fragmented, monodisciplinary, predominantly theoretical curriculum. Cognitive competences represent the basis of professional development, but their cumulative development is achieved by correlating them with the methodological-actions, with creativity, research and innovation, with the managerial, socio-emotional and cultural dimensions, of career management.

The complete development of the profile of professional competence represents a strategic option of the professionalization programs for primary and pre-school education, transposed into the holistic academic curriculum, in the spirit of the pedagogical constructivism paradigm. The curriculum is designed and made more effective in the sense of the competency-centred curricular model and revised according to the training and professional development needs of the trainees.

2. Educational research and innovation competences; structural and evolutionary characteristics

In our previous works, we addressed the problem of developing intercultural competences, in the initial and continuous training of teachers (Bunăiașu, Strungă, 2016) and of emotional competences (Bunăiașu, 2018), with emphasis on their role, the derivation in specific competences and the development strategies. Regarding the educational research and innovation competences, we assess that they have some defining notes:

- they represent an operable set of knowledge, skills, habits/abilities, values and deontological attitudes, which favour constructivist reflections on educational theory and practice, the scientific attitude in the complex knowledge of the problems of education, facilitate the comprehensive understanding and interpretation, issuing of hypotheses, the rigorous design of investigative measures, the proper management of research projects, capitalizing and extrapolating the research results, innovation of educational programs and practices;
- they are highlighted by superior performance in academic learning and professional training;
- they have an integrative, comprehensive character, by including components specific to other types of professional competences of the

teaching career, which facilitate creativity, research and innovation (didactic, design, curricular management, assessment competences; managerial competences; counselling and psycho-pedagogical assistance competences; psychosocial, cultural competences; personal and professional development competences);

- are at the intersection of professional and transversal competences, including both cognitive and methodological elements, as well as professional attitudes and behaviours;
- the affirmation of the research and innovation competences is conditioned by the development of other categories of competences and by the crystallization of professional values and attitudes. The process of developing these competences is long lasting, being structured during the initial training period and progressively affirmed in the continuous training.

The professional profile of the educational research and innovation competences is crystallized, according to generic structural models, on several dimensions: cognitive, action-methodological, axiological, to which we added the dimension of teaching career management. With this in mind, we propose a comprehensive taxonomic system of educational research and innovation competences, within the initial professionalization of primary and pre-school education teachers. The model is structured on three elements: 1) Dimensions of educational research and innovation competences; 2) General competences, by dimensions of training; 3) Examples of professional performances, which highlight the development of these competences.

In this perspective, we propose the following taxonomic system:

I. Targeted competences:

1. Cognitive dimension:

C.1.1. Complex analysis and personal interpretation of the methodological paradigms, theories and systems of pedagogy – as an integrative science of

education and of the subjects of the sciences of education, studied in the bachelor program of *Pedagogy of primary and pre-school education*.

C.1.2. Identification, description and critical and constructivist analysis of innovative perspectives and problematic situations in educational practice, which may constitute research topics.

C.1.3. Development of a consistent, diversified and operational cognitive system, regarding the educational research methodology.

2. The action-methodological dimension:

C.2.1. Development of learning capacities through research, individually or in groups, in direct activities or in virtual learning environments.

C.2.2. Development of the design abilities of theoretical and practical-applicative research activities, in accordance with the methodology of scientific research.

C.2.3. Elaboration of research projects, which meet a number of conditions: relevance for the problematic field of education sciences and educational practice in primary and pre-school education; complying with the methodological framework of scientific research; the realistic character, given by the operability and feasibility of the project; a high degree of originality in the research of the theme and a great capacity in obtaining innovative solutions.

C.2.4. Adequate and creative application of the methodology specific to the project management, in the organization, implementation, monitoring, assessment and revision of the educational research projects.

C.2.5. Implementation of innovative results of educational research in pedagogical practice.

3. Axiological dimension:

C.3.1. Demonstration of the scientific and professional attitude of receptivity to innovations in the educational field and in the practice of the pedagogy of primary and pre-school education.

C.3.2. Applying the deontological principles and norms specific to the scientific research activities.

C.3.2. Efficient cooperation and assuming specific roles in research teams, in direct activities or in virtual environments.

4. Career management dimension:

C.4.1. Crystallizing the concept of self-management of professional development in the field of educational research and innovation.

C.4.2. Development of metacognitive strategies, of self-assessment, self-monitoring, self-training, in order to self-perfect the educational research competences.

C.4.3. Elaboration and implementation of a professional development project, structured on objectives and training areas, in which strategic options regarding the development and affirmation of educational research and innovation competences are integrated.

II. Expected performances: educational research projects; operational plans for managing research projects; elaboration of research tools: questionnaires, interview guides, focus groups, observation grids, matrix of analysis of curricular documents; docimological tests; research reports; studies (impact, experimental, comparative), research papers; innovative educational and curricular products: optional curricular programs, curricular guides and auxiliaries, educational partnership projects; professional development projects; operational self-management plans of the professional development project.

3. Conclusions

The analysis of the comprehensive character and the process of cumulative development of the educational research and innovation competences represents a useful cognitive and methodological platform in the issue of presuppositions, which will legitimize and guide our further studies. Thus, several operationalized variables were outlined as references for our subsequent reflections and research, with the objective of developing these competences and facilitating affirmation in academic and professional performances: a) increasing the consistency of the reflective-investigative-innovative dimension of the primary and pre-school education teacher; b) resizing the curriculum for the *Pedagogy of primary and pre-school education* bachelor program; c) development of learning strategies through research, in the pedagogical, psychological and didactic disciplines of the specialty; methods and techniques of experiential academic learning, through research; d) collaborative learning through research in virtual environments.

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FROM MULTICULTURALISM TO INTERCULTURATION: CURRENT SOCIOLOGICAL APPROACHES

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Abstract

Due to the dynamism and heterogeneity specific to most societies nowadays, cultural diversity is a constant of social life. Therefore, different cultural identities, cultural contacts and exchanges, interculturality, but also subcultures and countercultures are, in today's globalized world, features of contemporary societies, characterized by multiculturalism and social mobility. Especially as a result of the new waves of migration and fleeing in recent years, new discussions in the academic field have emerged related to the new contexts of cultural diversity, multiculturalism, cultural integration, social inclusion. The cultural impact and the various contrasts between the native culture of immigrants and the culture of the host societies generated debates and polemics both in political and scientific sphere. This paper deals with the current sociological approaches as regards interculturality and the major cultural processes and phenomena that emerge in a multicultural society. In

this respect, a general framework for addressing these issues is delineated, and notions such as human and cultural diversity, multiculturalism, interculturality, acculturation, interculturalisation, but also concepts of subculture and counterculture are discussed. The current views and approaches in sociology are highlighted and the complexity and the difficulties that epitomise and accompany some cultural processes are pointed out.

Keywords: diversity, multiculturalism, interculturality, acculturation, interculturalisation, subculture, counterculture

Human diversity and its challenges

Human diversity has been acknowledged since ancient times. However, it was rarely a subject as such in the social and human sciences (Jucquois 2005). Diversity, as a reality and as a property of beings and things to exist in multiple and different forms, has over time been framed in taxonomies that followed the specificities of certain civilizations and epochs, and often these classifications had the role to clarify the differences and to justify the existing hierarchies and social order.

Since the first half of the nineteenth century, the scientific approach to diversity went through several paradigms, from the vision of linear historical progress that “scientifically”²⁰ justified colonialism, to promoting the idea that not all human “races” have reached the same stage of development, therefore the “upper race” (whites) must assume the role of teaching and civilizing the “inferior races”, and to the deeper reflection that followed the two disasters created by world wars in the first part of the 20th century.

²⁰ The quotation marks used in this paragraph for references to “races”, including the justification, considered at that time “scientific”, of different hierarchies, are meant to mark the distancing of the author of this paper from these ideas.

Currently there is no unified approach to diversity in the various socio-human sciences (Schultze 2009, Wieviorka 1998). However, there is an agreement that diversity is still the risk factor of potential major conflicts, and it finds itself in the nucleus of still persistent imbalances in the world, in ethnic and nationalist claims, totalitarian derivations or various forms of violence in societies, which leads to the need to create – or refine, where it already exists – systems of political and citizen regulation based on pluralism. However, this finding remains at the stage of a rather abstract goal.

Neither at a political nor at a scientific level, concrete answers were found to the question: which are the mechanisms through which the peaceful coexistence of groups and communities, whose values, beliefs, desires, projects and interests are different, would be possible? The stake of these answers is enormous, given the acute current problems that divide societies and threaten the existence of entire communities (Jucquois 2005, 214).

Cultural diversity in societies that have received new waves of immigrants and refugees raises a number of practical and political difficulties. The problems faced by these societies show that, at least at present, the past models of the political approach to diversity are no longer working. That is why it appears currently as necessary to conceive new models, adapted to the new conditions and functional in the current situation. One should be also aware about the stringency of finding such solutions. This process proves to be difficult, given that it implies not only solutions that involve structural changes, that can be decided at political and administrative level, but also – above all – solutions that involve socio-cultural changes, that is, at the level of values, norms, symbolic representations, mentalities, and this is the level at which changes are the slowest and most difficult in a society.

Multiculturalism and cultural identities

At a general level, the term of “multiculturalism” designates the coexistence in a society of several different cultures, and at a more specific level the social response to the multitude of concrete problems generated by the coexistence of populations perceived as – or which consider themselves as – different (Policar 2005, 451). The first experiences of institutionalizing of multicultural actions and implementing such policies took place in Canada, Australia and Sweden (ibid., 450). For example, in Sweden, an immigration country for Finns and Yugoslavs in the 1970s, the multiculturalist policy adopted in 1975 was based on three fundamental principles (ibid.): equality between minority groups and the majority population in terms of living standards; the freedom to choose between the identity of the own ethnic group and the Swedish cultural identity; ensuring lucrative labour relations for the Swedish economy’s productivity. As can be seen in this example, as well as from the Canadian and Australian experiences, there was an indissoluble link at the level of politics between cultural particularism and participation in economic life, which drew M. Wieviorka (1998) to talk about “integrated multiculturalism”. By using this term, Wieviorka described the phenomenon through which the social and cultural demands of the minority groups are interconnected, as are the general economic needs of the host country and its political and moral values (Wieviorka 1998, 238).

On the other hand, experiences in the USA have determined other forms of policies, which Wieviorka characterizes as “crumbled multiculturalism” (ibid., 244). Thus, the institutionalization of multiculturalism followed in this country two distinct types of logic: one of a socio-economic nature, and another of an identitarian nature. The first logic characterized the so-called affirmative action policy, whose goal was social equality. In this logic, there have been taken, among others, measures of positive discrimination, such as quota policies and countervailing measures

designed for ethnic minorities and women. And yet – and hence the associated criticisms and malfunctions – from such policies did not benefit individuals regarded as disadvantaged or impaired, but abstract collective entities. The second logic, that of policies of recognition, aimed at the acknowledgment of cultural differences as an essential expression of human dignity. Such policies implied obtaining political recognition of rights and privileges based on ethnicity, but also, at a meta-level, the acquisition of a better social visibility and a more equitable access to the public space arena (Policar 2005, 451).

Cultural identities are being constructed and reconstructed not only by learning the norms and internalizing the values within the own group, but, above all, by comparing with other groups, and the main sociological mechanism that allows this comparison is the cultural contact (Azzi and Klein 1998, 77). In this context, there are made references to notions such as “interculturality” and “acculturation”, through which the interaction between two or more cultures, with all the involved exchanges, combinations, takings over, but also rejections and conflicts, is designated, as well as the term of “interculturalization”, which is used to indicate the awareness and the recognition of cultural differences in a society.

Interculturality, acculturation and interculturalization

The human cultural diversity in a given society is often referred by using the concept of interculturality. Originally, this term designated the multitude of relations between cultures, thus rather involving a static vision regarding culture. Currently, the term has acquired more complex connotations, referring to the relations that exist within a society between the majority and the minority groups in terms of culture (Dietz 2018, 1), thus including the relations with regard to ethnicity, nationality, religion, language, customs, rituals etc.

In contrast to the references of the concept of multiculturalism or the alternative notion of “multiculturality”, which highlight the coexistence in a society of several different cultures, interculturality indicates rather the power balance that acknowledges who belongs to the majority and who is “stigmatized” as a minority (Dietz and Mateos Cortés 2011). The relations between the majority-minority constellations are mainly asymmetrical in respect of political, social and economic power, and they frequently reflect historically patterns of denying diversity, stigmatizing otherness, or discriminating particular groups (Dietz 2009).

Until recently, Western societies denied to a greater or lesser extent the heterogeneity (Blanchet and Francard 2005, 334). Their interculturality or cultural contact with the so-called “primitive societies” during the colonization, or with the ethnic immigrant groups, on the occasion of the first immigration waves, materialized in the form of a rather unilateral acculturation, in which the relationship between the majority group and the minority ethnic groups was unequal, and the reduction of the differences was always in favour of the dominant system (ibid.).

One sense of the complex concept of “acculturation” refers to the process of learning the norms, values and behaviours expected by the social and cultural environment that is foreign to someone, individuals and groups alike. Regarding immigrants and immigration issues, the term of acculturation can be used to designate the process of learning the norms, values and behaviours expected by the culture in which the individual/ group immigrated (Chadraba and O’Keefe 2011, 7). Acculturation means, in this context, what is socially and culturally expected from the immigrants who want to settle and stay in the host country, or, in other words, a cultural “adjustment” of minorities (immigrants) to the majority culture.

Over the time, acculturation has manifested itself as an epiphenomenon of conquests, colonisations, subjugations and political and economic

domination (Geană 1993, 18), often having a forced character. In order to depict this imposed nature, the term of “assimilation” was used instead of that of acculturation.

The cultural assimilation, which was the dominant norm in USA until the second half of the 20th century (Gordon 1964; Farley 1982), was understood as unilateral process through which the immigrants and their descendants gave up their culture of origin and fully adopted the culture of the host country (the American one), with everything involved: language, traditions, customs, social structure, behaviours. In Europe, on the other hand, assimilation has become associated as early as the first half of the 20th century with ethnocentrism, cultural oppression, and even with the use of violent means to force minorities to conform, culminating with the Nazi methods. As a reaction to fascism and to extremist slippages of nationalism, to the oppression and even expulsion of minorities, on the one hand, and as a result of increasing of the relevance of human rights, as well as of self-esteem and cultural pride of minorities after World War II, on the other hand, “assimilation” has become a rejected term, even a taboo (Integration and Integration Policies 2006, 11). Therefore, the notion of assimilation has now fallen into disgrace, and the phenomenon to which it refers is politically repudiated due to the new ethical standards adopted in international relations.

At present, however, another vision prevails: instead of imposing to the minority groups the cultural hegemony of the dominant collectivity, there is promoted the recognition of differences, which are valorised as such and integrated in the interactions of social actors (Blanchet and Francard 2005, 335). This process and this perspective are called, at least in some conceptual delimitations (e.g. Blanchet and Francard 2005), “interculturalisation”. In a similar view, but not explicitly speaking about the recognition of differences, but about their awareness, C. Clanet (1998, 70) refers to interculturalisation as the

set of processes by which individuals and groups interact when identifying oneself as being distinct from a cultural point of view.

In practice, interculturalization is a complex and complicated process that involves a series of identity challenges. That is why it is difficult, if not impossible to achieve, because it would need a recognition of the cultural relativism, i.e. a recognition of own cultural limits, and such an acknowledgment is hard to find in practice.

As far as the identification of the social actors is concerned, interculturalization involves more than just a mere juxtaposition of ethnic identities, which would mean an essentialist perspective. It involves rather a negotiation, within some multiple and varied interactions, of some “affinities and oppositions, proximities and distances, in order to constitute a new, identity-bearing reality” (Blanchet and Francard 2005, 335). From this point of view, interculturalization is a challenge, since it involves at least a certain degree of identity fluidity (Camilleri, et al. 2015) and the willingness to accommodate, by which the owners of different cultural luggage find a way to achieve a common form of intercultural regulation (Collès 1994).

Subcultures and countercultures

Nowadays, as a result of the process of globalization and the increasing mobility of people, societies have become complex and diversified. The cultural manifoldness has become an omnipresent phenomenon. In this context, other specific notions are also used to define the surrounding social reality, such as “subculture” and “counterculture”.

Although apparently the notion of “subculture” seems to describe, in a pejorative way, something more “second to” the culture, or a hybrid form in which different styles mix heterogeneously, similar, in many ways, to kitsch, in fact it is an expression of the great cultural diversity existing in any society. It marks the identity of different social groups, characterized by norms, values

and alternative lifestyles, or different from those of the society as a whole. Subcultures are part of a society while keeping their specific characteristics intact.

If we define culture as a way of life, consisting of modes of doing, being and thinking specific to a particular community, subculture is also a way of life characteristic to a certain social group, different from that of other groups. Often, the subculture is understood as a marginal or subordinate section of the dominant culture. Subcultures are most often characterized through oppositional elements, frequently manifested by symbolic forms of resistance (Rădulescu and Ștefănescu 2003, 226).

Thus, subcultures must be firstly related to a “parent” culture, i.e. that culture they are a subset of, but they should be also analyzed in terms of their relations to the dominant culture, in other words relating to the overall disposition of cultural power in the society as a whole (Clarke, et al 1976, 13). According to D. Hebdige (1979), subcultures can be seen as subversions to “normality”, bringing together like-minded individuals who feel neglected by societal standards and allowing them to develop a sense of identity. Given the nature of criticism to the dominant societal standards they manifest, subcultures can be often perceived as negative.

The identity of a subculture may be based on its ethnic heritage, may derive from the economic condition of the group (such as the poor subcultures of the ghettos), or may be defined by region and history (Goodman 2001, 59). Subcultures may be also shaped based on factors of a sexual nature (e.g. different gay subcultures), musical styles (e.g. goth subculture, developed from the audience of gothic rock, as well as hip hop, punk, rave subcultures etc.), cinematic preferences (e.g. “Trekkies” as a subculture of Star Trek fans) or diverse hobbies (e.g. “Bikers” as a subculture of individuals whose primary interest, actions and activities involve motorcycles), etc. In the art, various subcultures have also been distinguished throughout the time, as for example

Dada/Dadaism and Surrealism movements, who promoted radical aesthetic practices, such as collage, “dream work”, “ready made” (Hebdige 2002, 105) as ways of resistance or protest towards the social establishment and the mainstream culture. What is specific to many subcultures in the field of art and music is that, when they occur, they may be considered subcultures in the sense specified above, appearing as radical and completely different from the dominant culture, but within a short period of time they can be encompassed by that, becoming the mainstream taste, as for example through media interest and commercial exploitation of their new, innovative ideas.

Moreover, subcultures can be defined in relation to the deviation from the standard values and norms of the society, this being the case, for example, of subcultures of drug users, but also delinquent and criminal subcultures. The awareness of the group identity can be determined just by the attitudes expressed by the authorities or by the public opinion, as is the case with the subculture of drug users. The preference for drugs makes the individual a stigmatized person, as a result of the social reaction manifested to drugs in most contemporary societies. Such stigmatization forces a person to associate with other individuals defined by the same identity or preferences, and to seek support or guidance in the norms and values of the respective subculture. In this way, the association of individuals practicing similar lifestyles determines the creation of subcultures, which are defined by certain roles and skills, interests, demands, habits, etc. A negative reaction to a subculture, manifested, for example, by stigmatizing its members, can paradoxically strengthen their sense of belonging.

Sociologists view subcultures in two different ways: either as the product of norms and values that are alternative to those of global culture, or as the result of marginal or deviant values, norms and lifestyles in relation to legitimate or conventional ones (Rădulescu and Ștefănescu 2003, 227). Some subcultures are legitimate (e.g. ethnic and religious subcultures), others are

illegitimate or deviant (e.g. criminal subcultures). However, “legitimate” or not, each subculture has its own perceptions, definitions, significations, meanings and focal areas of interest. For example, the subculture of young people has as focal areas of interest leisure, hedonism and nonconformism, and manifests itself as an important element of solidarity in relation to adults (ibid.). The attempt to resist the dominant forces of the society has often taken on musical and dance forms, which are enshrined in subcultures, becoming a symbol of resiliency (Lull 1992). Many modern musical styles originated in young people’s subcultures represent an “anathema” to parents, teachers and, in general, to the existing social rules at a given time (McQuail 1997, 92).

Often, subcultures adopt special ways to stand out, such as spectacular styles of clothing or hairstyles, or striking and unusual actions. All these represent significant forms of response and resistance specific to the subculture the individuals belong to, through specialized subcultural identities and rituals. Therefore, subcultures function to win, or at least to challenge and contest the “cultural space” for their members. In this way, they generate and confirm meaningful ways of both individual and collective identity, as well as a mode of reference towards the dominant values of the wider cultural and social order (O’Sullivan, et al 1997, 308).

Furthermore, a subculture has frequently a distinct language. Marked forms of communication within subcultures confer also a sense of identity, provide the possibility of more precise communication between members of the subgroup, and protect this communication from people outside it. However, the cultural mosaic created by subcultures can be considered a factor of enrichment of the society (Goodman 2001, 59).

In some cases, the cultural patterns of a particular subgroup are not only different, but explicitly contrary to the patterns of the rest of society. The term “counterculture” is often used to designate such phenomena. The countercultures embody ideas, values, norms and lifestyles that are in direct

opposition to those of the larger society (ibid. 60). The “hippie” counterculture, for example, has challenged and bearded, in the 1960s and early 1970s, the fundamental American values of individualism, competition and materialism. This movement was a politicized, largely middle-class, alternative or “revolutionary” youth subculture that protested, opposed and fought against the older establishment on both sides of the Atlantic (O’Sullivan, et al 1997, 66). While countercultures like this can prove themselves, in the long term, progressive for society, other countercultures, such as neo-fascist and neo-Nazi movements, the Ku Klux Klan in the United States or the Muslim fundamentalist groups, who have developed their own sets of cultural patterns that put them in opposition to the cultures of their own societies, are essentially deeply destructive to the society as a whole.

Sometimes, as was the case with the “hippie” movement in the United States of America, counterculture elements are absorbed by the wider cultural framework, and the distinction between the two is blurred (Goodman 2001). In most cases, however, the countercultures remain in opposition, sometimes in conflict, with the larger society.

Currently, many western societies that have received, over time, immigrants, are facing the phenomenon of criminal countercultures that are defined by the national or ethnic origin of their members, immigrants or descendants of the second or third generation of immigrants. Such delinquent countercultures operate according to the structures and rules of organized crime and functionate according to the principles of clans and large criminal mafia families.

Conclusions

At present, cultural diversity characterizes most societies. Cultural contacts and exchanges, as well as cultural impact in case of the social restructuration as a result of migration and social mobility, are currently

themes often addressed in social sciences. Various approaches and discussions as regards social and cultural diversity conceptualize this problematic through terms such as multiculturalism, interculturality, interculturalisation and so on.

While the concept of multiculturalism, as well as the alternative notion of multiculturality, emphasize the coexistence in a society of several different cultures, the term interculturality indicates rather the asymmetrical relations that exist within a society between the majority and the minority constellations in terms of culture, as there are, in fact, unequal power relations between them also from a political, economic and social point of view. To describe the cultural processes through which ethnic groups of immigrants have passed, over time, terms such as acculturation and cultural assimilation have been used, the first with reference to the process of learning the norms, values and behaviours expected by the new social and cultural environment, and the second with reference to giving up the culture of origin and fully adopting the culture of the host country.

However, at present another vision prevails, namely instead of imposing the cultural hegemony of the dominant collectivity to the minority groups, there is promoted the recognition of differences, which are valorised as such and integrated in the interactions of social actors. This phenomenon, named interculturalisation, which in practice is complex and complicated, because presupposes a series of identitarian challenges, involves processes by which individuals and groups interact when identifying oneself as being distinct from a cultural point of view. Thus, interculturalisation requires interactions and negotiations, but also a certain degree of identity fluidity and the willingness to achieve a common form of intercultural regulation.

But not only the societies that recently received new waves of immigrants face cultural challenges. In all societies there exist to a certain degree cultural manifoldness, subcultures and countercultures. As it has been stated above, subcultures can shape themselves in a society based on different

criteria, such as ethnic heritage, region, history, economic condition, sexual identities, but also art, music styles or hobbies. Moreover, there exist subcultures that can be defined in relation to the illegitimate deviation from the standard values and norms of the society, this being the case of criminal and delinquent subcultures, and the drug users' ones.

Whatever the criteria for defining for a subculture, whether legitimate or illegitimate, and whatever the ways of identifying of their members, all subcultures are related to a "parent" culture and are considered in terms of their relations to the dominant culture and the mainstream trends. Subcultures can be viewed either as the product of values and norms that are alternative to those of global culture, or as the result of marginal or deviant norms, values, and lifestyles in relation to the legitimate or conventional ones.

Sometimes, the cultural patterns of some particular subgroups are not only different, but explicitly contrary to the patterns of the rest of society. In this case, the term of counterculture is used to describe the phenomenon of adoption by some groups of ideas, values, norms and lifestyles that are in direct opposition to those of the larger society. At times some countercultures may prove revolutionary, or they may contribute to society's progress and changing the status quo, but more often countercultures are deeply negative and destructive to society, as is the case with criminal clans, organized crime, and the radical, extremist and fundamentalist countercultures.

Beyond the last-mentioned types of countercultures, which are rather exceptions, the cultural diversity and the broad mosaic created by subcultures can be considered factors of enrichment within a society.

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USING OF THE STUDY ON ENERGY PROFILE IN THE PREDICTING OF THE SUBSTITUTION REACTION OCCURRING AT THE CHEMISTRY COURSE

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Abstract

In order to achieve a modern, formative education, we consider the process of interdisciplinary teaching-learning-assessment of chemistry an important and determinant factor. Interdisciplinary study of content on different educational disciplines will substantially contribute to the education of chemistry students, to the formation and development of chemistry-specific skills, of a logical and flexible thinking, to a better fixation and systematization of theoretical knowledge and their ability to apply practice. To this effect, the use of different programs of molecular energy calculation, of some chemical processes arising in the analysed systems, of structure visualization, etc. requires an interdisciplinary approach to knowledge, skills and abilities in the field of chemistry in particular, as well as in computer science, physics, mathematics. This interdisciplinary approach presents a challenge and, at the same time, a necessity for chemistry students as future specialists in the educational field.

Keywords: interdisciplinarity, energy study, specific competence, radical reaction, ligand, coordinating compound, substitution.

Introduction

In modern education, more and more interconnected trends in the curricular content appear. This need for integration arises from the impossibility of one of the disciplines (e.g. biology, chemistry, physics, mathematics, geography, etc.) to solve or explain some complex problems of processes and phenomena related to the unitary content of life and the surrounding world.

The interrelation of the contents of Chemistry discipline with Biology, Physics, Mathematics, Geography, and Computer Science in the educational process is based on cultivating students' mastery of the skills necessary to effectively adapt future specialists in different social situations. The gained knowledge will have a greater value if it is practiced in real-life problem solving. In an interdisciplinary context there are opportunities for horizontal transfer of knowledge from one discipline to another at methodological and conceptual level.

Interdisciplinarity is a methodological principle of an integrated approach to chemistry through the formation at students of an integrated knowledge system based on methods and principles of investigation for the development of integrated, and unitary thinking [1].

The process of teaching-learning-assessment of chemistry at university level is a complex one and aims at building competencies in a certain field, independent of achievements got earlier in other areas of knowledge. Therefore, the interdisciplinary approach of content from different disciplines of study leads to the creation of a favorable and necessary environment for the

developing of the initial professional competence at chemist students in an inter-/transdisciplinary context [2].

The Chemistry training will be much more effective if the interdisciplinary reference is made. In the study of such discipline as *Chemistry*, for example, at the university stage of teaching-learning, some interdisciplinary connections with other related disciplines, such as: geochemistry, physical chemistry, coordinating chemistry, organic chemistry, analytical chemistry, etc., are established. [3].

The interdisciplinarity is an effective way of organizing curricula at all levels, which goes beyond the area of disciplinary content and which targets the area of methods/attitudes. The process of attaining an interdisciplinary model results from the intersection of different disciplinary areas, being ignored the strict limits of the disciplines. Through an interdisciplinary approach, higher learning objectives (metacognitive capacities) can be achieved. The organizer principle is no longer focused on content (as in the case of multidisciplinary) but focuses on key competences [4].

One of the ways to increase the attractiveness of chemistry is to use the knowledge to solve real-life situations. This field is characterized by an interdisciplinary approach, because the phenomena occurring in nature are subordinated to the laws of physics, chemistry, biology, etc. The use of information technologies in the training process becomes a field under dynamic development [5, 6].

The reform of Moldovan education has created prerequisites for some transformations in the curriculum, where the interdisciplinary perspective is distinguished. The society needs specialists who must have the ability to think interdisciplinary and easily move from one domain to another. The study of interdisciplinary correlations has always been in the view of methodologists, while the integrated study of disciplines has raised the issue to a much higher level. The integration of disciplines is important in the training process of

highly qualified specialists. At a global level, the training of staff is focused towards the formation of highly qualified specialists who potentially can be employed in several adjacent areas.

At the school/university curriculum level, there are sufficient resources to achieve interdisciplinary education, where common objectives with more disciplines can be established. Interdisciplinary education aims to establish an integrated curriculum, i.e. an organization of the educational process in which pupil/student performs activities which require skills acquired not only in a school/university discipline. The correlation between disciplines can be achieved at the level of content, objectives, creating a favourable environment for each pupil / student to express freely, to work in a team or individually.

During the study of Chemistry, the student learns different chemical processes that occur between the interacting compounds, one of which is the *substitution process*. Substitution (replacement) is a chemical reaction by which an atom or a radical of a compound is replaced by another atom or radical derived from another chemical body [7].

The modern educational process is marked by the active implementation of advanced technologies that would allow the study in an attractive and interactive context of bodies, phenomena, etc. The realization of the studies at the interdisciplinary boundaries highlights the most interesting phenomena and properties of the matter, which can be used in the elaboration of the new technologies with more superior characteristics than the existing ones.

The interdisciplinary studies are also valuable by involving research and interpretation methods of various fields, by using new technologies in new circumstances, adapting them to actual requirements. Because in the field of chemical reactions the energy state of the molecular systems is of a great importance, the use of quantum calculations come to be a good exercise for determining the probability of carrying processes and an efficient method of developing interdisciplinary research competence.

It is necessary the teacher to have truthful arguments based on calculations and experimental data to persuade the disciples of the fairness of the processed information, but it is even more important for the pupils/students to have themselves the skills to carry out these operations. The use of quantum calculations to determine the energy of some chemical systems and the probability of carrying out of some processes is a valuable element in motivating young people for chemistry training and research.

Applied methods and materials

The geometric structure of the reactants (R), transition states (TS) and reaction products (P) were studied *ab initio* using the SCF method in the ROHF approximation, using for the atomic functions the base 6-31n (ROHF/6-31G(d)) [8].

Using some methods of theoretical calculation, a series of geometric and energy parameters related to the molecular structure and the energy profile of some chemical processes can be correlated and predicted. The use of quantum-chemical methods in the pre-university educational system would allow the creation of a set of valuable skills for some pupils who could later develop their own research style based on information technologies and rapidly evolving electronic resources. The studied model allows the harmonious intercalation of the training with the research [9], thus the trainee gets the opportunity to acquire professional skills useful for solving different problems in the field, as well as in the related fields.

All calculations were performed using GAMESS [10], which is a modern software package used to investigate structural properties or those determined by the electronic structure of molecules or complex molecular systems.

GAMESS is used not only for the study of the geometry of the molecules but also of the reactions with their participation, for the study of intermolecular

interactions and the energy profile, being especially useful for reactive molecular species that are difficult or even impossible to study through experimental methods. This study of energy in molecular systems is entirely based on quantum-chemical calculations as well as their theoretical processing, procedures which can be recommended to pre-university teachers for implementation in professional practice. The GAMESS program performs the calculations based on the input data. All the program parameters are introduced in the initial files (example of the transition state calculation shown below):

```

$contrl scftyp=rohfunrtyp=sadpoint icharg=0 mult=2 $end
$contrl maxit=200 $end
$system memory=10000000 timlim=2200 $end
$statpt nstep=200 hess=calc $end
$basis gbasis=n31 ngauss=6 $end
$guess guess=huckel $end
$scf damp=.true. $end
$data
[CH3-H-Cl]
Cnv 3
C      6.0  0.0000000000  0.0000000000  0.0671388126
H      1.0  0.0000000000  0.0000000000  1.9032760811
H      1.0  1.0676901532  0.0000000000 -0.0247742350
Cl     17.0  0.0000000000  0.0000000000  3.8039078114
$END

```

Using this model, the calculations were performed for all species involved in this radical substitution reaction.

The didactic method of studying molecules and phenomena within the school / university course as well as for applying more complex study methods can be based on the use of several programs, one of them being GAMESS,

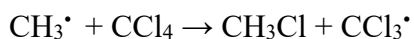
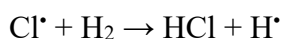
which contains different calculation methods, starting with those of dynamics and molecular mechanics, semi-empiric methods, methods *ab initio* based on Hartree-Fock theory or methods based on the theory of density function and can be used for calculating a very wide range of molecular properties [10].

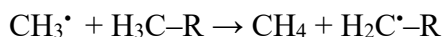
As the example, the reactions of methane chlorination occurring in the radical substitution process, resulting from the mechanism of the radical chain reaction and substitution reactions of some ligands from coordinating compounds have been taken. Both the energy status of the investigated chemical systems and the energy profile of the intermediate reactions were studied. The acquisition of quantum-chemical methods creates prerequisites for autonomous training, the formation of a personalized style of thinking, the elaboration of some special solutions in a problem situation.

Results and discussions

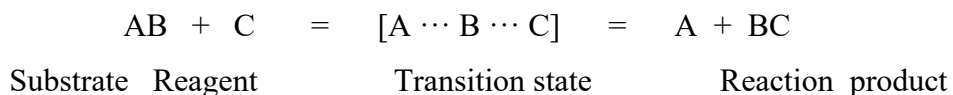
Theoretical study of the substitution reaction of hydrogen by halogen

The subject of this study is proposed radical reactions to some hydrocarbons. Most often, the free radical represents a carbon atom with an orbital partially occupied by an electron (a unpaired electron). Such a species is the result of a homolytic cleavage and has the character and behaviour of a monovalent atom. Free radicals being particles with relatively high reaction capacity have a fairly short life span. In their stabilization tendency they are combined in twos or through reactions with other substances present in the system. Such radicals are initiators of radical-mechanism reactions (addition, substitution or polymerization). We can refer to radical substitution reactions (SR), in which a free radical extracts an atom from a stable molecule, transforming the latter into a new free radical (examples):





Reactions of this type result from the mechanism of the transition state with low activation energy (0-5 kcal/mol), in the end the reaction rate being quite high:



In the free radical reactions besides the stable reaction product, a new free radical is formed. This, in turn, can initiate a new substitution reaction, in which besides a stable new molecule a new free radical is formed. Consequently, the state of the radical can continue through a large number of reactions, thus creating a chain reaction.

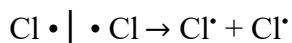
Chain reactions have specific properties that distinguish them from other types of reactions and thus become recognizable. A chain reaction consists of the following steps: initiation, propagation, termination (interruption).

Halogenation of alkanes, according to the nature of the process being carried out, is a radical substitution reaction (SR), which proceeds fairly easily in the case of the inferior representatives of the homologous series and slower in the case of the superior ones. The reaction is initiated at light (hv) or temperature (300-600°C). In these reactions the hydrogen in the alkane molecule can be replaced by halogen (especially chlorine or bromine, fluorine reacts quite energetically; iodine - not) to a complete substitution. The halogenation reaction of methane is a chain one and takes place in several stages: under the action of light or temperature, the chlorine molecule is homologically cleaved with the formation of two chlorine radicals. The resulted chlorine radicals react with the methane molecule forming hydrogen chloride and free radicals of methyl. In turn, methyl free radicals react with

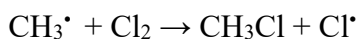
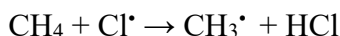
other chlorine molecules, forming methyl chloride and free chlorine, which reacts again with methyl chloride. Thus, the initiated reaction can proceed to the end (complete substitution).

Thence we have:

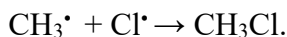
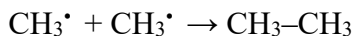
1. initiation of the reaction:



2. propagation of the reaction:



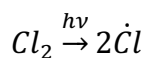
3. interruption of the reaction:



Also, with the help of quantum-chemical calculations, one can study the energy profile of some intermediate reactions that take place in different processes, for example substitution in the chlorination reaction of methane.

Particular case is the radical substitution reaction $\text{CH}_4 + \text{Cl}_2 = \text{CH}_3\text{Cl} + \text{HCl}$ for which the intermediate reactions were studied and theoretically analyzed; according to the reaction equation. the energy profile was studied. The process consists of the following steps:

1. At the first stage, which is the initiation reaction carried out under the action of light or temperature; the homolytic cleavage of the chlorine molecule takes place with the formation of two free radicals:



From the energy point of view, this reaction is thermodynamically convenient (exothermic), $\Delta E = 7.81 \text{ kcal / mol}$.

2. Several intermediate reactions may occur at the propagation stage of the radical chain:

a. The interaction of methane with the chlorine radical with the cleavage of the covalent bond C-H, with the initial obtaining of an intermediate (ST) with the following structure $\text{CH}_3 \cdots \text{H} \cdots \text{Cl}$, with the imaginary frequency $1731,6i$, finally obtaining the reaction products and forming a new radical according to the reaction equation:

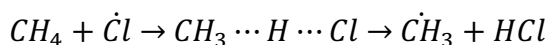


Figure 1 schematically shows the energetic profile of this radical reaction:

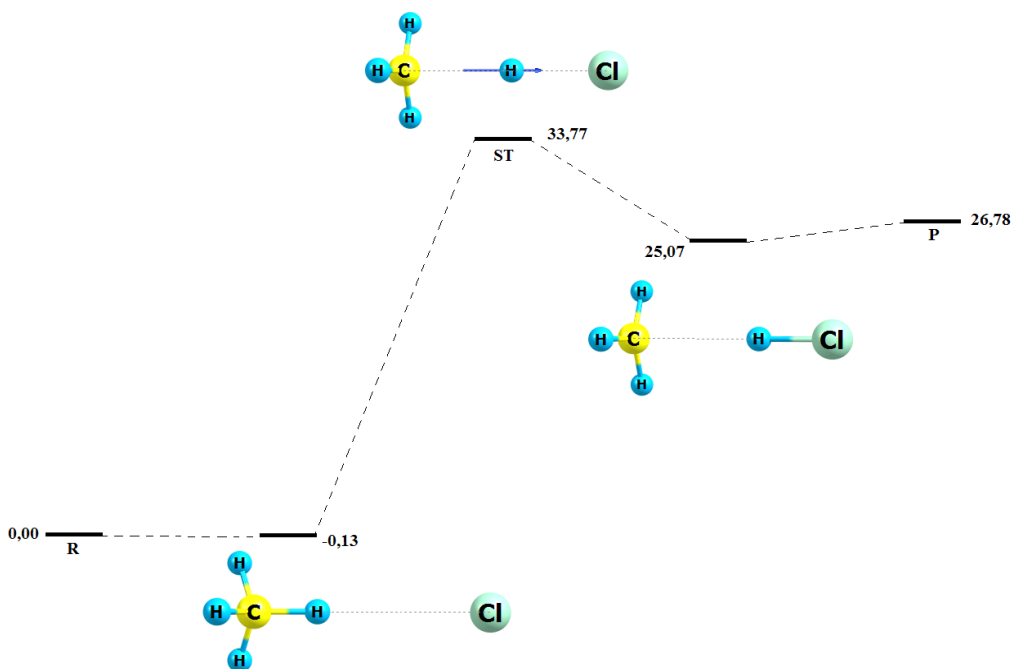


Fig. 1. Energy profile of CH_3^\bullet radical formation through the interaction of methane with Cl^\bullet radical.

According to the calculations, it turned out that the pre-reaction complex has a binding energy of -0.13 kcal/mol, the transition state energy is 33.77 kcal/mol, and the post-reaction complex has a stabilizing energy of 25.07 kcal/mol. The energy which triggered this reaction has a value of 33.64 kcal/mol. The vector of transition state, associated with the unique imaginary frequency, is first of all a movement of the hydrogen atom H between C and Cl that represents state structure appropriate to transition.

- b. The methyl radical formed at the previous step interacts with another chlorine molecule to form an intermediate $\text{CH}_3 \cdots \text{Cl} \cdots \text{Cl}$, which possesses only one imaginary frequency with a magnitude of 534.8 cm^{-1} . The obtained reaction products are the chloride radical and methyl chlorine according to the equation of reaction:

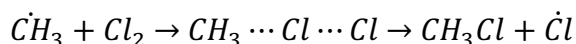


Figure 2 shows the location of the transition state from reactants to products and also shows the energy profile of the reaction. In order to get an insight into reaction mechanisms and to support experimental activity, theoretical studies of energy calculations and identification of transition state structures and pre- and post-reaction complexes were undertaken. This structure (ST) is characterized by the partial transfer of the chlorine atom to the methyl radical:

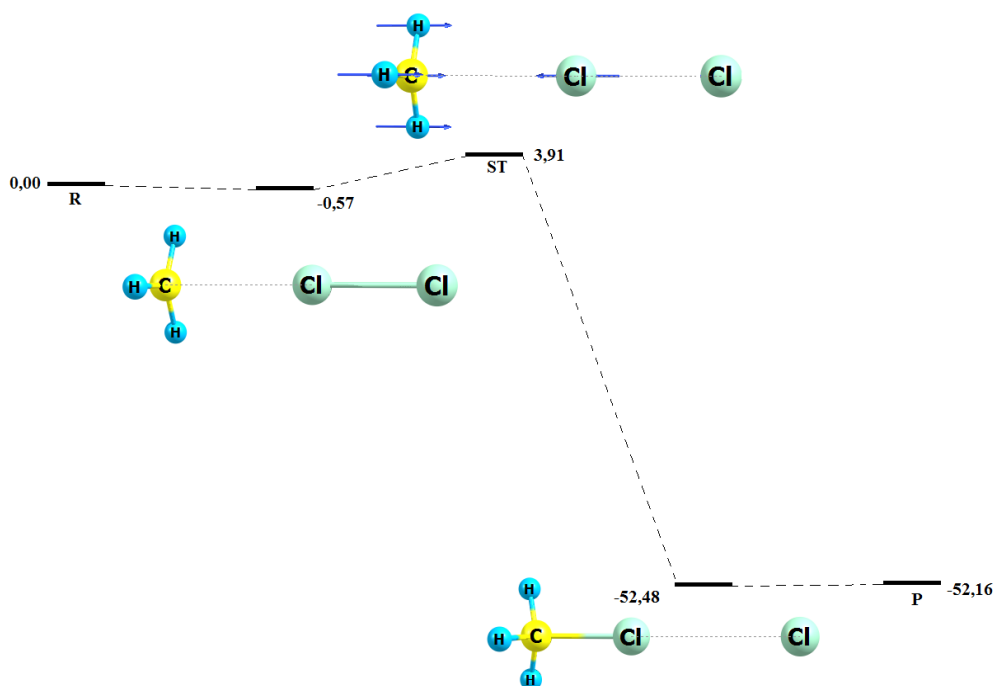


Fig. 2. Combination reaction of the methyl radical with the chlorine molecule.

The calculations show that the pre-reaction complex has a binding energy of -0.57 kcal/mol, the transition state has energy of 3.91 kcal/mol and the post-reaction complex has a stabilizing energy of -52.48 kcal/mol. The obtained result indicates a less stable complex of transition state than reactants and a barrier of activation of this reaction with a value of 3.34 kcal/mol.

3. Interaction between the radicals obtained at the previous stages may also be considered as a stage of interruption of the studied reactions with obtaining the ethane molecule, chlorine or methyl chloride. By analysing these reactions, it was theoretically proved that the combination of radicals actually takes place with the formation of neutral molecules and they occur without any reaction barrier.

The method is proposed for the Organic Chemistry course (cycle I) while studying the energy of radical substitution processes and is optionally recommended for the high school cycle.

Theoretical study of the substitution reaction of some ligands in coordinating compounds

Inorganic chemistry studies different substitution reactions, which differ in the interacting compounds, the used substituents, the mechanisms of chemical reaction, and so on.

By studying the substitution reactions, can be determined the result or the products to be obtained, the mechanism of the reaction (splitting of one type of chemical bond with the formation of another type), the different reactivity of the investigated compounds with different reactants, the state of aggregation of the system in which can occur reaction. In order to make the teaching-educational process more effective at chemistry course can be used different *methods* of scientific knowledge (problem-solving, modelling, schematization, chemical experiment, analysis, synthesis, generalization, etc.) and various *didactic resources*, including computer and the digital software necessary for selecting, viewing, processing and presenting new information.

The use of different digital software in the study of Chemistry is necessary to deepen the theoretical knowledge in the field, to form and develop practical skills for their further application, and to deepen the understanding of the processes and phenomena that arise in the analysed systems. The organization of an interdisciplinary education better targets both scientific progress and socio-human requirements regarding the formation of a contemporary personality, helps to gain an overview of life and universe, to thoroughly assimilate fundamental values and easier to distinguish objectives.

In order to analyse the possibility of an interdisciplinary investigation, involving knowledge from the fields of chemistry, physics, informatics, , it

was proposed the study of the energy process of the substitution of some sulphanilamide ligands (SAM) from coordinating compounds with other ligands (L – in current study – bipyridyl).

Quantum-chemical calculations were performed to determine the electronic structure of the coordinating compounds and the ligands in their composition. The geometric parameters calculated in the fundamental state of the studied compounds and the experimental data are presented in Table 1. The comparative analysis (Table 1) proves a good correlation of the theoretical and experimental data regarding the lengths of the chemical bonds formed between the cobalt atom and the atoms of the elements that coordinate to it on the apical axis.

Table 1. Theoretical and experimental geometric parameters (Axial co-ligand).

Complex	Theoretical values, Å		Practical values, Å	
	R (Co- E_L)	R (Co- N_{azid})	R (Co- E_L)	R (Co- N_{azid})
1	2,03	1,94	1,961(4)	2,031(4)
2	2,03	1,94	1,969(6)	2,024(6)

Since for the synthesis of coordinating compounds **1** and **2**, as rectangles, are used complexes from which the sulphanilamide ligands are substituted [9], it was decided to calculate the energy profile for these reactions. Studying these two substitution reactions quantum-chemically, where we have the same reactants, but in different reaction conditions different products (Figure 3) are obtained, the energy parameters described in Table 2 were described.

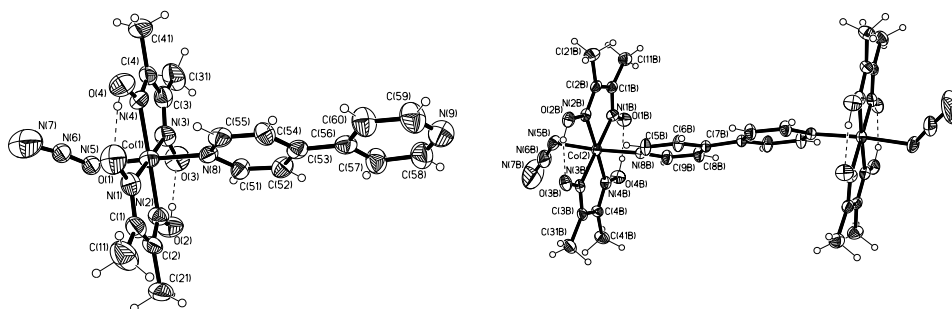


Fig. 3. The molecular structure of the complexes **1** (a) și **2** (b) [11].

The energy difference ($\Delta E = \Sigma E_P - \Sigma E_R$) between the reactants and the reaction products for each substitution is calculated. The obtained results indicate the exothermic nature of the substitution reactions.

Table 2. Energy profile of substitution reactions

Nr.	The substitution reaction	ΔE (kcal/mol)
1	$[\text{Co}(\text{N}_3)(\text{DH})_2\text{L}_1] + \text{bpy} \rightarrow [\text{Co}(\text{N}_3)(\text{DH})_2\text{bpy}] + \text{L}_1$	-9.22
2	$2[\text{Co}(\text{N}_3)(\text{DH})_2\text{L}_1] + \text{bpy} \rightarrow [(\text{Co}(\text{N}_3)(\text{DH})_2)_2\text{bpy}] + 2\text{L}_1$	-14.18

For both reactions the energy profile was studied. In the case of the first reaction, the reaction energy is -9.22 kcal/mol, and for reaction nr. 2 the reaction yield is 14.18 kcal/mol. Figure 4 shows the substitution reaction scheme:

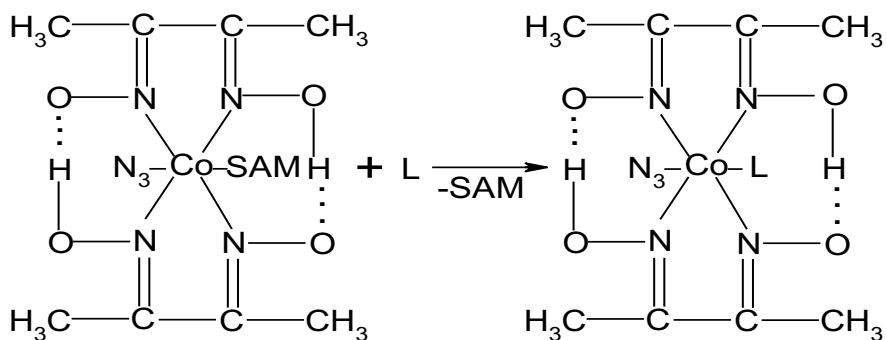


Fig. 4. Scheme of substitution reaction of the ligand SAM from the internal sphere of the complex by L.

Also, on the basis of the substitution reactions, it was decided to be calculated the energy of the cobalt bond with the sulphanilamide ligand prior to substitution as well as the substituent ligand in the final compounds. Table 3 shows the binding energy in the optimized geometric configuration, which is determined according to the relationship:

Table 3. Connection energy R_{Co-L} .

Ligand	$E_{bond.}(e.a.u.)$	$E_{bond.}(kcal/mol)$
SAM (L_1)	0.0678	42.54
bpy	0.0871	54.66

The method is proposed for the study of the substitution process energy and it is recommended for undergraduate and master degree courses, especially for Basics of Coordination Chemistry (Cycle I) and Coordination and supramolecular Chemistry (Cycle II).

Conclusions:

A quality education aims to develop students' systemic, integrative thinking about life and, as a result, it appears the need for the formation and development of integrated competencies which allow the correlation of the specific content of several disciplines, the transfer of knowledge and methods from one discipline to another.

The degree of student preparing for life is directly proportional to their ability to contextualize and apply knowledge in actual life situations, to solve everyday problems engaging different disciplines. The use of calculation methods of the energy of ligand substitution processes in coordinating compounds provides the opportunity to study the competition processes of different molecules at coordination with the central ion, the fact which allows subsequent analysis of the causes and the formulation of the conclusions regarding the degree of probability of formation of some coordinating compounds on the ground of theoretical calculations.

The training of the skills to use interdisciplinary methodology that integrates elements of chemistry, physics and informatics creates prerequisites for complex and profound studies in order to elucidate the chemical processes based on the calculation of the energy state of the molecular systems. This process enables students to build competences in the field of study subjects and information technologies.

The quantum-chemical calculations allow determining the energy profile of some chemical reactions, the fact which allows us to have a real prognosis in terms of the possibility of carrying out the chemical process.

Thus, using computer-based quantum-chemical methods, we achieve an efficient and attractive interdisciplinary model that argues the necessity and usefulness of conscious chemistry training. The model is recommended for use in university courses, and optionally in general education, for teaching motivated students or explaining some phenomena of higher complexity.

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MATERIAL, INTENTION AND ORIENTATION OF THE MESSAGE

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Abstract

The present study is located to the epistemology of communication and aims mainly to clarify the inscription of the message with intent and the orientation given by it. The secondary aims to highlight ten types of materials with which the message is constructed (signs, codes, clues, indicators, clues, signals, symbols, images, symptoms, default stories). The method used is a comparative-meta-analytical one. The conclusion reached is that any message is targeted, that every message has a purpose.

Keywords: communication, message, purpose, orientation, intention

1. Action, interaction, transaction

Any communication is a simultaneous and inevitable action, interaction and transaction. Finally, it can be a transaction between two communicators or between a communicator and several communicators, between a receiving communicator and a text. In any case, communicators to

“be on the same wavelength” must run the three states of being a communicator: action, interaction, transactions. When they pay attention to the same information, communicators reach the highest level of communication, that of transaction type. In other words, complete, perfect, total communication is a transaction that has been imbued with action and interaction. The central element of the communication transaction is the relationship, a flexible and attentive reaction to feedback and feedforward. The communication relationship is usually part of social relationships that influence the interpretation and use of messages. A lover and his girlfriend, under the moonlight, are in a social transaction that risks a lot to give, on the one hand, a certain emotional content and on the other hand to give certain meanings to everything that is said. Obviously, there is always a difference in quality between a close and direct communication relationship and a long-distance or long-term communication relationship. At the same time, whether we have a face-to-face or mediated communication, or it would be immediate or distant in time and space, the communication relationship will have three cardinal elements and two fundamental forms of action. These three cardinal elements are the sender, the message and the receiver. It is no longer necessary to defend the idea that the message has its own existence, independent of both sender and receiver. When someone wants to question this idea, then they need to think about how they feel when they go to put a letter in the mail and would like to take it back to change something. The letter is completely out of his control. The message is a letter.

Once built and sent, it becomes independent; the message producer can no longer change the message once it is placed in the communication stream. The producer of the message, the sender is in the situation of a general who would send his troops to battle without accompanying them, in which case he, the general, must wait for the news on the front to know if his orders are obeyed, how the enemy army reacts and what is the result of the battle. Once

sent, the message will enter the receiver's power. In this sense, Gilles Willett points out: "The message exists in the form of a sign or a set of signs with no other meaning than that assigned by the receiver, due to a cultural apprenticeship" (Willett, 1992, pp. 83-84). The message is not made of signs, but of meanings. Let's be clear: language is a system of signs. So the sign belongs to the language. Instead, meanings are elements of discourse. The message is the force of speech; it is not constructed from signs, but from contextual-situational decodings of signs, that is, from meanings. Without a decoder (receiver), speech has no message. The receiver gives by force of his mind the force of speech through the message. In addition, it is likely that the two strong communicators (sender and receiver) will never give the exact same meaning to a micro-message, a message-building material, a message in its entirety and even that, between sender and recipient, "equivalence "The meanings of a speech should not be perfect. The message is simply a set of meanings in direct connection with the traditions, customs, cultural acquisitions of communicators. These meanings will be largely affected by the cultural framework, the existential experience, the situation of the recipient and the psychological context. The issuing communicator constructs from different materials, the optimal meanings thanks to which he hopes to provoke this or that communicative and / or practically social effect or behavior. This would be the first act of the communication process. The receiving communicator scans, inventories the received meanings and makes a selection that he structures as a message; subsequently, he interprets this message as articulated and reacts to it. These two acts are not clearly differentiated temporally and structurally; however, they are distinct and based on different motivations. It turns out that the first function of communication is to put people in a relationship, to substantiate a transaction. Let's take an example: a communicator says "Good evening" to another communicator; he does not intend to convey anything about the current state of affairs. In fact, he makes

a polite and friendly gesture, generating a micro-message of friendship. Another example: someone is reading a newspaper; in doing so, this communicator is informed of changes in its environment; In addition, this communicator is exposed to taking a certain dose of persuasion administered by the editors and chroniclers of the newspaper and has fun with comics and some reports. Starting only from these examples, it can be seen, it can be deduced that it is rare that the messages have only one purpose and that, very often, the manifest content of the messages is not the one taken into account at all. The latent message of communication may be more meaningful than its manifest content. The uses, uses that can be given to one and the same message can vary greatly from one communicator to another. Any message can have multiple functions for the same receiver. Thus, an entertainment message will not be used by all for the purpose of strict fun, some can use it, interpret it politically, others in a social sense. Any message can be functional in various ways.

Communication always involves an action, interactional, relational-transactional component that has a structuring role. In this perspective, Klaus Krippendorff states the following general law of communication: “Any process of communication, once initiated and maintained, leads to the formation of a structure” (Krippendorff, 1971, p. 171). In other words, what is developed over time is a mutually acceptable model of interdependence, ie a structure. Krippendorff defines communication as a “process of transmitting a structure between the parts, identifiable in time and space, of a system” (Krippendorff, 1969, p. 107). This system can be biological, cognitive or social in nature (Cioroai et al., 2019; Yücesan, 2020). The whole process of communication is a dynamic and open system of messages. Data analysis can determine whether these processes have their own existence and specific characteristics. Communication is manifest in the system when its behavior cannot be explained by the behavior of its parts taken in isolation.

Communication always involves a grid encoding one form of communication into another form of communication, for example transforming a mental image into a verbal message.

2. Intention and orientation in the message

The relationship, the action, the interaction, the transaction and the meanings form the core of the message; they are found, they can be identified in the structuring center of the message. If there is no action, interaction, transaction, meaning and relationship, then it must rightly be considered that there is no message. Outside the transaction, what is observed, what it means is not ordinal to the message. If finally there is a synthesizer a transaction, then we must conclude that this simple yet complex fact is already significant and that there is a message. As for meanings as such, they can be of two kinds: assigned or found (Voinea, 2015; Voinea, 2017; Strehie, 2015). Whatever category it belongs to, the meanings always depend on a communicator and a situation. Constantin Noica pointed out that “the fundamental question of knowledge is whether to understand means to find or to put meanings” (Noica, 1993, p. 51). He opted for the thesis of meaning, that is, man puts meanings. Just as Martin Heidegger demonstrates that any comprehension must be preceded by a pre-comprehension, so, we say, before any message there is a pre-message: the pre-message consists in a unilateral or bilateral investment of intentionality. Specifically: there is no message without a trace of intent. The message is generated by a unilateral or bilateral intention. It bears irrepressibly an intentional inscription: either recipient- “ial”, ie induced by the issuer, by the recipient, or recipient- “ial”, ie induced by the recipient, or an inscription, a bilateral imprint. The intention of signification represents its distinctive sign, the mark of individualization. On the other hand, as a constitutive element of a consciousness that lives only as a consciousness of something, as a consciousness towards something, the intention inertially

takes over from this the teleological directivity, the orientation, the tendency towards, with a Greek word is impregnated with an “orexis “. The intention turns out to be teleological, it contains a project of influence. By coordinating ideas, it can be inferred that any message has a teleological character.

The purposes for which the necessary energy is provided become causes and produce effects. Thus, the final structure of the message intervenes, becomes manifest in the communication circuit and produces effects, induces influences (Negrea, 2018; Negrea, 2019a; Negrea, 2019b; Voinea, 2019). Under these conditions, it seems pertinent to ask questions such as “with what intention is the message transmitted, what is the intention of the message: to persuade, to convince, to seduce, to manipulate, to flatter, to control, to to scare, to make a mess, to terrorize etc. “

3. The material of the message

Indeed, the analysis of intention, which must be directed at understanding the tension between the expression of a need and satisfaction, does not explain the phenomenon of the message, but makes understand the way in which individuals use the signs and codes necessary for its particular practical production. The material of the message can be formed by signs, codes, clues, indicators, clues, signals, symbols, images, symptoms, implicit stories. These 10 types of materials can be used either using one, several or all of them within the same message. The differences in understanding their message come from what materials each receiver considers the communicator-sender has selected and used. In other words, the message is first and foremost a matter of choosing the production material and a problem of thinking in terms of the material used. Whoever chooses the material well will build a better message. On the other hand, whoever understands the message in appropriate terms regarding the material used, will be able to understand more accurately the projected message, the constructed message.

The material of the message carries much of the intent of the message. Indeed, the analysis of the intention of the message allows to reveal the level of consciousness and the type of strategy of the interlocutors in a communication situation, as well as the value induced by a message. Intention is the criterion of the semiological message (Mounin, 1968, p. 37). The selection of a message by a recipient is not guaranteed, because the recipient will understand the meaning and intent that the sender will encode. Interpretations and meanings of a message are always reduced to a small number of possibilities, even if the interrelationships between thought, objects and symbols allow access to a huge range of interpretations and possible meanings. A message cannot be interpreted anyway: some factors intervene in reducing the possibilities of interpreting a message. On the one hand, memory, experience, apprenticeship in the given cultural context have contributed to the construction of our mental structures as matrices of perceptions, attitudes and interpretations. On the other hand, as each communication situation has its own characteristics, some words we use are loaded with a certain meaning. And this is because the human being has a certain sense of consensus, compromise and convergence, because he accepts, in most cases, what is declared to be true without asking questions (Pelau & Rosca, 2018; Enachescu, 2020; Jora et al, 2020; Şahin & Kargın, 2020).

An act of communication allows to create realities due to signals, signs, symbols, meanings, sub-meanings, in a word due to messages. Acceptance of the act, its integration in the phenomenon of organization, makes possible the emergence of structure, order, meaning and significance (Alaran et al., 2020; Fernández-Bedoya et al. 2020). However, messages that result from an act and a communication situation always have a great deal of ambiguity about the ways to interpret them and to assign / discover / find their meaning. The signs and messages that produce it by assembling them can mean all kinds of different things depending on the context (physical, social, etc.) of

communication. “It does not communicate with unique or isolated peers, but with sets of signs, joined according to certain rules. In other words, it does not change signs, but messages” (Willett, 1992, p. 124). Signs do not allow communication unless they are combined in such a way as to produce meaning, to produce information. Truth is not a message, neither to be nor real. “Truth is real” (Heiddeger, 1988, p. 156); all that is real is message. The act of “moving” is not a message, but a combination of movements capable of signifying the sequence of approach is a message (Талалаева, 2020; Чернова, &Талалаева, 2020). The sequences “Peter-admire-Paul” and “Paul-admire-Peter” form two satisfying messages. The same words make two messages with different meanings. The sequence “rabbit-jump” is an ambiguous message, the form “-le” of the definite article indicating the singular number, and the form “sar” of the verb indicates the plural. The verb “to come” is not a message, but the form “comes” is one, it is a message. In order to produce, build or understand messages, we need communication codes. But only communication codes allow communication in the narrow sense of information exchange through messages. A communication code is the union of two components: a repertoire of signs and one of the rules for joining these signs, which allow the production of meaningful messages (intelligible and information-bearing): “it is a system of signs with the rules of use”, as Carnap says (Apud Mounin, 1975, p. 108). Natural languages or language codes (German, French, Chinese, etc.) are obviously among the most developed communication codes (Xue, Yang & Chen, 2020; Şahin, Kargın, Uz & Kılıç, 2020; Şahin, Kargın & Kılıç). In communication (in the narrow sense of the term), we send and receive messages (and not just information), and for this we must use communication codes. That is why it is said that messages are encoded and decoded. The message requires knowledge of the codes. Codes are repertoires of signs associated with some merging rules to produce meaningful messages. The main action of the codes is to allow communication

in the sense of exchanging messages. The code / message ratio is dialectical. In mass communication, with messages circulating in one direction (or almost), the receiver would be constantly confined to a passive role. The scientific study of perception shows that to perceive means to seek, to differentiate, to distinguish, to filter, to sort, to re-know, to compare, to associate... in short, it means to re-construct reality. The receiver must know the code used by the sender (lexicon and rules) and, starting from this knowledge, reconstruct the message issued, associating with the perceived words and their combination “good, adapted” meaning. Three factors complicate this operation: the concrete variability of linguistic utterances, the polysemy of linguistic signs and the existence of parallel messages with linguistic messages. Moreover, the way we receive signs, signals and messages has two levels: denotation and connotation. Indeed, when we speak we do not limit ourselves to encoding linguistic messages, we produce at the same time, voluntarily or not, all kinds of non-verbal messages (such as gestures, positions, facial expressions, etc.) and paralinguistic messages (such as tone and volume, flow rate, etc.) (Narita, 2019). These parallel messages confirm, accentuate, nuance, relativize or sometimes contradict the linguistic message itself. Thus, the statement “I am of course calm” can be denied by paralinguistic elements (very fast flow, very strong and sharp voice...) and paraverbal elements (redness of the face, tremors, jerky breathing...). The “true” message is the result of all these micro-messages, and in order to decode a message we must really build a meaning for it, taking into account any potential content of the communication. Because it best allows you to take into account all the micro-messages that flow simultaneously across multiple channels, face-to-face communication facilitates richer exchanges - complete, complex - than mediated communication. It should be added that the receiver is not limited to perceiving and decoding: it interprets. Indeed, the meaning it gives to the received messages depends not only on their global

communicative content (numerous simultaneous messages circulating in various channels), but also on the context of communication, in its broadest sense. To fully understand a message, we should correlate it with its overall context. Messages, in the strict sense of the term, are only one element of communication, and their meaning depends on both the formal content and the relationship between the participants in the communication process, which is always a systemic transaction: the behaviors of one depend on those of the other. and each other. For Mounin, for example, the scientific study of signs is restricted to the only signs that have been created to serve the media (ie, communication codes) and not to social codes, to take the terms we have already used (Mounin, 1975, p. 16).

4. Conclusion

Action, interaction, transaction and meaning appear as cardinal dimensions of the message, which is characterized by processes of transformation, combination, interpretation, representation, transmission, dissemination, exchange and sharing of meanings. As for the sign, which refers to something other than itself, it is the pivot of relationships, interactions and communication situations through which relationships are established with reality and the construction of realities. They are influenced by factors, forces and ways that intervene, in the form of messages and meanings, in the production of representations. This relationship depends equally on the needs and values of the protagonists and is influenced by situations and events that always involve a set of factors and forces of various kinds, as well as the groups to which each person belongs. In short, all communication factors intervene in the sender-receiver relationship and determine the chances of success or failure of the message, as well as the state of convergence or divergence of the interlocutors. They also demonstrate the complexity and

richness of the elements, forces, events, and processes that characterize the relationship between a sender and a receiver in a communication situation.

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RESPONSE TO TWO-MODE OF EXERCISE TRAINING (BRISK WALKING AND JOGGING) OF UNIVERSITY STAFF HIGH-DENSITY LIPOPROTEIN

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Abstract

The purpose of this study was to establish the response to brisk walking and jogging of volunteered university staff high-density lipoprotein cholesterol. The area of this study was Michael Okpara University of Agriculture, Umudike, and Abia State, Nigeria. The age of the regular non teaching staff is 35–60 years. As a result of the call for free lipid profile test, the population of this study was 67 volunteered university staff who presented themselves for the free lipid profile test at the University Health Center. Fifty-four (54) Non-teaching staff (39 females and 15Males) who pass the inclusion criteria test were selected as subjects, while 13 (9 male and 4 female) lost out of been selected as subjects of this study after strict consideration of both inclusion

and exclusion criteria. Data were collected using two instruments- Lipid and Risk Identification Questionnaire (LRIQ) and Venous blood samples from the subjects for lipid profile tests. The hypotheses were tested using ANOVA. Findings showed that after the treatment the male subjects in Brisk walking group had significant mean gain in the high-density lipoprotein cholesterol than jogging group. The HDL cholesterol of the female has almost equal positive response to both brisk walking and jogging exercise. The university programme and calendar that will motivate and give her staff opportunities towards active participation in exercise should be developed.

Keywords: Brisk walking, jogging, lipid profile, high-density lipoprotein

Introduction

Physical inactivity and Lipid profile abnormalities are among the risk factors affecting a growing number of adults across the globe. Lifestyle factors, including diet and exercise are well recognized as important modifiable determinants of lipid profile, and risk for cardiovascular disease (CVD). Lipid otherwise called cholesterol plays a major role in human heart health and high cholesterol is a leading risk factor for human CVD such as coronary heart disease and stroke. Cholesterol can be good (high-density lipoprotein) or bad (low-density lipoprotein) to the cardiovascular system (Ma & Shieh, 2006).

The modern lifestyle of more frequent intake of energy-dense food and culture of low levels of physical exercises and linked to increasing risk of lipid profile disorders. Exercise still remains the optimal strategy to improve the majority of lifestyle-induced metabolic disorders (Parr, Heilbronn, & Hawley, 2019). The beneficial effect of exercise on the cardiovascular system is well documented. There is a direct correlation between physical inactivity and cardiovascular mortality, and physical inactivity is an independent risk factor

for the development of lipid disorders including coronary artery disease. Low levels of physical exercise increase the lipid profile abnormalities and risk of CVD mortality (American Heart Association., 2017). The decision to initiate cholesterol-lowering therapy and high HDL-c therapy depends on the individual's risk of experiencing a cardiovascular (Juneau, 2019) since according to Abdulhadi (2019), high HDL levels protect against coronary heart disease.

In lipid profile test, High Density Lipoprotein cholesterol (HDL-c) less than 40 mg/dl is considered to be low, and a major risk factor for heart disease (Ma & Shieh, 2006). Meanwhile higher HDL-c level is has been reported to be better for an improved healthy heart (Abdulhadi 2019). Walking and jogging combine two elements, which have been reported to be beneficial for well-being, HDL-c level, and health. Among healthy populations even short exposure to natural environments (through physical exercise such as walking and jogging) can reduce mental fatigue and stress and improve well-being (Barton & Pretty 2010; Berman, Jonides & Kaplan 2008; Bratman, Daily, Levy, & Gross, 2015). Walking and jogging requires no special skills or facilities and is achievable by almost all groups of people.

There is preliminary evidence that exercise improves the antioxidative and anti-inflammatory properties of HDL (Ruiz-Ramie, Barber, & Sarzynski 2019). Most times poor HDL-c level is the result of ineffective lipid therapy. Individuals under the lipid lowering drug therapy complain of adverse effects of drug therapy. This has equally resulted to non and poor adherence to drug prescriptions. Exercise therapy could be a positive adjunctive alternative to these health problems associated to the lipid lowering drug, cardiac and lipid profile abnormalities. The participants in exercise therapy can use it whenever they choose without adverse effect, unlike lipid-drug therapy.

Method

Participants

The researchers through the Medical and Health Department of Michael Okpara University of Agriculture, Umudike Abia State, Nigeria called advertised for staff free lipid profile tests. The advert was placed on the Notice board of different colleges and staff school of the University. Volunteered Non-academic staff with elevated lipid profile aged 35-60 years from Michael Okpara University of Agriculture, Umudike Abia State, Nigeria presented themselves for the study. The population of the study was 67. Questionnaire that contained both Inclusion and exclusion criteria were given to the volunteered staff and their response collated. Hereafter, 54 Non-academic staff was qualified and sampled for the study. The 54 subjects for the study was randomly sampled into unequal three groups- Brisk walking group 18(13 females and 5 males), Jogging group 13(8 females and 5 males) and Control group 23 (18 females and 5 males).

Instruments

The instruments for data collection in this study were venous blood samples from the subjects. The data were collected by collecting venous blood samples from the subjects. About 5ml of venous blood samples were collected from the subject into plain tubes and allowed to clot retract and separated and the serum collected for the determination of lipid profile of the subjects.

Lipid and Risk Identification Questionnaire (LRIQ) was also administered to the subjects to elicit information on demographic data. The items on demographic data are: age range, employer, nature of employment (teaching or non teaching staff), and gender. The items for inclusion and exclusion criteria are: age, whether the subject is on sedentary (exercise less than 2 times/wk), not under any lipid-lowering drug therapy.

Procedures

Pretest and posttest Lipid profile test (screening) was taken by two certified Chemical pathologist and Medical laboratory scientists, during pre-test and post-test. Each of the subject was screened by the same examiners to minimize measurement error. Under all strict aseptic precautions, blood sample were collected from each subject after overnight fasting of about 12 hours. The serum were separated immediately after obtaining the blood sample by using centrifugation for 10 minutes. Blood lipid concentration and Lipid Profile- HDL cholesterol were measured and calculated using Blood Analyzer. The appropriate chemical testing kits were used.

The intervention group are: Group 1) Brisk walking and Group 2) Jogging group. The intervention group- Brisk walking group and Jogging group trained with one Research assistant each. In the exercise prescription for the intervention groups, all the subjects in both Brisk walking and Jogging group were guided to perform at the frequency of three time per week. The duration of each training session was 50 minutes- 5 minutes warm up, 40 minutes no break brisk walking exercise and jogging exercise and 5 minutes cool down.

The mode of exercise- Brisk walking exercise and Jogging exercise were aerobic exercises. The Brisk Walking Exercise comprises –self paced walk or move on the feet with slow pace. The Jogging exercise comprises- self- paced jog and trot. The training programme for the two intervention groups lasted for 12 weeks (3 months). There were three sessions per week (Mondays, Wednesdays, and Fridays). Every training session were made to be in the evening time, 5pm to 6pm, and were made up of three segments; the general warm-up, conditioning bout and cooldown.

The brisk walking exercise and jogging exercise programme took place at the Michael Okpara University of Agriculture (MOUAAU), Demonstration

Secondary School Football field. The subjects in the control group were instructed to live their normal lifestyle.

Changes in HDL-cholesterol were compared between the 3 groups- Brisk walking group, Jogging group and control group. Test for Mean Differences in the HDL-cholesterol level in the three groups across gender were carried out. The hypotheses were tested using ANOVA.

Results

Table 1: Test for Mean Differences in the HDL-cholesterol level of Male non-academic staff in the three groups.

		Sum of	Df	Mean	F	Sig.
		Squares		Square		
	Between	728.133	2	364.067	10.482	.002
	Groups					
PostHDL-c	Within	416.800	12	34.733		
	Groups					
	Total	1144.933	14			

Table 1 indicated that ANOVA revealed a significant main effect on the PostHDL-cholesterol of the male university staff in the three groups $F(2,14) = 10.482, p < .05$. Hence, the hypothesis that there is no significant difference in the Post HDL-cholesterol of male university staff was rejected. Post hoc analysis showed that differences occurred in male staff' HDL-cholesterol only in walking and control groups.

Table 2: Test of Multiple Comparisons in the Mean Differences of Male HDL-cholesterol Among the three Groups

(I) groups	(J) groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
walking exercise	jogging exercise	7.20000	3.72738	.232	-3.1601	17.5601
	Control	17.00000*	3.72738	.002	6.6399	27.3601
jogging exercise	walking exercise	-7.20000	3.72738	.232	-17.5601	3.1601
	Control	9.80000	3.72738	.066	-.5601	20.1601
Control	walking exercise	- 17.00000*	3.72738	.002	-27.3601	-6.6399
	jogging exercise	-9.80000	3.72738	.066	-20.1601	.5601

*. The mean difference is significant at the 0.05 level.

Table 3: Test for Mean Differences in the HDL-cholesterol level of Female non-academic staff in the three groups.

		Sum of Squares	Df	Mean Square	F	Sig.
PostHDLCHOL	Between Groups	2102.638	2	1051.319	42.015	.000
	Within Groups	900.798	36	25.022		
	Total	3003.436	38			

Table 3 indicated that ANOVA revealed a significant main effect on the PostHDL-cholesterol of the female university staff in the three groups $F(2,38) = 7.771, p < .05$. Hence, the hypothesis that there is no significant difference in the PostHDL-cholesterol of female non-academic staff was rejected. Further analysis using Bonferroni post hoc test indicated that differences in the female non-academic staff HDL-cholesterol differed in walking and control groups; and jogging and control groups but not in walking and jogging groups.

Table 4: Bonferroni Test of Multiple Comparisons in the Mean Differences of Female HDL-cholesterol among the three Groups

(I) groups	(J) groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
walking exercise	jogging	4.45192	2.24779	.166	-1.1924	10.0962
	exercise	16.07692*	1.82069	.000	11.5051	20.6487
jogging exercise	walking	-4.45192	2.24779	.166	-10.0962	1.1924
	exercise	11.62500*	2.12553	.000	6.2877	16.9623
Control	walking exercise	-	1.82069	.000	-20.6487	-11.5051
	jogging exercise	-	2.12553	.000	-16.9623	-6.2877

*. The mean difference is significant at the 0.05 level.

Discussions

There was sufficient evidence to suggest a favourable association of brisk walking and jogging on HDL-C across male and female in the two intervention groups. The ANOVA revealed a significant main effect on the PostHDL-cholesterol of the male non-academic staff in the three groups. The hypothesis that there is no significant difference in the Post HDL-cholesterol of male non-academic staff was rejected. Post hoc analysis showed that differences occurred in male non-academic staff' HDL-cholesterol only in brisk walking and control groups. Considering groups, male non-academic staff in Brisk walking group and Jogging group had the significant mean gain in HDL-cholesterol, though brisk walking group had higher mean gain. Male in control group do not have significant mean gain in HDL-cholesterol.

The hypothesis that there is no significant difference in the PostHDL-cholesterol of female non-academic staff was rejected. Further analysis using Bonferroni post hoc test indicated that differences in the female staff' HDL-cholesterol differed in walking and control groups; and jogging and control groups but not in walking and jogging groups. The HDL cholesterol of the female subjects had almost equal response to brisk walking and jogging exercise.

Both male and female in Brisk walking group and jogging group had significant improvement (mean gain) in their HDL-cholesterol level unlike male and female non-academic staff in the control groups. This could have also resulted from the fact that exercise treatment given to the Brisk walking group and jogging group could help improve their HDL-cholesterol level. Also, the exercise dose-50 minutes each training session proved to be a significant dose that led to the improved HDL-cholesterol. The results of this study showed that HDL-cholesterol levels differed significantly between the control group and the intervention groups (Brisk walking group and Jogging group).

Studies have also supported the finding that regular exercise improves HDL-cholesterol by increasing the profile level. Participation in moderate and vigorous aerobic exercise had a positive affect on high-density lipoprotein cholesterol (Ikekepeazu, Oranwa, Ogbu, Onyekwelu, Esom, & Ugonabo, 2017; Kwon & Lee, 2017; Loprinzi & Addoh, 2016; Mawi, 2009). Regular walking exercises prove to induce HDL-cholesterol toward healthy level as against irregular exercise.

Similarly, Bemelmans, Blommaert, Wassink, Coll, Spiering, Graaf, and Visseren, (2012) reported the relationship between walking speed and changes in cardiovascular risk factors in participants of a 12-day walking tour to Santiago de Compostela. It was a prospective cohort study. It is a single-centre study with healthy middle-aged volunteers. The Participants are healthy middle-aged men (n=15) and women (n=14). Subjects using lipid-lowering medication were excluded. Participants walked 281 ± 10 km of the classical route to Santiago de Compostela in 12 days in 2009. Walking speed was recorded and blood pressure, weight, waist circumference, lipids and glucose were measured every other day. Changes in risk factors were compared between gender-pooled groups with faster and slower walking speed. Second, the relationship between walking speed and changes in risk factors was quantified using a linear mixed effects model. On the results, in the faster walking speed (4.6 ± 0.2 km/h) group, high-density lipoprotein cholesterol (HDL-c) increased more than in the slower walking speed (4.1 ± 0.2 km/h) group (difference in change between groups: 0.20; 95% CI -0.02 to 0.42 mmol/l). A 1 km/h higher walking speed was related to an increase in HDL-c (0.24 ; 95% CI 0.12 to 0.30 mmol/l). In conclusions, walking the same distance faster improves HDL-c more in healthy middle-aged subjects.

However, similar studies (Murtagh, Boreham, Nevill, Hare, and Murphy, 2005; Omar, Husain, Jamil, Nor, Ambak, Fazliana, Zamri, & Aris, 2018; Slentz, Aiken, Houmard, Bales, Johnson, Tanner, Duscha, and Kraus

2005) have come with contrary findings which could be linked with insufficient exercise dosage and decreased amount of exercise over time.

Murtagh, Boreham, Nevill, Hare, and Murphy, (2005) examined the effect of instructing sedentary individuals to undertake 20 min of brisk walking, in two different patterns, 3 days per week, on fitness and other cardiovascular disease (CVD) risk factors. Forty-eight subjects (31 women) mean (FSD) age 45.7 F 9.4 year were randomly assigned to either one 20-min walk (single bout), two 10-min walks (accumulated bouts) 3 days week¹ for 12-week, or no training (control). Blood pressure and fasting lipoproteins were assessed. Thirty-two subjects completed the study. Participants were instructed to walk briskly throughout the 12-week walking programme and were permitted to use the treadmills at the university free of charge. Subjects were advised to perform all walking bouts on treadmills. Walkers recorded the duration, speed, distance and RPE of all walks in a training diary. Subjects were instructed maintain their usual dietary habits throughout the study. There were also no changes in body mass, adiposity, blood pressure, waist and hip circumferences, or lipid/lipoproteins. In the conclusion, brisk walking for 20 min on 3 days of the week fails to alter cardiovascular disease risk factors in previously sedentary adults.

Imamoglu, Atan, Kishali, and Burmaoglu (2005) compared plasma triglyceride and lipoprotein concentrations of male and female subjects of different training levels. In this study participated 20 male wrestlers, 44 male and 51 female physical education students and 40 sedentary females. The results showed no significant differences in lipid profile between control subjects and wrestlers with a 10-year experience. Wrestling training, consisting predominantly of anaerobic and strength exertions, was insufficient to stimulate a rise in HDL-cholesterol level.

In Dundar, Kocahan, and Sahin, (2019) study of the effects of 8 weeks of basketball training on blood lipids among basketball players. The exercise

groups were given 2 h of basketball training for 5 d a week and for 8 weeks. The control group was randomly selected among the adolescents who did not regularly exercise. The results suggest low levels of cholesterol, triglyceride, high-density lipoprotein (HDL), and low-density lipoprotein (LDL) parameters ($p < .05$). This study demonstrated that after 8 weeks of chronic exercise training, insulin levels decreased. The decrease in leptin and irisin levels is compatible with the pattern of decrease in the lipid levels as a result of chronic exercise.

Dietary factors (caloric consumption) influence the development of CVD either directly or through their action on traditional risk factors, such as plasma lipids, BP, or glucose levels (Mach, Baigent, Catapano, Koskinas, Casula, Badimon, Chapman, Backer, Delgado, Ference, 2020). Conway, Genest, Habi, & Leiter -Expert Opinion (2019) reports that one of the important focus should be to decrease caloric consumption and by increasing exercise (to more than 200 min per week) as needed to achieve and maintain a body mass index of less than 27 kg/m² (ideally less than 25).

The significant differences in mean gain in HDL-cholesterol in favour of subjects that took part in both brisk walking and jogging exercises as against those in control group is an evidence that exercise is more effective than diet in improving blood HDL-cholesterol level. The differences exhibited after the training could have been as a result of differential body responses and adaptation to exercise (Odo, Emeahara & Agwubuike, 2017). High levels of HDL cholesterol can lower the risk of heart disease and stroke (CDC, 2020). Hart, & Buck, (2019) reported that certain dimensions of health-related quality of life (BMI, blood lipid) have been shown to improve in older adults due to exercise training intervention.

Fogoros (2019) reports that a 2.5 mg/dL rise in HDL may actually amount to a substantial reduction in cardiovascular risk. Gao, Xu, Zhang, Lu, Gao, and Feng, (2020) reports that a 4 week of living high-training low and

high may help to relieve the loss of lean soft tissue mass and serum HDL-C of overweight and obese females. Pagonas, and Westhoff, (2019) states that if exercise would be a drug, it would be the ideal cardiovascular polypill. It reduces blood pressure, weight and low-density lipoprotein cholesterol and it improves glucose tolerance and endothelial function. Gordon, Chen, and Durstine, (2016) reports also reductions in body weight following aerobic training result in a significant improvement in HDL-C levels.

Conclusions

It can be concluded that brisk walking and jogging is an effective therapy for improving the blood HDL-cholesterol level. However, brisk walking is more effective in improving male HDL cholesterol than jogging. Brisk walking and jogging exercises can be recommended for persons with low HDL-cholesterol level without any adverse effects. The HDL cholesterol of the female has almost equal positive response to both brisk walking and jogging exercise. For reducing the risk of low HDL-cholesterol level and lipid, brisk walking exercise and/or jogging exercise with moderate intensity is more effective than depending only on diet and being inactive. To achieve improved HDL-cholesterol level higher dose of walking exercise and jogging exercise of about 50-60 minutes per day could lead to significant mean gain. Physical inactivity negatively affects the blood HDL-cholesterol level.

It was recommended that, the university programme and calendar that will motivate and give university staff opportunities towards active participation in sports and exercise should be developed and implemented. Authorities of tertiary institutions of higher learning, ministries and agencies should identify and implement physical exercise programme as health-enhancing strategies among her staff. Staff of the university should imbibe the culture of regular brisk walking exercise during their leisure period even outside school environment to improve their lipid profile. University staff

regardless of age and gender should make it a lifestyle exercising at least 3 times per week. Individuals who experiences adverse effects with the lipid lowering drug should go for brisk walking or jogging exercises as an adjunct alternatives.

All the participants signed consent of participation form after attaining personal understanding of the rationale of the study. The study procedures were approved by the University.

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**ACHIEVEMENT MOTIVATION AND ACADEMIC
OPTIMISM AS CORRELATES OF ACADEMIC
ENGAGEMENT AMONG POSTGRADUATE
STUDENTS IN NNAMDI AZIKIWE UNVERSITY
(NAU), AWKA**

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Abstract

Academic engagement is a pre requisite for academic success among students at all levels of education. This study sought to determine the relationship that achievement motivation, academic self-efficacy and optimism have with academic engagement of postgraduate students in Nnamdi Azikiwe University, Awka. Two research questions and two null hypotheses tested at 0.05 level of significance guided the study. The study adopted a correlational research design. The population comprised of 1633 Postgraduate students of 2018/2019 academic session in Nnamdi Azikiwe University, Awka. A sample of 280 postgraduate students were randomly drawn from the 14 Faculties in Nnamdi Azikiwe University, Awka for the study. The instruments used for data collection were three, namely: Academic Achievement Questionnaire (AAC), Academic Optimism Questionnaire (OQ) and Academic Engagement

Questionnaire (AEQ). Both validity and reliability of the instruments were determined. Validity of the instruments was determined by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was determined using the Cronbach Alpha and alpha coefficient of 0.72 was obtained for AAC, 0.75 for ASEQ, 0.70 for OQ and 0.72 for AEQ. Data collected were analyzed using Pearson Product Moment Correlation for answering research questions and t-test of significance of r for testing the hypotheses. Findings of the study revealed that the independent variables (achievement motivation and academic optimism) have a moderate and positive relationship ($r = 0.508$; and $r = 0.582$ respectively) with the dependent variable (academic engagement). Based on the findings, it was recommended that the University should re-strategize by employing more motivational packages for the postgraduate students to arouse them into active academic engagement required of their academic pursuit.

Key words: achievement motivation, academic optimism, academic engagement, postgraduate students.

Introduction

Education is the hallmark for the growth and development of any nation. Education in general and university education in particular, is fundamental to the construction of the knowledge based economy and society. Various nations of the world including Nigeria have been making planned efforts towards harnessing this important sector for their optimal development. The Nigerian government in its National Policy on Education of 2013 made the provision for educational opportunities for the citizenry, irrespective of creed or physical status (Anierobi, 2016). The policy is to ensure that the desire that Nigeria should be a land full of opportunities for all its citizens, able to generate a great and dynamic economy and growing into a united,

strong and self-reliant nation is achieved. University education started in Nigeria in 1948 with the establishment of a campus of the University of London in Ibadan, presently known as University of Ibadan. Subsequently, other universities were established through Federal and State governments as well as private enterprise efforts.

The Universities were established with the intents to providing manpower essential for the emerging public service towards the economic growth of the nation. Accordingly, one of the fundamental aims of University education in Nigeria is the creation of elites and production of skillful human resources as an arsenal for the development of the nation's development and economic boost (Jegade, 2017). This education is expected to impart knowledge, skills and competencies to the graduates. Nnamdi Azikiwe University, Awka (NAU, Awka) as one of the federal universities in Nigeria keyed into this with a focus to producing graduates who are disciplined, self-reliant and excellent in their professions.

The structure of the postgraduate programmes calls for constant interaction between the student and his academic supervisors for guidance on their numerous academic tasks required of the programme (Ahmed, Umrani, Pahi & Shah, 2017). Aside constant interactions with one's academic supervisor, the student is equally required to attend to course/class works, academic conferences and possibly write, present and publish meaningful articles in various academic journals relevant to their field of study. Obviously, postgraduate students should be trained to develop necessary skills for independent study and research prowess with the needed savvy for attracting of grants towards advancing the frontiers of knowledge (Aigbedion, Iyakwari & Gyang, 2017). No wonder it was posited that postgraduate education must motivate students to serious work to avoid hindrances to the accomplishment of their academic programme (Munyengabe, Haiyan,

Liangyan & Yiyi, 2017) which calls for active engagement of students in their academic activities.

Academic engagement refers to the extent to which students identify with and all their efforts, commitment and participation in academic and non-academic activities. Mohammad, Hossein and Abbas (2018) saw it as efforts devoted by students to academic activities. Contextually, academic engagement refers to students' active participation and commitment to academic related activities for self-improvement. Academic engagement is a multidimensional construct. For instance, while some school of thought presented a model that consists of three interrelated dimensions of cognitive, emotional, and behavioural engagement, another presented three dimensions of engagement consisting of absorption, vigor and dedication, which is the focus of this study (Alrashidi, Phan & Ngu, 2016). According to Truta, Varz and Topala (2018), vigor, dedication and absorption are dimensions of Schaufelli's 2002 model of academic engagement.

Vigor refers to the students' ability to exhibit a high level of mental energy while studying, their willingness to exert and invest effort and persist in the face of obstacles while maintaining a positive attitude to learning. Dedication is characterized by students' sense of enthusiasm and commitment in their studies. Absorption refers to students' sense of being profoundly occupied and completely concerted in their studies. Academic engagement is by this considered the hallmark for academic success among students. According to However, the challenges faced by teachers to draw learner's attention to educational contents and to help with their learning through academic engagement (Oriol, Amutio, Mendoza, Da Costa & Miranda, 2016) cut across all level of education.

The researcher observed that many postgraduate students in Nnamdi Azikiwe University are bored, unmotivated, and uninvolved as demanded by the exigencies of their academic programmes. This has posed a great challenge

to their teachers and supervisors alike. No wonder, Ahmed, Umrani, Pahi and Shah (2017) decried that students are not bringing that needed energy, vigor, and absorption in their studies. Similarly, Almarghani and Mijatovic (2017) rightly pointed out, that the passive role of students in their learning and education and the absence of engagement are quite common in many higher education institutions in developing countries including Nigeria. Academically engaged students fully concentrates in their studies, are enthusiastic in academic learning, and persist when encountering obstacles and challenges (Alrashidi, Phan & Ngu, 2016). This implies that lack of academic engagement can lead to unfavourable outcomes such as poor academic achievement, and increases the risk of academic failure and attrition. In order to be academically engaged, students should be motivated to achieve success in their study.

Academic achievement motivation is defined as a self-propelling drive and determination that students exhibit in their quest for academic success. Adegboyega (2018) simply defined it as one's determination to succeed in academic activities. Achievement motivation is the need for success or the attainment of academic excellence and it is one of the three components that make up McClelland's human motivation theory. David McClelland and his associates in their theory of motivation coined the term n-Ach which denotes need for achievement (Unachukwu; Ebenebe & Nwosu, 2019). This theory states that people will do what they have been rewarded for doing under appropriate conditions. By implication, all students are influenced by a need to achieve to a certain degree. In some students, the need to achieve could be high, while it may be low in others.

Achievement motivation has been consistently linked to positive academic outcome. According to Wigfield, Tonks and Klauda (2016), achievement motivation propels behaviour towards achievement. By implication, one could assert that achievement motivation is paramount for

success. For instance, Adegboyega (2018) found that achievement motivation is positively related to undergraduates' attitude towards examination. In his study, Ajay (2016) found no significant relationship between academic anxiety and achievement motivation among students. Similarly, Sivapakiam and Nalinilatha (2017) found that students with high achievement motivation tend to be less involved in examination malpractice and are disposed for the realization of educational goals. No wonder, Gang, Han, Fah and Bansa (2018) asserted that students who exhibit high achievement motivation display more determination in tackling difficult homework and completing their schoolwork successfully. In their study with secondary school students in Tiruvanamalai District of Tamil Nadu State, Santhi and Suthanthiradevi (2019) found a positive correlation between achievement motivation and academic performance of the students. Obiero (2018) also found a positive relation between achievement motivation and academic performance in mathematics. On the other hand, Gizdarska (2017) found in his study that achievement motivation was not able to predict students' performance. Nevertheless, when students have the desire to achieve maximally, they will likely be disposed to activate their desire and quest for active engagement in the academic activities. Bearing this mind, teachers therefore, mostly deploy motivation strategies towards arousing the students' desire for academic engagement which precedes success. This implies that lack motivation could hinder academic engagement. Lack of motivation seems to account for lack of desired engagement with a negative ripple effect such as the obvious procrastination and delay in carrying out academic tasks by students. Motivation to achieve is profitable when a student is optimistic about accomplishing their academic pursuit with success.

Optimism refers to expectations that good and positive things will take place in the future (Datu, King & Valdez, 2018). In other words, it could be explained as making a positive attribution about succeeding now and in the

future. Academic optimism refers to the ability of students to think positively and believe that things will work out successfully in their academic pursuit. In learning therefore, optimistic students are those who think positively, who plan and work for the best outcomes in any given academic endeavour. Thus, students who have an optimistic orientation towards their academic life should have positive expectations regarding their academic outcomes. According to Horner, Jordan and Brown (2019), high academic optimism suggests that academic achievement is valued by the students. Similarly, Mulawarna, Nugroho, Susilawati, Afriwilida and Kunwijaya (2019) found that optimism relates positively with self-esteem. This implies that lack of optimism can lead to negative expectations making a student to strive less, become passive and give up more easily on their goal. Validating the assertion on the implication of lack of optimism, Piper (2019) averred that pessimistic individuals are less satisfied with life.

Optimism has been identified with positive academic outcomes. For instance, Tetzner & Becker (2017) found a positive relationship between optimism and academic performance while Azfandak & Abdolatur (2019) associated it with academic self-efficacy. Similarly, Jafri (2017) noted that people with high level of optimism have positive outlook, and expectations of positive outcome enhances their willingness to put more efforts in academic activities. In his study, Cankaya (2016) found that optimism can support better academic functioning to some extent. In other words, optimistic students have positive expectations of their capability, efforts and success and these expectations should keep them engaged in the academic activities. Thus, optimistic individuals having these self-beliefs will no doubt, expect success when they are presented with a challenge. In their study, Mollnero, Zayas, Gonzales and Gull (2018) found that optimism predicted resilience noting that students who have good expectations about their future will show greater adaptation to academic stressors. By implication optimistic students are more

disposed to overcome academic challenges because they believe that with persistence and motivation, they will always overcome difficult academic circumstance they may face. This implies that the inclination to overcome difficult academic circumstances will increase optimistic students' motivation to engage actively in their studies.

Statement of Problem

Postgraduate students are generally looked upon as scholars. They are seen as intellectuals who are capable of running their academic programmes through individual study and active engagement in all academic activities provided by their higher institutions of learning. Unfortunately, contemporary postgraduate students in Nigeria especially in Nnamdi Azikiwe University seem to still lag behind in their engagements in academic activities. Achievement motivation and optimism have been identified in literature as necessary factors that promote academic engagement among all categories of students. It is out of this concern that the present researcher felt a need to look at how achievement motivation and optimism relate to academic engagement among postgraduate students of Nnamdi Azikiwe University, Awka. This study was guided by two research questions and two hypotheses:

Research Questions

The following research questions guided the study:

1. What is the relationship between achievement motivation and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka?
2. What is the relationship between optimism and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between achievement motivation and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka.
2. There is no significant relationship between optimism and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka.

Method

This study adopted the correlational research design. This design was adopted by this study because it sought to determine the relationship between the independent variables (achievement motivation and optimism) have with the dependent variable (academic engagement) of postgraduate students in Nnamdi Azikiwe University, Awka. The population of the study comprised of all the postgraduate students admitted in 2018/2019 academic session in NAU numbering 1633 (School of Postgraduate Studies, NAU, February, 2020). Simple random sampling technique was used in selecting 20 postgraduate students from each of the 14 Faculties in the university. A total number of 280 postgraduate students representing 17.15% were selected and this formed the sample size for the study.

Instrument for Data Collection

Three sets of instrument were used in collecting data for the study. Academic Engagement Scale (AES) used was adapted from the Utrecht Work Engagement Scale-Student Version by Schaufeli, and Bakker (2003). Utrecht Work Engagement Scale-Student Version was a 17-item instrument with six, five, and six items assessing Vigor, Dedication and Absorption subscales. It was originally developed on a seven-point Likert scale anchored by the response options from 0 (never) to 6 (every day). In adapting the instrument, item no 13 “When studying, I am very resilient, mentally” was removed,

leaving the AES with 16 items for this study. The instrument was then placed on a four-point Likert scale response of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The scale measures academic engagement on three domains (vigor, dedication, absorption). An average of all the three subscales provides a score for general academic engagement. Higher scores indicate active academic engagement while low scores indicate passive academic engagement.

Optimism is an 8-item instrument on a 4 point Likert response, adopted from academic emphasis cluster in School Academic Optimism Survey of Hoy, Tarter, & Hoy (2006). The original academic optimism scale measures and combines the three school-level elements: academic emphasis, collective efficacy, and faculty trust in parents and students. The scale includes 30 total items: 8 items on academic emphasis, 12 items on collective efficacy, and 10 items on faculty trust. Responses to collective efficacy and faculty trust items consisted of a 6 point Likert scale ranging from Strongly Disagree coded as 1 to Strongly Agree coded as 6, and responses from the academic emphasis portion consisted of a 4 point Likert scale ranging from Rarely coded as 1 to Very Often coded as 4. The items were directly scored such that higher scores indicate higher academic optimism while lower scores indicate lower academic optimism.

Achievement Motivation was measured using Achievement Motivation instrument adapted from Elias, Noordin and Mahyuddin (2010). The instrument contains nine items on a four point Likert response of strongly agree (4), agree (3), disagree (2) and strongly disagree (1). The maximum score for the instrument is 36 while the minimum score is 9. A score of 18 and above was considered high achievement motivation while a score of below 18 was considered low achievement motivation.

Validity and Reliability of the Instruments

The validity of the four instruments was established by three experts in Nnamdi Azikiwe University, Awka. One of the experts is in the Department of Educational Foundations, the other in the Department of Psychology, all in Nnamdi Azikiwe University, Awka.

The reliability of the instruments was determined using Cronbach alpha method in determining the internal consistency of the instrument. An alpha coefficient of 0.72; 0.70 and 0.71 were obtained for achievement motivation, optimism and academic engagement respectively, which was considered high and showed that the instrument was reliable for use.

Method of Data Collection

Data for the study were collected by the researcher with the services of a research assistant who was already trained on data collection exercise.

Method of Data Analysis

Data collected were analyzed with appropriate statistical methods. Research questions were answered using Pearson Product Moment Correlation Coefficient while the use t-test of significance of r was employed for testing the hypotheses at 0.05 level of significance. The decision rule was that if the calculated value of t is greater than or equal to the table or critical value of t , the null hypothesis will not be accepted. Otherwise, the null hypothesis will be accepted.

Results

Table 1

1. What is the relationship between achievement motivation and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka?

2. There is no significant relationship between achievement motivation and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka.

Table 1 showing the relationship and test of relationship for Achievement Motivation and Academic Engagement among postgraduate students in Nnamdi Azikiwe University, Awka (N= 280)

Variables	x	SD	r	t-cal	t-crit	df (2)
Academic Engagement	3.71	0.21				
			0.508	9.88	2.92	
278						Sig
Achievement Motivation	3.26	0.14				

Table 1 shows a correlation coefficient of 0.508 ($r = 0.508$) for the relationship between achievement motivation and academic engagement. This reveals that the relationship between achievement motivation and academic engagement is moderate and positive among postgraduate students in Nnamdi Azikiwe University, Awka. Table 1 also shows the test of significance of r for the relationship between achievement motivation and academic engagement. It reveals that the calculated value of t (9.88) is greater than the critical value of t (2.92) at the alpha level of 0.05 and df (2). Thus, the null hypothesis is not accepted. Therefore, there is a significant relationship between achievement motivation and academic engagement of postgraduate students in Nnamdi Azikiwe University, Awka.

Table 2

1. What is the relationship between optimism and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka?
2. There is no significant relationship between optimism and academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka.

Table 2 showing the relationship and t-test of relationship for optimism and Academic Engagement among postgraduate students in Nnamdi Azikiwe University, Awka (N= 280)

Variables	x	SD	r	t-cal	t-crit	df(2)
Academic Engagement	3.71	0.21				
			0.582	11.90	2.92	278
Optimism	3.05	0.13				

Sig.

Table 2 above shows a correlation coefficient of 0.582 ($r = 0.582$) for the relationship between optimism and academic engagement. This reveals that the relationship between academic optimism and academic engagement is moderate and positive among postgraduate students in Nnamdi Azikiwe University, Awka. Table 3 also shows the test of significance of r for the relationship between optimism and academic engagement. It reveals that the calculated value of $t(11.90)$ is greater than the critical value of $t(2.92)$ at the alpha level of 0.05 and $df(2)$. Thus, the null hypothesis is not accepted.

Therefore, there is a significant relationship between optimism and academic engagement of postgraduate students in Nnamdi Azikiwe University, Awka.

Discussion of Findings

The findings of this study were made as follows:

The study determined achievement motivation and academic optimism as correlates of academic engagement among postgraduate students of Nnamdi Azikiwe University (NAU), Awka. Research question one and hypothesis one determined the relationship between achievement motivation and academic engagement. The analysis of research question one revealed that achievement motivation has a moderate and positive relationship with academic engagement of postgraduate students in NAU. The result of hypothesis one revealed a significant relationship between achievement motivation and academic engagement of postgraduate students in NAU. The above findings prove that achievement motivation is very vital in academic engagement of students in tertiary institutions. This implies that students participate actively in academic activities and do better in class work when they have the zeal to achieve maximally in their academic pursuit.

This finding agrees with the findings of Santhi and Suthanthiradevi (2019) and also of Obiero (2018) that achievement motivation is positively correlated with academic performance of students. This could be explained that when students are propelled to achieve maximally, there is a high tendency that their zeal will make them to be actively engaged in their academic activities cum studies which facilitate success. Similarly, the finding aligns itself with the finding of Gizdarska (2018) that achievement motivation predicts students' performance. This is true because students' level of achievement motivation will predict his level of achievement. A student with a high achievement motivation is more disposed to actively engage in academic activities that will birth maximal performance and success than the

student with a low motivation to achieve. The finding also corroborates the finding of Adegboyega (2018) that achievement motivation has a positive relationship with students' attitude towards examination. One attitude towards examination whether positive or negative, could result from one's level of preparedness towards examinations. One cannot be properly prepared for an examination without engaging in active study and participation in other required academic activities. Thus, it could be said that students who have positive attitude towards examination are most likely are students who actively engaged in their studies and required academic activities.

The finding of this study disagrees with the assertion of Ahmed, Umrani, Pahi and Shah (2017) that students are not bringing the needed energy, vigor and absorption in their studies. This assertion seems not to hold for postgraduate students in Nnamdi Azikiwe University, Awka as their motivation to achieve maximally propels them to engage in academic activities.

Research question two and hypothesis two determined the relationship between academic optimism and academic engagement. The analysis of research question two revealed that academic optimism has a moderate and positive relationship with academic engagement of postgraduate students in Nnamdi Azikiwe University, Awka. The result of hypothesis two revealed a significant relationship between academic optimism and academic engagement of postgraduate students in Nnamdi Azikiwe University, Awka. The above findings prove that optimism promotes academic engagement of students in tertiary institutions. This implies that students participate actively in academic activities and do better in class work when they have positive expectation about succeeding now and in the future. Their expectation of good and positive academic outcome will propel them to engage in their studies.

This finding of this study agrees with the finding of Ekeh and Oludayo (2015) that optimism has a positive relationship with academic performance

of students. This could be explained because when students have positive expectations that they will succeed in their academic endeavour for the betterment of their lives, they will likely engage actively in academic activities to ensure the actualization of the anticipated success. The finding also agrees with Azfandak and Abdolahur (2019) that optimism has a positive relation with academic self-efficacy. Having a positive expectation about the outcome of a thing will no doubt build the person's confidence. Thus, students who have expectations of good and positive academic outcome will likewise, build confidence in their academic ability which will in turn boost their academic engagement. Finally, the finding also aligns with that of Mollner, Zayas, Gonzales and Gull (2018) who found a positive relationship between optimism and resilience among university students. It is also true that optimism could trigger and sustain resilience. Students who are optimistic about their academic pursuit are already disposed to develop resilience which keep them engaged in academic activities.

Conclusion

Based on the findings of the study, it is concluded therefore, that achievement motivation and academic optimism have a moderate and positive relationship with academic engagement among postgraduate students in Nnamdi Azikiwe University, Awka. Any increase in achievement motivation, and or optimism will reflect positively on academic engagement of the postgraduate students.

Recommendations

The following recommendations were made based on the findings:

1. The postgraduate students in Nnamdi Azikiwe University should build up their zeal for academic success. This will propel them to engage actively in their academic programmes.

2. The University should re-strategize by employing more motivational packages for the postgraduate students to arouse them into active academic engagement required of their academic pursuit.
3. Academic programmes should be made to be enriching and inclusive to enable the postgraduate students work together with course lecturers and supervisors without hitches as partners for maximum engagement of the students.

Suggestions for Further Studies

Based on the fact that the study was carried out with only postgraduate students in NAU, the researcher recommends for further studies as follows:

1. That a similar study be carried out using undergraduates in Nnamdi Azikiwe University, Awka to see whether the findings obtained for postgraduate will also be obtained for undergraduate students.
2. A replication of the study should be carried out using all the higher institutions in Nigeria for better generalization of the result in the nation.
3. A comparative study will be necessary for federal, state owned and private universities to find out which of their postgraduate students are more academically engaged.
4. The study can also be replicated using secondary school students.
5. A similar but a comparative study should be made among Postgraduate Diploma, Masters and Doctoral Students in the same Institution

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SOCIAL ACTION IN *SUROAN* TRADITION IN JAVANESE SOCIETY

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Abstract

Suroan is known as a tradition which resulting from acculturation between Saka and Islamic calendar. This tradition is performed to beg blessings and protections from misery and disasters. The implementation of *Suroan* became a custom in society and involving some trusted agents through social actions. However, most of *Suroan* performed in society is not in accordance with its true meaning. Regarding with this problem, this research has purpose to obtain the action in the *Suroan* tradition. The method used is descriptive qualitative with the kind of research is ethnography using Miles and Huberman's interactive model. The data is collected through interview and observation in Bangunharjo, Taman Sari village. The result shows that social actions performed by Bangunharjo society are: a) traditional action through *Suroan* implementation is performed; b) affective action in a form of burial of the

goat's head, group prayers and puppet shows; c) instrument rational action in a form of physic, material, and emotional involving; d) rational action of value in a form of *ubarampe*. Thus, it can be concluded that Bangunharjo society still conserving *Suroan* tradition.

Keywords: *Suroan*, social action, tradition, culture.

1. Introduction

The developed tradition in the Java society cannot be separated from the acculturation between Islamic and Hindu religion. The acculturation of Islamic and Hindu has provided new tradition in Javanese society that is dating system. The dating system used by Javanese society among centuries is Saka calendar which has developed in the reign of Sultan Agung, the king of Islamic Mataram in 1613-1646. Sultan Agung is trying to change the dating system by mix and match with Islamic calendar, thus, the result from the mix and match is in form of Java or Aboge calendar that is used up to now (Maziyah, 2010).

The belief on the dating system exists in the *Suroan* tradition which is known as tradition by the acculturation between Saka and Islamic religion. The Javanese society using dating system as guiding to some life occurrences such as determining the best time for marriage, building a house, and others.

The dating system of Javanese society is in accordance with month circulation. Javanese dating system is also using seven days in a week and *pancawara* system (name for 5 days in a week) consist of *legi*, *pahing*, *pon*, *wage*, and *kliwon* (Ruhimat & Ruhimat, 2011). The Javanese societies are having its own calculation dealing with the *pancawara* system for calculating the important days. The calculation is always combined with Gregorian calendar (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and

Sunday). From the *pancawara* system and Gregorian calendar, thus the *neptu* which consist of 35 days will be found (Utomo, 2005).

The grade for *neptu* for each day is:

Table 1. the calculation of days according to *Pasaran / Pancawara* System

No	Days	<i>Neptu</i> grade	<i>Neptu</i> of <i>Pasaran</i> days	Grade <i>Neptu</i>
1	Sunday	5	<i>Legi</i>	5
2	Monday	4	<i>Pahing Pon</i>	9
3	Tuesday	3	<i>Wage Kliwon</i>	7
4	Wednesday	7		4
5	Thursday	8		8
6	Friday	6		
7	Saturday	9		
Amounts		42	Amounts	33
<i>Neptu</i> of Gregorian calendar (days)			<i>Neptu</i> of <i>pasaran</i> days	

Source: (Gunasasmita, 2009)

This *neptu* calculation then become society references in determining the good day to perform *Suroan* tradition (usually perform in the first month in Javanese calendar). The *Suro* month has its specialty for Javanese society. Javanese society assumes that *Suro* is sacred month. In this month, Javanese society is suggested to leave any kind of unimportant celebration and is better to do self-introspection.

Suroan tradition in Javanese society in Bangunharjo, Taman Sari village is performed in order to hoping blessings and protection from God. The Javanese society believes that by doing *Suroan* is protected them from

misery or disaster in the Bangunharjo hamlet. According to Mister SI, in the previous time, Bangunharjo is experiencing disaster called *pagebluk* (an epidemic of skin disease that occurred in a community that did not heal until one of the Javanese residents in Bangunharjo hamlet took the initiative to carry out *Suroan* celebration by sacrificing a goat to obtain healing and a blessing in life (interview with Mister SI, May 16, 2018, 16.23 in Bangunharjo).

Thus, from the incident, the society believes that if the society does not perform *Suroan*, the society will face difficulty life. *Suroan* is having different procedure and implementation in each of region. The research conducted by Latifah (2015) and Christina (2008) explain that *Suroan* implementation in Temanggung, Central Java and Banyuraden, Yogyakarta are having different date or day in *Suroan* implementation. In Temanggung, the celebration is performed in the first date of *Suro*, meanwhile, in Banyuraden, the celebration is performed in the eight day of *Suro*.

Loso, et al., (2014) and Zahra, (n.d.) also states that the implementation of *Suroan* celebration is not only different in the date or day but also the way its implementation is also different. *Suroan* in Wonosari, Malang is performed by giving *sedekah bumi* (alms of the earth), washing the heirlooms, burning ogoh-ogoh, and puppets show. In addition, in the Gorontalo, Sidomukti, *Suroan* is celebrated in the intersection and started after Maghrib prayer.

These differences in the *Suroan* celebration are inseparable from the influence of social agents who feel responsible and able to implement *Suroan* tradition. Thus, the actions that perform by the social agents will be followed by other parties. Social action can be described as an act that can influence people or an act that is influenced by people. According to Weber, action was behavior that was meaningful, social action was action, i.e., meaningful behaviour that was oriented toward others (Truzzi, 1974).

Weber (2009) specifically classified the social action which has subjective meaningful into four types. These four types are including: 1)

traditional action, 2) affective action, 3) rational action of value, 4) instrumental rational action. The first classification can be described as actions that become a hereditary custom. Hence, *Suroan* tradition as traditional action is inseparable from society action. Secondly, affective action is described as action determined by the condition and emotional orientations of the agents. Thirdly, rational action of value is action which is performed without think about the way achieving its goal. In this action, the individual do not value whether or not the chosen way is the right one to achieve the goals. Fourthly, instrumental rational value is an action that is performed by individual with the consideration of its purpose. In order to determining the choice, individual usually used the tools in achieving its purpose.

In fact, *Suroan* tradition has become a habit of society group in Bangunharjo, hamlet. However, in its implementation, *Suroan* does not in accordance with the implementation of the ancestors. According to Said (n.d.), the *Suroan* tradition usually celebrated with *tirakat* (keep awake during night), fasting, and praying. Since it is become different in its implementation in each of region, it has caused different social action in the implementation. Based on the explanation, this research has the objective to obtain deeper about the actions performed by agents in *Suroan* tradition especially in Bangunharjo hamlet.

2. Methodology

This study used descriptive qualitative methodology with ethnography as the research type. Ethnography is a systematic description and analysis on cultures of groups, society or ethnic groups which gathered from the field in a certain time (Bungin, 2003). It is done simultaneously in six stages, such as; (1) choosing ethnography project, (2) submitting questions, (3) collecting data, (4) recording, (5) analyzing data, and (6) writing report (Spradley, et al.,

1997). This study was done in Bangunharjo Hamlet, Taman Sari, Gedongtataan, Pesawaran. The location was chosen due to its different *Suroan* tradition performance with other regions. Moreover, Bangunharjo Hamlet is still performing *Suroan* tradition every year.

The variable used in this study is social action of *Suroan* tradition. Social action is an action which apparently directed to other people. According to Weber (2009), social action was consisted of four types, namely; (1) traditional social action, (2) affective social action, (3) value rational social action, and (4) instrumental rational social actions. The subject of the study was taken using purposive sample based on criteria as below;

- a. The customary elder whose job is giving information on *Suroan* tradition
- b. Religious figures in Bangunharjo Hamlet
- c. Committee whose job is running *Suroan* tradition
- d. Society who perform *Suroan* tradition

The data were collected through interview and observation. The observation was done in three phases, started from descriptive observation which describe the social situation in the location, focus observation which done to find out the category such as the society's actions in performing *Suroan*, and selective observation to know the differentiation among categories. Furthermore, researchers also used books and documents which related to the problem as the secondary data.

The data analysis was done by organizing the obtained data into categories, explaining the data into units, analyzing important data, arranging or serving the data in the form of report and making conclusion to make it easy to understand. The researcher used interactive model by Huberman, et al., (2014) to analyze the data, as below;

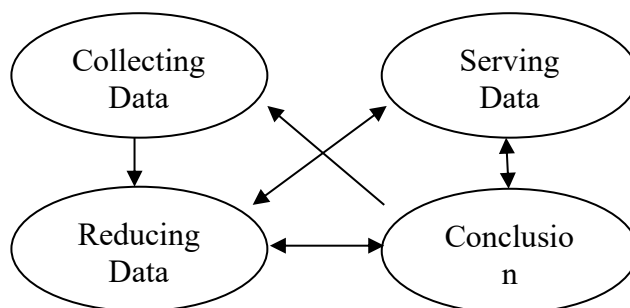


Figure 1. Interactive Model

Source: (Huberman, et al., 2014)

Data reduction is a form of analyzing data which obtained through interview, observation and documentation. The data are reduced with summarizing, choosing, erasing and organizing the unnecessary data. In this stage, the researchers reduce the data by choosing, categorizing, and making abstraction from field report, interview and documentation. After reducing the data, the remaining data were prepared in the form of interview report, field report, and documentation report and given a code to organize the data. The last is making conclusion by verify the field data due to know its validity. Hence, the researchers can analyze the data faster and easy.

3. Result and Discussion

The condition that push Bangunharjo's societies in performing *Suroan* tradition is based on the motives that occur. The motives that occur in Bangunharjo's society are developed due to their experiences or habits. It cannot be observed in a direct way but can be interpreted in behavior in the form of stimulation and encouragement (Uno & Motivasi, 2011). Bangunharjo's motives in performing *Suroan* can be seen in table 2 below:

Table 2. The Motives in Performing *Suroan*

No	Motives	Description
1	Culture Preserving	<i>Suroan</i> tradition is held by Bangunharjo's society and transmitted to next generations to keep maintaining and preserving the tradition. Hence it can motivate others to keep running the tradition
2	Religious	The purpose in <i>Suroan</i> tradition is to appreciate God's blessings in a year
3	Social Bonding	The performance is involving the whole Bangunharjo's societies, started from the preparation until the finale with cooperation and togetherness. Togetherness showed the attitudes of working together and helping each other. These attitudes are done spontaneously with the sense of family relation.
4	Economy	During <i>Suroan</i> tradition, Bangunharjo's society sell various kinds of things

Source: Primary Data, 2019

These motives above lead to some actions in achieving the objectives. It is similar to *Suroan* tradition in Bangunharjo's that performed based on cultural motives in forming the social system on human actions. The social system is consisted of human activities, including interaction, relationship and friendship among each others.

This study discussed on social actions done by Javanese people in Bangunharjo Hamlet in performing *Suroan* tradition. Social action, according

to Weber, is an action which able to influence people or influenced by people. Weber (2009) classified the social actions in four types; (1) traditional social action, (2) affective social action, (3) instrumental rational social action and (4) value rational social action.

3.1. Traditional Social Action

Every human needs a culture as a self-defense for life survival. One of the cultures that still preserved is the tradition which done hereditary due to its advantages. Bangunharjo's society has a tradition that has never been abandoned every year, namely *Suroan*.

1. Performing *Suroan* tradition annually

Javanese people in Bangunharjo Hamlet still preserving *Suroan* tradition. *Suroan* tradition was held since the hamlet established until now. One of the informants said that *Suroan* tradition is still held annually as a form to maintain the culture from elder who found Bangunharjo Hamlet" (L/WO/8/7/2019). Bangunharjo's societies believe that *Suroan* tradition is a heritage from the ancestor that should be maintain. Pi added that *Suroan* tradition teach about kindness. Many values are contained within its performance, such as maintaining *sillahturahim* (family relationship), strengthening intimacy and togetherness between families (5/P/Pi/9/7/2019). In *Suroan* performance, there is a sense of helping each other to fulfill the needs and purposes. All people are work together every year to maintain *Suroan* tradition in order to not be left behind. For Bangunharjo's societies, *Suroan* is a characteristic or identity for its Hamlet.

2. Performing *Suroan* tradition in *Suro*

Suroan is performed every *Suro* in the beginning of the year in Javanese calendar and held on *Kliwon*. As the informant said, *Suroan*

is held annually on Kliwon in Suro (3/L/So/8/7/2019). However, the reason why *Suroan* is held on *Kliwon* is unknown but people keep doing it since it is what has been exist from the past. *Kliwon* is seen as *jengunge dina* (the queen of the day). There are some sacredness in *Kliwon*, including (1) perfect time to hope, utter and value many kind of life problems, (2) time to suggest own self to enter inner peace, (3) the opening time for *ijabah* (something to be granted) for hopeful people when praying to The Creator, (4) time that has Creator's power.

3. Unaltered *Suroan* tradition procedure

The procedures in performing *Suroan* are not changing from past until present. As the performing time which done on *Kliwon*, in *Suro* and the performing procedure which still using goat's head as the main requirement. This is in accordance with Wo, one of the informants, who said that the performance was held by cutting goat's head in the morning, and then burying the head in crossroad, while the meat is cooked and given to people in *riungan* event (gathering event) (1/L/Wo/8/7/2019). Another informant, Po, said that there should be goat's head for every *Suroan* tradition because it is the tradition that has been existed hereditary. Thus, goat's head is always exist, even just one, in every *Suroan* (4/L/Po/9/7/2019). This showed that Bangunharjo's societies are still believed that there will be a disaster if *Suroan* tradition is not performed as it is.

4. Giving Education to committee

Young generations are involved in *Suroan* tradition as the committee with expectation that the tradition can be run everlastingly. Yi said that young generations are asked to help in performing *Suroan* tradition as a preparation for the future. They will get education on what is *Suroan* and how *Suroan* tradition is performed through their

participation as committee. Therefore, *Suroan* tradition can be performed continuously until indefinite time.

3.2. Affective Social Action

Bangunharjo's societies claimed that *Suroan* is not only performed based on the ancestor preservation but as a form of honor and appreciation to God because He was given a cure to Bangunharjo's societies that had been stricken by mass disease. The appreciation of Bangunharjo's societies is applied to *Suroan* tradition with actions as below:

1. Cutting Goat's Head

In the past, the elders tried to get rid of plague by holding some rituals. However, none of the rituals showed any recovery until they performed *tasyakuran* (appreciation to God) by cutting goat's head. They were cutting and burying the goat's head on crossroad during *Suro* in *Kliwon* as a form of appreciation to God. As the informant said that, "Suroan is held because Bangunharjo's people had been stricken by a disease, then they were performing *tasyakuran* by cutting a duck in order to get rid of the disease but it did not work until they were performing *tasyakuran* on *Suro* in *Kliwon* with cutting goat's head and burying in crossroad" (2/L/Ln/8/7/2019).



Figure 2. Goat's slaughtering

Source: Self documentation, 2019

Suroan tradition is performed as an appreciation to God for curing the disease plague. It also performed to communicate with God either to say thank you for everything which has been given in the past year or to ask for everything to run smoothly and even better than last year. As one of the informants said, that *Suroan* tradition is done as an appreciation to God and get blessings (W/HS/8/7/2019). Furthermore, Wo explains that goat's head was buried as a gratitude to Allah for creating earth and living things (Wo/8/7/2019).

The statements from HS and Wo described the position of *Suroan* is not merely as the heredity tradition but also as a relationship between human and the Creator. Human express his thankfulness for the God's blessing in one year by holding *Suroan*. Nevertheless, not all people accept the tradition, some of them reject it. According to Bangunharjo's society, in the past, there were some citizens who reject the celebration of *Suroan* tradition because it considered as *musyrik* (a person who does not believe on the oneness of God) and believe on

myth. Po explained that the citizen who reject *Suroan* were incomers not the indigenous. He also added that the incomers probably did not know about the history from *Suroan* tradition, therefore they reject it. But now, all of the citizens are accept and even support the tradition (4/L/Po/8/7/2019). Moreover, Pi stated, “If people thought that the tradition is giving an offer to devil or demon, I absolutely disagree with that. That thought is owned by somebody who had wrong idea on the true meaning of the tradition done by the ancestors. This tradition is only directed to God, not devil or demon” (W/Pi/10/7/2019).

Therefore, the tradition which has been done by the ancestor is directed only to a God as a media to express gratitude for everything given to Hamlet’s citizens. If there is a citizen who worship and offer offerings during *Suroan* tradition to something except God is an offense or fault.

2. *Riungan* (Gathering Event)

The purpose of *riungan* during *Suroan* tradition is a form of citizens’ appreciation toward God who has given a gift, such as life’s security, prosperity and earnings. Thus, people need to save a little part of their earning to be given to others. In *riungan* event, people pray to God for all kindness and pray for the ancestors so that their sins were forgiven and their deeds were accepted. *Riungan* is done in the afternoon after Ashar (the time when the sun has not turned dark yellow) in the house of Community Leader. Before performing *riungan*, some figures are giving some greeting. The first greeting is done by the Committee Leader who provide reports of income and outcome of *Suroan* funds. The next greeting is delivered by the Community Leader of Bangunharjo Hamlet, and the last greeting is given by the Village Chief of Tamansari. After delivering greetings, *Rois* (an elder or a chief) is delivering speech for 7 minutes and ended

up with prayer to express gratitude to God and ask for safety, protection and blessing. *Rois* also pray for the ancestors to be in His protection and forgiveness. After the prayer is done, people are welcome to eat the food that has been served. The food has meaning and message for human that depicted through the ingredients used within.

3. Puppet Performance

Puppet performance is always done as the closing event in *Suroan* tradition. The performance is started on night after *riungan* with accompaniment of Javanese songs and gamelan. Puppet is chosen as the closing performance because it is one of the cultures that often staged in Indonesian culture.



Figure 3. Puppet Performance in Bangunharjo's Hamlet

Source: Self Documentation, 2019

The values within the puppet's art have been proved to popularize the life guidance, norms, and variation of government sectors. Puppet is an entertainment media which able to carry every

human life aspects, human thought including things related to ideology, politic, economic, social, culture and law or security defense.

3.3. Instrumental Rational Social Action

Suroan has defined as interaction tool between societies in the Bangunharjo hamlet. The *Suroan* tradition is successfully performed due to good cooperation between residents of the Bangunharjo hamlet. Hence, the action performed to make the successful implementation of the *Suroan* tradition include:

1. Material Action

The society role in *Suroan* tradition is quite important. Therefore, it will not be implemented if the society do not involving directly in the celebration. The involvements of the society are material involvement in a form of money or supporting tools that can be used in *Suroan* tradition. The informant “Po” stated that, “the society of Bangunharjo, hamlet is participated in *Suroan* by paying tuition amounted IDR 35,000 for each family (KK) that is collected to the committee in each neighborhood.” (4/L/PO/8/7/2019). According to the informant, sometimes the society of Bangunharjo hamlet is also donating as like coffee, sugar, tea, or even cigarettes for the guest or the society itself.

The obstacle facing by the committee is that there are some residents who do not pay tuition because they have not been able to. In this case, the committee’s policy is invite to pay sincerely without considering the specified amount. It is delivered by one of the informant, “the committee has its own policy or those who not able to pay based on the specified amount. But, the amount of people who not

able to pay is only three families, so sometimes it does not matter.” (L/GN/11/7/2019).

Another obstacle facing in *Suroan* is that no material support from village government, only moral supporting by the presence in *Suroan* tradition. It is stated by the informant, “the government never provides supporting material, but they support by the presence in *Suroan*. I have asked to the government about the material but it remain no material supporting, maybe it is due to the low budget from government or anything else, I just do not know.” (4/L/Po/8/7/2019).

2. Physical Action

Besides material action, the society is also helping for the sake of *Suroan* successful. The society is helping start from pre-implementation including the making of stage, preparation, and cleaning the venue.



Figure 4. The society of Bangunharjo is helping each other in *Suroan* preparation

Source: Self Documentation, 2019

The women are also supporting the *Suroan* by helping each other in cooking the food and beverages for *riungan* (gathering event). The cooking process usually conducts in the hamlet head mother,

community leader of Dusun Bangunharjo. The activity of the women begin by going to the market to buy cooking needs and the evening before the event in the morning the cooking activity starts until it is finished.



Figure 5. The women while cooking in *Suroan* tradition

Source: Self Documentation, 2019

3. Emotional Action

In the *Suroan* celebration, all of the society is helping sincerely without any enforcement. It is due to the emotional bounding between the society under the same culture and region. As stated by the informant EH, “every society always involving in the *Suroan* tradition, they are participated without expecting anything. They are sincerely helping for the sake of *Suroan* celebration successfulness in each year.” (W/EH/11/7/2019). Moreover, Informant HS added that *Suroan* tradition is must, even though it is not an original tradition from the region. HS is newcomer in Bangunharjo hamlet, but HS is always involving in *Suroan* tradition.

Without the role of society, it is impossible the tradition can be everlasting up to now. The society has giving the mental and emotional supporting to celebrate *Suroan* tradition. The emotional participation of the society is also actively helping conserving the *Suroan* tradition.

Thus, there is no enforcement for all of the society to involve in the celebration. But, the society is sincerely helping without expecting anything. The society realizes about the important of *Suroan* tradition so that the God's blessing and protection will not losing.

3.4. Value Rational Social Action

The implementation of *Suroan* is a sacred ritual or Javanese community who still believing in the majesty of *Suro*. Therefore, the implementation is always performing in every year. The society still believes that if the *Suroan* is not implemented, then there will be disaster or misery in their life. In fact, the implementation of *Suroan* is needed extra cost for the celebration as like the making of *Ubarampe*.

1. The Making of *Ubarampe*

Ubarampe is a complement in *Suroan* tradition. In some traditions performed by the society in Java, there is value expressions that are contained in the offerings used. As like *Suroan* tradition in Bangunharjo which also using offerings described as follows:

a. *Ayam Inkung* (Inkung Chicken)

Inkung is Kampong chicken cooked and served as a whole. In some of traditions in Java, *Inkung* become the part of “*ubo rampe*” or offerings' complement served to complete the serving of offerings. *Inkung* is described as tribute to Prophet Muhammad. In addition, *Inkung* is interpreted as unborn baby, thus is deemed not to have any mistakes or still be pure. *Ube rampe ingkung* then

interpreted to purify the guest in the *tasyakuran* (appreciation to God).

b. *Bubur Merah-Putih* (Red-White Porridge)

The red porridge is a compliment in offerings made from rice, giving salt seasoning and is mixed with palm sugar for giving the red color. The white porridge is also a compliment in offerings made from rice and giving salt seasoning. The red-white color is interpreted as a tribute for ancestors in order to get blessing and symbol of human creation.

c. *Pisang Raja* (Cooking Banana)

Cooking banana is symbolized as a king who can uphold all his people and assumed that human has the characteristic as a king who is fair and wise.

d. *Wedang Lima* (Five Drinks)

Wedang Lima or five flavor drinks including sweet tea, bitter tea, sweet coffee, bitter coffee, and mineral water is used as a symbol for five days *pancawara/pasaran* (*Legi, Pahing, Pon, Wage, Kliwon*), seven days in Gregorian Calendar (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday), twelve months of Javanese calendar (*Sura, Sapar, Mulud, Bakda Mulud, Jumadilawal, Jumadilakir, Rejeb, Ruwah, Pasa, Sawal, Dulkaidah and Besar*) and *windon* eight years (*Alip, Ehe, Jimawal, Je, Dal, Be, Wawu and Jimakir*). This tradition is aimed so that humans able to pray for their own salvation.

e. *Jajanan Pasar* (Snacks)

Jajanan pasar is snacks that are sale in market, such as cake and bread. The meaning of *Jajanan Pasar* is aimed for unity and harmony among societies.

f. *Tumpeng* (ceremonial dish of yellow rice served in a cone shape)

Tumpeng is symbolized as a form of gratitude to the God. Besides, there is another believe as refer to the cone shape of *Tumpeng*, mountain is will provide abundant natural resources.

4. Conclusion

Based on the result and discussion explained above, it can be conclude as follows:

- a. *Suroan* tradition is still preserved in Bangunharjo hamlet in every *Suro* as form of *tasyakuran* (appreciation to the God) for the blessings and abundance that has been obtained by residents for the past year.
- b. The *Suroan* celebration is divided into two classifications that held sequentially as communal and entertaining celebration.
- c. The *Suroan* celebration has encouraged social action of Bangunharjo, hamlet. There are four social actions including:
 - 1) Traditional action: the society doing *Suroan* celebration in every year without changing the procedures implementation
 - 2) Affective action: the action implemented in burying goat's head, praying together, and held puppet show
 - 3) Instrumental rational action: the action implemented in physic, material, and emotional supporting.
 - 4) Rational action of value: the action is implemented in the making of *ubarampe*.

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THE EFFECT OF WORK EXPERIENCE AND CHARACTERISTICS OF JOBS ON EMPLOYEE WORK ACHIEVEMENT IN SHIPPING COMPANY

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ABSTRACT

The commitment itself is shaped through individual characteristics and job characteristics. High commitment will improve employee work performance, thus individual characteristics and job characteristics should logically be related to work performance. This study aims to determine the effect of work experience and job characteristics on employee's work performance in shipping companies. Methodology of this study is quantitative research and will be test the relationship between independent and dependent variables, with a sample of managers at shipping company located in Surabaya. Independent variable is work experiences and job characteristic, dependent variable is work performance. The data analysis technique used in this study is multiple linear regression analysis. Based on the result, it is obtained that the effect of work experience and job characteristic on employee's work performance which has a significance value below 0.05 is a work experience

variable. Thus, the work experience variable has an influence on work performance, while job characteristics do not have any influence on work performance. The result of this analysis indicated that work experience variable has an influence on work performance, while job characteristics did not have an influence on work performance. Based on the result, it can be concluded that Work experience has a positive effect on work performance, while Job characteristics do not affect work performance. However, work experience and job characteristics simultaneously influence work performance.

Keywords: Work Performance, Work Experience, Job Characteristics.

INTRODUCTION

Indonesia known as country of maritime, because it has water area larger than the mainland, which has an area of ± 3.1 million km². Around 70% Exports and imports process in Indonesiacarried out by sea transportation. This is related to the existence of various shipping companies in Indonesia.

On its development, shipping companies in Indonesia always face several obstacles along with factors which affect the survival problem of company, including human factors. As one of determining factors, human always be the main role forboth aspects of direct, indirect inproduction process and management practices. Furthermore, globalization which affects all aspects of modern life of human demands the company's always be ready to compete, at national and even international levels. When employees are dissatisfied with the nature of the work they do, their level of commitment can be intentionally reduced because employees are the engine room of an organization, employee dissatisfaction with the nature of the work they do can also be a threat to the overall performance of the company/organization (Ezeanyim & Ufoaroh, 2019).

Company that wants to be developed must be able to improve the efficiency and productivity of their entire resources and able to compete with other similar companies. One of example on competition is how to get a workforce (human resources) that is reliable and agile, thus it can serve and satisfy all consumers. Human resources are important indicators to achieve organizational goals effectively and efficiently and performance is the answer to all the successes or failures of the stated organizational goals. Performance can be seen from the achievement of targets from employees in an organization (Kertiriasih, Sujana, & Suardika, 2018). The importance of understanding human resources as a supporting factor for the success of the company which will have an impact on the importance of the competencies and expertise of employees. Establishing employee competencies and expertise makes it possible by building work permits (Indriasari & Setyorini, 2018). Furthermore, for shipping companies, the dissemination of knowledge on human resource management has become a common need, because shipping companies can absorb significant amount of labor. By the development of time, problems faced by organizations regarding human resource management are increasingly diverse.

Organization is a place of gathering and working together to achieve certain goals. One of the success standards of an organization depends on individual behavior. Organization should be able to achieve any goals effectively and efficiently, an organization should treat each individual as human being by provided a work that can fulfill human needs for food, place to stay (provides the need of facility). Organizational commitment which consists of trust in the values and goals of the organization must be improved so that the skills, efforts and nature of working conditions will be better. Job performance can also be influenced by variables such as maintaining good interpersonal relationships, absenteeism, withdrawal behavior and other behaviors that increase danger in the workplace. Based on this description, it

can be assumed that organizational justice can directly affect job performance (Suharto, Suyanto, & Hendri, 2019).

The organization must guarantee any protection, security check and avoid heavy pressure at work given the opportunity to interact for employees on making decisions, giving awards and opportunities to develop their potential. Organizations must therefore try to invest resources into programs to improve job satisfaction and employee performance. Where there is job satisfaction from employees, the tendency is to have low turnover, commitment and loyalty from employees (Laosebikan, Odepidan, Adetunji, & Aderinto, 2018). Because all the important point, "the level of motivation and commitment of workers and the desires of organization will be reflected on their satisfaction of work, and the obligation they really need to do." It is well known, the high commitment is one of the four things studied in terms of human resource management, in addition to maintain high quality, flexibility and strategic integration (Guest, 2011).

In line with this opinion, some organizations have been amazingly successful in modern world to have recognized that motivation and commitment of workers are the most competitive and powerful (Sadler, 1994: 95). Some studies demonstrated the level of organizational commitment of an individual stated that they do not work as hard as they can. The workers who involve themselves, to benefit the organization, worker is also will benefit from what the worker did. Within the adequate of work experiences, employees can add the ability to complete the quantity and quality of work. Errors made by employees can be suspected due to dissatisfaction in work and loss of motivation so that the work done by employees is less than the maximum that will damage employee performance (Octaviannand, Pandjaitan, & Kuswanto, 2017).

Meanwhile, opening of the opportunities to innovate and become creative thinking will encourage the workers to deny and shows their personal

potential. In line with this description, industries that have a high level of competition such as shipping industry. The workforce needed for this industry is specialist workforce, therefore it is not uncommon for middle and upper level workers to move from one company to another company. This phenomenon is allegedly related to the commitment of the workforce towards the company. Commitment itself is shaped through individual characteristics and job characteristics. The high commitment will improve the employee's work performance, thus individual characteristics and job characteristics should logically be related to the work performance. Based on this, this study tried explains the relationship between individual characteristics and job characteristics toward work performance.

LITERATURE REVIEW

(Wu, Hu, & Zheng, 2019)**Guangdong wu** research entitle **Role Stress, Job Burnout, and Job Performance in Construction Project Managers: The Moderating Role of Career Calling**, the research shows to exploring the role stress effect (role ambiguity and role conflict) on job burnout and job performance in the Chinese construction industrial of project managers. Guangdong wu is provides stress management and job burnout management of the significant theoretical and practical insights. The research using JD-R model is a mainstream conceptual framework, it is describes the influence of job characteristics on job burnout and how to enhance CPMs' job performance to achieve project success. (Inuwa, 2016) stated that dissatisfaction is one of the main factors that decreases motivation and decreases employee morale in the workplace which can result in lower productivity that causes employees to influence the overall performance of the organization. The results of the analysis illustrate that there is a positive and significant relationship between job satisfaction and staff performance. This

study will serve as a policy guide in areas relating to improving employee performance through job satisfaction and will also create impetus in the area of organizational behavior and human resource management.

Guangdong wu used 191 owner of work used of contractors, subcontractors, and supervisors in the Chinese construction industry. It obtained there are; 1) on job burnout and job performance, the role of ambiguity has a negative and significant effect. 2) There is no significant influenced on job performance, on job burnout of role conflict has a negative and significant effect. 3) on job performance of job burnout has a negative impact. 4) the relationship between the role conflict and job performance is positively moderated, the relationship between role ambiguity and job burnout career is negatively moderated. Job satisfaction is important because it acts as a source of intrinsic motivation that encourages workers to be diligent and efficient. Job satisfaction among worker is who tend to contribute to happiness, welfare, and employee retention. On the other hand, job dissatisfaction often leads to a high likelihood of risk reducing staff morale, increasing resignation or employee turnover, and decreasing productivity. Male employees are more satisfied than female friends. However, employees with children and low education tend to be satisfied with the achievements related to their work compared to colleagues who are highly educated and those who do not have children (Mundia, 2019).

In the research of **Serhii Voloshinov**(Serhii Voloshinov, Vladyslav Kruglyk, Viacheslav Osadchy, Kateryna Osadcha, 2020) entitled **Realities and prospects of distance learning at higher education institutions of Ukraine**.Theresearch of**Serhii voloshinov** is to identify the realities of distance learning in Ukraine consisting in provision students and the access to distance learning at most higher education institutions. Serhii is represented the analysis of the survey results of student answers of four classical, pedagogical, maritime and agro technological higher education institutions, it

is regarding to the practical implementation of distance learning in their institutions. Student is uncomfortable to work remotely theoretical of training materials and practical tasks, student is prefer the automated remote testing. The aspect that most preferable is reading the theoretical material and viewing the video of the lectures remotely and student is prefer to sending completed assignments over the internet. The opinion of the students, the ability to combine work and study and self determination of the study time and place is the great advantage of distance learning. Student can indicated that it is required of self motivating learners, based on the most significant disadvantage of distance learning. Placement and workload cannot increase employee work motivation, but can improve performance through work motivation. There are areas/work units that always seem to be filled with work, but there are also other areas where employees are often seen sitting relaxed rather than working (Anita, Aziz, & Yunus, 2019).

RESEARCH METHODS

The design of this study is quantitative methodology, and it will test the relationship between dependent and independent variables. Which is an independent variable in this study is work experience and job characteristics, while dependent variable is work performance. This statement can be proven by the extent of the indirect effect (employee placement on employee performance and competence on employee performance) through motivation identified as intervening variables (Ambar Kurniawan, Abdul Rivai, 2018). The population of this study were all managers of shipping companies. The path diagram explicitly provides a theoretical quality relationship between variables. The model moves from left to right with the implication of the priority of a close causal variable relationship to the left (Wulandari, 2017). With a sample of managers at shipping company located in Surabaya. The

data analysis technique that used in this study is multiple linear regression analysis a statistical analysis that depends on modeling relationship between two variables, dependent (response) and independent (predictor) (Koloğlu, Birinci, Kanalmaz, & Özyılmaz, 2017). With a mathematical model like the following formula below:

$$Y = b_0 + b_1X_1 + b_2X_2 + e$$

Information:

Y = Job Performance

b₀ = Constant

X₁ = Work Experience

X₂ = Job characteristics

b₁, b₂ = Coefficient Regression

e = error

RESEARCH RESULT

A. Demographics Of Respondents

The data in this study obtained by distributing questionnaires to the middle managers of shipping companies in Surabaya. Among 123 questionnaires sent, 98 were returned, it is consists of female and male with the age of respondent and the level of education of respondent, it is explains as follows:

Table 1. Gender

Gender	Amount	Percentage
Female	37	38%

Male	61	62%
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Source: Data processed (2019)

Table 2. Age of Respondent

Information	Amount	Percentage
≤ 25	5	5%
26 – 30	25	26%
31 – 35	25	26%
36 – 40	20	20%
≥ 41	23	23%

Source: Data processed (2019)

Table 3. Level of Education

Information	Amount	Percentage
High School	5	5%
Diploma	15	15%
Bachelor	49	50%
Magister	29	30%
Doctor	0	23%

Source: Data processed (2019)

Respondents in this study were 62% male, and 38% female. Based on age classification there are 21-30 years and 31-35 years, they have the same percentage of 26%. With the highest level of education is Undergraduate Degree, by 50%, then Post-Graduate, Diploma and High School, with a percentage of 30%, 15% and 5%.

B. Data Analysis

1. Validity and Reliability Tests

Validity test measured by looking at the significance value, while reliability measured by looking at Cronbach's Alpha values.

Table 4. Validity and Reliability Test Results

Variable	Alpha Cronbach Value	Significant Value
Work Experience	0,589	0,00
Work Charateristics	0,898	0,00
Work Performance	0,828	0,00

Source: Data processed (2019)

From the table above it can be concluded that the instrument used is valid and reliable. The alpha cronbach value of work experience is 0,589, the work characteristic is 0,898, and the work performance is 0,828. The variable X1 is obtained 1,675 VIF value, the variable X2 is obtained 1,675 VIF value, the X1 and X2 of tolerance value is the same.

2. Normality Test

Variable	VIF Value	Tolerance Value
X1 (Work Experiences)	1,675	0,619
X2 (Work Characteristics)	1,675	0,619

Data normality test was done by the Kolmogorov Smirnov test. The data in this study are normally distributed because the significance

value is greater than 0.05. The following table explains about data normality test:

Table 5. Data Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		98
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	2.29574809
Most Extreme Differences	Absolute	.079
	Positive	.079
	Negative	-.041
Kolmogorov-Smirnov Z		.786
Asymp. Sig. (2-tailed)		.567

a. Test distribution is Normal.

The data normality test has been obtained that the normal parameters has mean and Std. Deviation. Most extreme differences have obtained absolute, positive, and negative value. The Kolmogorov-Smirov Z is ,786, and Asymp Sig. (2-tailed) is 567.

3. Classical Assumption Test

Classification assumption tests include Multicollinearity, autocorrelation and heteroscedasticity. Multicollinearity tests are carried out by looking at tolerance and VIF values.

Normal P-P Plot of Regression Standardized Residual

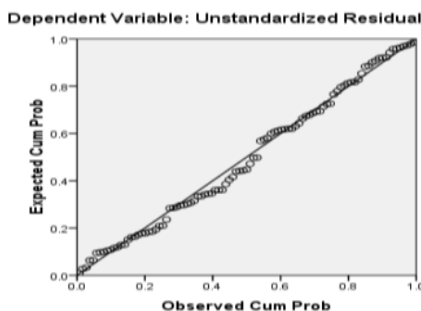


Figure1. Test Heteroscedacity. Source: Data processed (2019)

Table 6.Autocorrelation Test

Du	Durbin Watson	4-Du
1,713	1,958	2,287

Source: Data processed (2019)

Based on the table above, it is known that the data in this study are exempt from Multicollinearity, heteroscedasticity and autocorrelation. Multicollinearity does not occur if the tolerance value > 0.100 and $VIF < 10$. For heteroscedasticity test using scatter plot, if the points are random and do not form patterns, then heteroscedasticity does not occur. For autocorrelation using Durbin Watson, there is no autocorrelation if the Durbin Watson value is between du and 4-du.

4. Model Significance Test (Test F)

The F test carried out to determine the simultaneous effect of work experience and job characteristics on work performance. Based on the results of the F test, it is known that the significance value result is 0,000. Thus, it can be concluded that work experience and job characteristics simultaneously influence work performance within the magnitude of influence 26%, it means that the factors affecting work performance by 26% are influenced by work experience and job characteristics, while 74% are influenced by other outside factors of work experience and job characteristics.

5. Hypothesis Test (t Test)

After testing the normality and classic assumptions, then the linear regression test is performed. This test is conducted to determine whether there is influence and the magnitude of the influence of independent variables on the dependent variable.

Table 7.t Test

Information	Unstandardized Coefficient		t	Sig
	B	Std. Error		
Constant	9,165	0,943	9,715	0,000
X1 (Work Experience)	0,815	0,190	4,295	0,000
X2 (Work Characteristic)	0,049	0,099	0,493	0,623

Source: Data processed (2019)

Based on table 7 above, the linear of regression equation explained as:

$$Y = 9,165 + 0,815X_1 + 0,049X_2 + e$$

The equation above can be explained as follows:

1. If the value of work experience and job characteristics considered as constant, with the value of work achievement 9,165. Therefore, work performance is achieved even without work experience and job characteristics.
2. The coefficient value of experience on work performance is positive with 0.815. It means that increase in work experience by one unit will be able to influence the variable work performance by 0.815.
3. The coefficient value of job characteristics on work performance is positive and has a value of 0.049. This means that increase number in job characteristics by one unit, will influence the variable of work performance by 0.049.

Hypothesis testing done by observing the value of significance t. Based on table 8, which has a significance value below 0.05 is a work experience variable. Thus, the work experience variable has an influence

on work performance, while job characteristics do not have any influence on work performance.

Based on the obtained F test results, it can be known that work experience and job characteristics simultaneously influence on work performance. This can be proved by the significance value in F test that smaller than 0.05. From the results of hypothesis testing (t test), it is known that the significant effect on work performance is work experience, because the significance value of work experience less than 0.05. The coefficient value of work experience of 0.815 means that each increase in work experience is one unit, so the work performance variable will increase by 0.815. The results of this study are in line with the opinion of Siagian (Siagian, 2015): "Work experience shows how long it takes for employees to work well". (Swasto, 1996) In addition, work experience includes of the many types of jobs or positions that have been occupied by someone and their duration of work in each of these jobs or positions. Thus, years of service is one of the individual factors related to individual behavior and perception. For example, the reason someone who has worked fifteen years or more in looking at a situation is completely different from a worker who has worked for a year. Work experience that has been obtained by an employee will be able to improve his ability to carry out work. Workers who have high ability make it possible to get higher rewards, both intrinsic and extrinsic, so that it will strengthen and increase its commitment to the organization, as stated by Steers (Raka, 2015) to increase employee commitment can be done by offering rewards that apply throughout the organization to the its members such as relatively high salary levels, good additional facilities, opportunities for personal growth and progress.

Job characteristics do not have any influence on work performance because the results of the t test has significance value of 0.623, which means it is bigger than 0.005. The results of this study support the research

of Bashaw (Edward Bashaw & Stephen Grant, 2014) and Job characteristics are related to skills variations, job identity, task significance, autonomy and feedback. The series of dimensions of the work if linked to psychological conditions will be able to provides the work motivation and high job satisfaction, so that work performance can be achieved. However, in this study the characteristics of work do not have an influence on the work performance. This means that the managers in shipping companies is lack of motivation and high job satisfaction. Therefore, for them work is considered as something that is less meaningful or important, lacks a sense of responsibility for the results of the work personally and has not been able to ascertain in an orderly and reliable manner how the business results, what results have been achieved, and whether the results were satisfactory or not (Edgar inside Delany, 2017).

CONCLUSIONS AND SUGGESTIONS

Based on the results of hypothesis test, it can be **concluded** as below:

1. Work experience has a positive effect on work performance.
2. Job characteristics do not affect work performance.
3. By combine two variables of work experience and job characteristics, it simultaneously influences the work performance.

Work performance is achieved even without work experience and job characteristics. Work experience is increase, it will be able to influence the variable work performance. Job characteristics is increase, it will influence the variable of work performance. Based on the result, it is obtained that the effect of work experience and job characteristic on employee's work performance which has a significance value below 0.05 is a work experience variable. Thus, the work experience variable has an influence on work performance, while job characteristics do not have any influence on work performance. It can be known that work experience and job characteristics simultaneously influence

on work performance. This can be proved by the significance value in F test that smaller than 0.05 And from the results of hypothesis testing (t test), it is known that the significant effect on work performance is work experience, because the significance value of work experience less than 0.05

The **suggestions** in this study are as follows:

1. The company needs to pay attention on work experience factors as an effort to improve work performance. Because work experience is a factor that influences work performance improvement.
2. The director of the shipping company should make a strategy that can increase employee motivation and employee satisfaction at work. Because, the employee's motivation and job satisfaction can help to improve work performance.

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MASS CULTURE IN THE GLOBALISATION AND COSMOPOLITANISM ERA

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Abstract

The first steps of real globalisation are related to the navigation development and great geographic discoveries, times when material and spiritual value exchanges took place worldwide. Thus, great changes at the human society level took place, the most concrete form of globalisation is known as “Europeanisation”, a process unfolded over more centuries that succeeded in obtaining a cultural homogenisation in the mankind essential techniques plan.

The intent of our endeavour is to trace an overview of the changes known by culture in the globalisation and cosmopolitanism era. Being a complex and dynamic process, globalisation is a term which exceeded the academic sphere, being frequently used in mass-media and by the population.

Keywords: mass culture, globalisation, cosmopolitanism

1. GLOBALISATION AND CULTURE

The first decades of our century point out more and more the fact that humankind rapidly heads towards globalisation, towards a world seen as unity on planetary level, towards identities that will operate by mutual rules and standards. We frequently understand by *globalisation* the process of permanent integration of material, financial, informational, cultural flows worldwide in a unique structure, with specialised sectors.

As it worked in all eras, cultural development gains new dimensions with the economic, technical-scientific progress, giving birth to mass culture. This term is defined as a conception on life, as a form of valorisation of existence, as an assumed and lived, dominant ideology. Generally, culture is associated to certain spaces, by the changes that took place over the last years led to the deterritorialization of culture and its introduction in other territories, precisely as consequence of globalisation.

If one frequently speaks of a mass, global culture, that seems to be the American kind, due to the elements that compose it: the massive distribution of certain American products, like Coca-Cola, Nike, Burger King, Apple etc; the great action range of American TV stations, received in different parts of the world; the domination of the Hollywood American film studios: the restaurants and hotel chains. And the examples can go on.

Mass culture is a key phenomenon of postmodernity. People tend to eat the same, dress the same, listen to the same kind of music, have the same habits, believe in the same values and rules. Thus, are born the consumption global culture products that transcend the cultural spaces. The development of human society is an economic, but also a cultural process.

In this context, we shall try to outline the impact culture globalisation has on urban life, pointing out the main changes that take place at the level of the two basic parts of culture: the *artifactual* and the *mentifactual one*.

Among the first *artifactual culture*, namely material elements, we enumerate the clothing products, such as the jeans, for instance and the architectural ones. In this regard, we offer as example the aspect of the Triumphal Arch of Bucharest, built according to the architectonic model of the Arc de triomphe of Paris.

The mentifactual culture elements, as human mind products, are, among others, music and dance, jazz that acquired worldwide connotations.

2. GLOBAL CULTURE AND MASS-MEDIA

Global culture became available and gradually extended because of the modern means of communication, because they became accessible to the largest lairs of the population. This new cultural type visually and audibly addresses the culture consumer, offering an environment where all these means are accessible to them and solicit their interests, preferences, passions. The modern means fulfil both the role of culture transmitter, cultural flow bearer, and also, the role to be, themselves, culture values, which organically integrate in masses. Thus, they become instruments of a product information, spread according to an industrial technique, being characteristic to the current stage of development of the society where we encounter mass production, mass consumption, mass broadcasting, mass auditory. One can say that the existence and action of mass communication means have effects on the content of the tradition culture, that is metamorphosing.

There are orientations according to which mass culture is seen as a standardised culture, a market culture, whose propelling factor is not the interest to form advance knowledge, but the material interest. From this perspective, it becomes a mediocre culture phenomenon, which is distinct from the superior culture, which is not accessible to common man, as a way of “democratisation” of values and “kitsch”. Therefore, mass culture is defined as a set of cultural myths, images, models spread by all broadcasting

means, as a type of culture that serves consumption, which spreads conformism.

In the current society people lean very much on the mass information and communication means, often with the purpose to find a balance between the multiple adherence relations. In order to build the individual and group identity, modern man that lives in the diaspora must be simultaneously connect to various spaces of reference, for instance, their country of origin, their host country, the neighbouring countries, and also faraway lands, and mass-media's role is to initiate and maintain such virtual contacts.

Therefore, mass-media plays a very important role in expanding the intensely debated "global village with cosmopolitan values"¹. Public is encouraged to exceed the boundaries of their familiar universe, to set connections with the ones that are far and to develop the conscience of a world perceived as a single place. Consequently, due to their incontestable transnational range of action, the contemporary media has the capacity to make us think of ourselves as belonging to the "cosmopolis, to the global society"². Naturally, the mass-media connections with the globalisation elements are many times achieved through a series of public relations techniques³.

3. COSMOPOLITANISM AND GLOBALISATION

What is cosmopolitanism and how can we differentiate it from connected notions, such as globalisation and transnationalism?

As referred to cosmopolitanism and what it stands for, Rantanen⁴ states that it is a moral concept that represents the manner in which people feel in relation to their fellow men that are far, whose life is affected by civil wars, genocides, massacres or natural disasters. Therefore, being cosmopolitan is not a fix identity, because at a certain point a person can feel like belonging to a place or on the contrary cosmopolitan, depending on the given context and circumstances. In relation to this concept, we can ask ourselves whether we

can speak, in fact, of cosmopolitanising without the existence of a catastrophe or if we can empathise with the ones far from us in case their life is threatened by a disaster. Since we cannot give accurate answers to such questions, one can deduce that cosmopolitanism is not a perfect concept, having both strong points, and also limitations. Beck and Sznaider equally define cosmopolitanism as an imperfect theoretical construct because “it comprises many contradictions”⁵. For Beck and Sznaider, cosmopolitanism is, therefore, another “contested term; there is no uniform interpretation of it in the growing literature”⁶. The two authors unfold next ideas according to which cosmopolitanism should not be wrongly interpreted as globalisation, transnationalism or glocalisation.

This point of view is also adopted by Rantanen who considers that limits should be set between cosmopolitanism, internationalisation and globalisation⁷. Internationalisation has become a dominant idea in the years after the second world war, when, out of fear of dealing with new conflagrations, the states funded the international organisations, hoping to prevent such conflagrations in the future.

Globalisation, however, gave the theoreticians the chance to study the changes that occur locally, regionally, nationally and internationally from the public’s point of view. At this moment, the relations between the nation-states, culture and mass-media started to weaken, the mass-media from the diaspora appeared with more force, and the concept of cultural homogenisation was replaced by the one of cultural heterogenization. If globalisation was a popular research current in the 90’s, cosmopolitanism is generally perceived as a long-debated topic as early as the beginning of our century.

CONCLUSIONS

Beyond the contradictory talks, the private interpretations, what is important to remember is that all these terms: *internationalisation*,

globalisation, transnationalism, glocalisation or cosmopolitanising, have mutual features: each of them brought something new, each of them has its flaws and strong points. Just as important is that all these thinking currents keep on making themselves felt nowadays. More than that, these research areas, different but equally important, have shaped the universe of communication and information media, which, in their turn, have come to fulfil a central role within each ideologic stage. Global culture goes through the same steps of its discovery as the culture of organisations⁸.

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THE ILLOCUTIONARY ACT AND THE POWER OF THE MESSAGE

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Abstract

This study is circumscribed to the pragmatics of communication. The thesis under investigation is whether the message is a practice of power. It is found that between the communicators there is an inevitable and always denied war for control of communication. The fight to impose meanings is fought on all available channels. Predominantly, the conflagration of communication is one of words. The imposed illocutionary acts contribute to the power of the message.

The conclusion reached is that the message is a matter of power: any message aims at the accumulation, preservation and / or imposition of power.

Keywords: communication, communication channel, language acts, speech acts, children

1. Communication relationship

The constituent elements of a relationship between two individuals perceived and known from the point of view of communication are few, although the processes in which these elements are involved are multiple and complex: source, message, channel and receiver. Communication is more than a simple linear process of changing and sharing messages and meanings. By reducing communication to an exchange and sharing of messages and meanings, the person is fragmented into two entities, ie the sender and the receiver, even if they are essentially two roles that are assigned and dissociated when scientific analyzes are made. These elements are acceptable when considered from the point of view of a basic paradigm and, taken in isolation, are already of great complexity. However, they should always place them in their own context and take into account the situation, cognitive, affective, mental, social, political and religious factors, as well as communication skills. Communication is a phenomenon consisting of systemic, transactional, circular, selective, non-repetitive, unpredictable, irreversible, cumulative, complex processes that guide the evolution of the meaning and significance of what is and what appears.

Through these processes it is shown what seems to us to have a form and a content, what seems to us to be structured, organized and ordered in time and space as a message. There are processes that make the past, present and future of a communication act interdependent and that guide the evolution of human behaviors and personality. Moreover, since the relationship, action, interaction, transaction and meaning are the center of any message, its scientific study should begin with the processes and constituent elements of a relationship between two entities. The message is meaningful. Rather, it is a meta-significance phenomenon that allows to understand and explain, in a communicative perspective, the fundamental aspects of the wide range of actions, interactions, transactions between elements, individuals and even

organizations (Peptan, 2019; Toma & Tiari, 2019). From this perspective, it would then be possible to understand the fundamentally non-entropic nature of the message phenomenon, to identify and define the concepts of study and communication science.

2. Building the message

Producing a message is not the result of chance. Implicitly or explicitly, communicators seek to produce specific effects depending on their needs and their perception of the situation. So intention is related to the system of relational tension that exists between individuals and can be generally expressed as provoking the need to communicate. The idea of control is inseparable from the idea of finality. Being able to verify and act through a message on a situation necessarily requires a knowledge of the purpose or objective to be achieved.

The content of communication, the message, is the first means by which individuals have social relationships with each other and with the environment. However, as the communication is not only linear, the communicator is not the only one to exercise control, because he must adjust to the structures and processing capabilities of the interpreter (Pîrvu, 2012; Frunză, 2019). However, it is clear that there is a relationship between messages, power and control. The content must be reproducible in a permanent form. The content of the message is characterized, according to F. Fearing (1955), by the use of sign-symbols. These sign-symbols are a significant representation of reality. The message relates projectively to the idea of intention. The specificity of the intentions depends on the degree of precision with which the communicator predicts the effects of the message it produces (Fernández-Bedoya et al. 2020; Martínez). In the personality structure of the communicator, the intention is a manifestation of the variables needs-tensions. It plays a role of selection and structuring. The interpreter is

always included in the psychological field of the communicator when the latter produces a message (Cerban, 2018; Jones, 2020). The specificity of the intentions therefore defines the power that the interpreter's image has over the message produced by the communicator. The consumer is always inscribed for the purposes of the message, which ensures its coherence and cohesion. In chronological order, first, the power of the message is expressed in the importance that the communicator attaches to the planning of his communication.

The target of planning is the interpreter. Consequently, the messages are:

- a) explicit in terms of the desired effects on the performer;
- b) voluntarily manipulating in this sense the different aspects of the content (for example, during a propaganda campaign, the communicator targets a particular audience and assumes that this audience has needs, that it is aware or not of the problem to be solved and that it is intelligent or stupid).

Less “targeted”, less teleologically oriented messages are first centered on the communicator, as he seeks more to express himself than to provoke effects in others. These are unplanned and, beyond the personality structure, first reflect the emotional dynamics of the author.

Intentional and highly planned messages are powerful communications, because the author aims through their content to produce important effects on the consumer: cognitive, convincing, persuasive or emotional. Content control is then linked to the control of the effects sought and the power structures within the ongoing communication mode (Ghiță, 2018; Maritz, 2019). These strictly planned communications-messages are the work of professionals (relations, publicists, propagandists). The degree of reality represented is the function of the manipulation of the content by the communicator. The freedom that is attributed to the communicator when structuring the content of the communication determines the degree of reality or fiction (Similaru, 2007; Schubert, 2017; Bell & Martin, 2019).

The meaning of the message is given by an “adjustment” of comprehension, which depends on the level of convergence of the communication partners. The receiving subject and the transmitting agent each belong to several primary groups (family, friends, current of scientific opinion). These groups transmit their values to the individual and shape him from them. They influence the sender when selecting and producing the message and guide the receiving subject in selecting and perceiving the message and how it reacts. Individuals and primary groups are located in a social organization in which they tend to integrate, assimilate and in the modeled framework that generally maintains communication as a process of exchange and sharing of messages and meanings. To understand the message, its functioning and the consequences of its various effects on individuals, common sense, the daily experience of consuming messages is not enough. Philosophical knowledge related to the phenomenon of the message is required, it is mandatory to model or master a clear and distinct concept of the message. As Paul Attallah (1991) strongly points out, “studying the circulation of messages without knowing why they are circulating, that is, in what interest, means condemning oneself to being a mere executor of social power. It means to turn with pleasure into a capital manager, an efficiency specialist, a persuasive communication strategist without really understanding who and what is being worked for. Before you manage communication, you need to know why you are communicating. “

3. The illocutionary force of the message

As show J.-L. Austin (1975) and J. Searle (1969), the act of language consists of a hierarchy of subordinate acts, distributed on three levels: i) the level of the locutionary or propositional act: the act of saying; ii) the level of the illocutionary act (or of the illocutionary force): what we do by saying; iii) the level of the illocutionary act: what we do by saying. If we tell someone to

close the door, there are three things that can be done. The predicate of the action (to close) is related to two arguments: you and the door. It is the act of saying. If this is said by the force of an order, and not by that of a finding, or a wish, or a promise, then this is the illocutionary act. Finally, by giving an order, certain effects can be caused, such as fear; these effects make speech a stimulus that produces certain results. This is the perlocutionary act, the effect, the action. Adhering to Austin-Searle's thesis, Paul Ricœur expands its field of action. It confirms its validity during the speech (Gioroceanu, 2010; Ionescu, 2015; Ionescu, 2017). The illocutionary force is based both on mimicry and gesture, as well as on the inarticulate aspects of discourse, which we call prosody. It follows from the research of the French philosopher (Ricœur, 1984, p. 208) that it is necessary to understand by “the meaning of the act of language or more precisely by the noema of saying, not only the phrase in the strict sense of the propositional act, but also the illocutionary force and action illocutionary, insofar as the three aspects of the act of language are codified, elevated to the rank of paradigms and where, consequently, they can be identified and re-identified as having the same meaning. “By coordinating the ideas of the sentences about the act of language, one can configure the abduction that the message gathers in one direction the illocutionary force of the acts of language that compose the discourse and which are also called acts of speech or acts of speech (Charaudeau, 1983, p. 84). The message has the unitary force of the acts that compose it. It can be stated, following another clue, that the message is the force of the meanings that one attributes to a speech. The message gains power only through a consciousness that assigns meanings. In the manifest absence of a receiver there is no message, only speech. In this perspective, the concept of “language act” remains valid, instead, the motto introduced by J. Searle consisting in the assertion that “language acts are a variety of human actions”, being at the same time “the minimum basic units of linguistic communication”. (Searle, 1969,

p. 9 and p. 39), can no longer be accepted, not even admitted as a platform for discussion.

Communication means action, interaction, transaction through the message. The act of language is, on the contrary, an event of language, having a unique meaning. It can be a component of communication, and not a minimum unit, because it is not certain that from the combination of any of the types of language acts a communication can arise. Then, the act of language must be located in the speech, which is why some call it the act of speech. The action of thought is transposed through language into discourse. It makes language acts compatible in relation to their locutive, illocutionary and perlocutive qualities. The success of the unitary integration of language acts is measured by the coherence and cohesion of the discourse, qualities that in the alternative are also transmitted to the message. On the new premises we can say, as J. Habermas does, that “through the act of language, discourse has an action component” (Habermas, 1983, p. 458). The following implication becomes translucent: thinking wants to become visible, to manifest through action within a state of affairs; for this, it puts pressure on the language-instrument-means in order to translate its influence on an objective reality that only through language is the domain of evidence. Language, like any language, diffuses action into discourse. In the process of intermediation that the abstract language realizes in order to fulfill the expected action of thinking, certain meanings are precipitated as nuclei, called acts of language (de Graduados, 2019; Clitan & Barbu-Kleitsch, 2020; Guzun). The minimum units acquire conceptual organization: the forms are concretized in a formulation. This is the “living manifestation of language”: speech. Once the language falls into discourse, the action is instantiated. Language becomes subjectivized, and thought-occurrence becomes attributable to an “I”. “I” in the language we are either all or no one. The sophisticated argument of the third would fit perfectly with those who would like to be someone in language,

someone between everyone and no one. This possible objection can only be dampened by accepting any “I” as a discursive self. The grammatical “I” lacks action power. Language creates still lifes or paintings, static paintings. The reality of language is discourse. Language allows for two concrete “I’s” of discourse, one in discourse and the other behind discourse. 4.

4. Conclusion

Any speech is that of a person who is speaking for himself or for someone else. Even if a discourse could be assumed, appropriated by any of us, it will not belong to all or anyone, that is, it will not be a work of language, but only a production generated by language. The discourse presents and is crossed by the three characteristics of the act of language, locutivity, illocutivity and perlocutivity. The articulation of the force of thought as discourse in a force in discourse will be called the message. The message is the force part of the discourse, the one in which all the possible allocated energies are synthetically integrated: the force of ideas, the force of emotions, the rhetorical force, the convincing or persuasive force, the teleological force, the action force. The message is the concept that designates the discursive illocutionary substance. “Everything is summed up in power” (Deleuze, 1995, p. 22): language, discourse, message.

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DECENTRALIZED FINANCE (DEFI) – THE LEGO OF FINANCE

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Abstract

Blockchain Technology can enhance the basic services that are essential in traditional finance and it has the potential to become the foundation for decentralized business models, empowering entrepreneurs and innovators with all the right tools. By means of a trustless and distributed infrastructure, blockchain technology is optimizing transactional costs and allows the rise of decentralized, innovative, interoperable, borderless and transparent applications which facilitate open access and encourage permissionless innovations.

DeFi stands for “Decentralized Finance” and refers to the ecosystem comprised of financial applications that are being developed on top of blockchain and distributed ledger systems.

The Decentralized Finance (DeFi) or Open Finance movement takes that promise a step further. Imagine a global, open alternative to every financial service you use today - savings, loans, trading, insurance and many others - accessible to anyone in the world only by means of a smartphone and internet connection.

DeFi is the movement that leverages decentralized networks and open source software to create or transform old financial products into trustworthy and transparent protocols that run without intermediaries.

This article will analyze several studies and researches on Decentralized Finance with focus on its features and subsets, intending to offer a synthesis on how the ecosystem is evolving and the way it may reshape the structure of modern finance by creating a new landscape for innovation.

Keywords: Decentralized Finance, Decentralized Applications, Decentralized Exchange, Blockchain, Smart Contracts, Ethereum, Bitcoin, Stablecoin, Derivates, Futures.

Introduction

DeFi refers to the economic paradigm shift enabled by decentralized technologies, particularly blockchain networks, which started a whole movement with the introduction of bitcoin (S.Nakamoto, 2008). Blockchain and Distributed Ledger Technologies (DLT) represent the common ground for enabling borderless, immutable and transparent technology. Launched in 2015, Ethereum is the world's programmable blockchain as the concept of Ethereum Virtual Machine is based on fact that it can execute more complex applications, having digital assets being directly controlled by a piece of code and implementing methodic rules or even blockchain-based decentralized autonomous organizations (DAOs) (V. Buterin, Ethereum Whitepaper, 2015).

Ethereum is programmable, which means that developers can use it to build new kinds of applications (G. Wood, 2014). With smart contracts as a base for Decentralized Applications (dApps), it is possible to execute program logic in a decentralized way as all peers in the blockchain network validate transactions to maintain the integrity of the ledger. These transactions trigger

the execution of the program logic, which inflicts changes to the state of globally shared objects (A.M. Antonopoulos, G. Wood, p67,442-444, 2018).

The idea is to develop and operate financial dApps on top of a transparent and trustless frameworks, such as permissionless peer-to-peer (P2P) protocols. This new concept of Open Finance, generally refers to the digital assets and financial smart contracts, protocols, and decentralized applications built on open blockchains or Distributed Ledgers Tech.

By June 2020 there were identified 214 DeFi projects listed, from which 199 were using the Ethereum Blockchain architecture. (DeFiPrime, 2020).

Summing up, the DeFi movement is shifting traditional financial products to the open source and decentralized world, which removes the need for intermediaries, reduces overall costs, and greatly improves transparency.

What is DeFi and why is everyone talking about it?

DeFi, also referred to as ‘Open Finance’, is a set of Blockchain/DLT-based financial services and applications intended to augment or replace the currently existing financial system, which is comparatively referred to as ‘Centralized Finance’.

When compared to traditional financial services, Decentralized Finance brings numerous benefits through the use of smart contracts and distributed systems. As the ecosystems mature, deploying a financial application or product becomes much less complex and demanding. For instance, many dApps are being developed on top of the Ethereum blockchain, which provides reduced operational costs and lower entry barriers (Binance Academy, 2020).

There are already many initiatives making headway in the various sub-sectors that comprise the broader DeFi landscape. These particular initiatives have been built on the Ethereum network, but others have been created or exist

on other permissionless blockchains such as Bitcoin. By using permissionless networks, DeFi creators are able to make their services accessible to anyone as long as they have a device and an internet connection.

To fully understand this, it is important to understand the nuance in the way terms like Bitcoin and Ethereum are used. The term ‘Bitcoin’, for example, is used to describe both the Coin (a part of the application layer) that is exchanged as well as the network (a part of the protocol layer) that the coin is exchanged on. When it is said that a DeFi application uses Bitcoin, this means that it is a separate application in the application layer which operates on top of the underlying Bitcoin Network Protocol. In effect, this can help to shield DeFi services from the immense volatility that discourages some from recognizing Bitcoin as a viable store of value.

From a DLT and Blockchain perspective, one of its greatest promises and drivers of value is the notion that it facilitates decentralized peer-to-peer transactions without the need for a third-party intermediary and their associated fees.

By bringing this technology into the traditional finance system, DeFi is the potential to create new avenues to access services and activities like: payments, lending, borrowing, funding or investing (A.Rossow, 2020).

DeFi hit new heights with more than 1,000 new assets added in May 2020 and total users number reaching 550,000. It continues to grow at an exponential rate with the number of new DeFi assets increasing by almost tenfold over the same time last year (J. Mapperson, 2020).

Total DeFi users over time

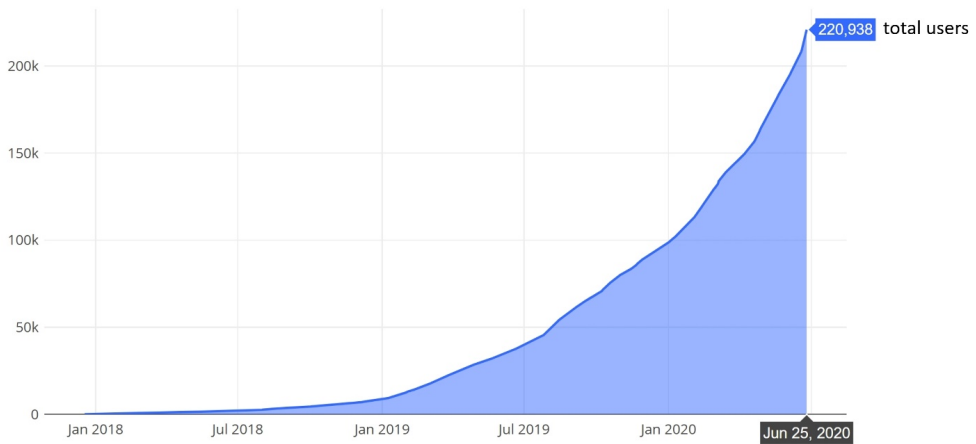


Fig. 1 – Total DeFi users over time. Source: Dune Analytics, Data from 25th of June 2020. Excluding Dai users. Retrieved from <https://explore.duneanalytics.com/>

Although the total numbers remain small in the overall scheme of things, adoption is growing and this is likely to increase as projects become more user-friendly. The market cap of all DeFi projects has surpassed \$6 billion according to DeFi Market Cap (DefiMarketCap, 2020).

Currently, the three largest functions of DeFi are:

- Translating monetary banking services (e.g., Issuance of stablecoins);
- Providing peer-to-peer (or pooled) lending and borrowing platforms;
- Enabling advanced financial instruments such as Decentralized Exchanges (DEX), Tokenization Platforms, Derivatives and Predictions Markets.

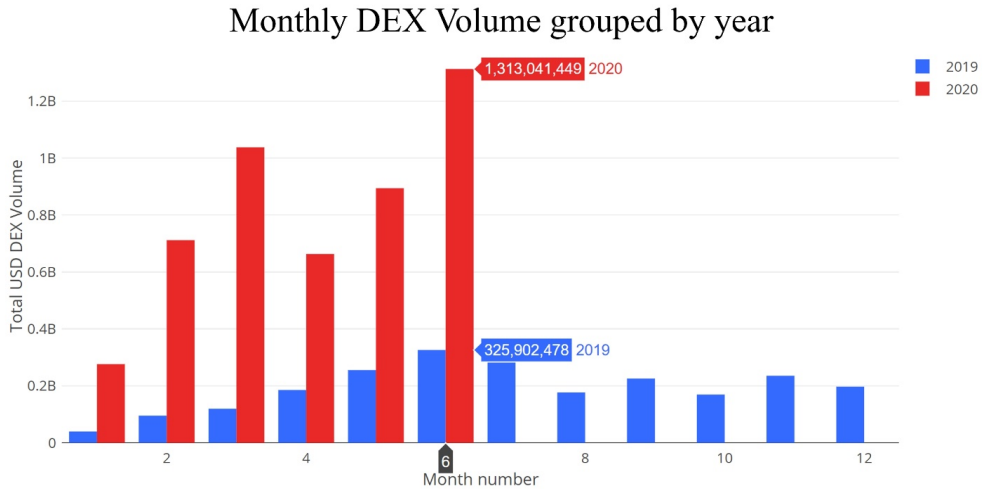


Fig. 2 – Monthly DEX volume grouped by year. Source: Dune Analytics, Data from 25th of June 2020. Retrieved from <https://explore.duneanalytics.com/>

Some of the most common use cases

Stablecoins

A stablecoin is a type of cryptocurrency that is designed to maintain a stable market price. Recently, this type of digital currencies has grown in popularity, and we now have numerous stablecoin projects.

The idea behind stablecoins is to provide some of the advantages of both fiat currency and cryptocurrency worlds. Currently, stablecoins are mostly used as a hedge against the high volatility of cryptocurrency markets, but depending on the context, they can also be used as a stable currency that provides increased transparency and decentralization. Also, when compared to traditional fiat currencies, they present faster transactions and lower fees, with an average of \$0.2/transaction (Ethgasstation, 2020), making them quite useful for everyday payments and international transfers.

Although the exact mechanisms vary from one coin to another, stablecoins are supposed to be somewhat resistant to market volatility, so they should not experience significant price changes.

Many stablecoins have their values fixed by pegging them to the price of another asset. While most of them are pegged to the US dollar, there are stablecoins pegged to the price of other cryptocurrencies, or even commodities, like silver or gold. By being pegged to real-world assets, these coins avoid the wild price swings caused by the high levels of volatility, very common in cryptocurrency markets (Binance Academy, 2020).

Borrowing and Lending

There quite a few Blockchain powered lending and borrowing dApps – one of the most flourishing categories of open finance. Users can deposit their crypto in the Smart Contracts as collateral and can borrow against it. It then automatically matched lenders and borrowers and adjust the interest rate dynamically on the basis of demand and supply and open lending protocols (C.Bhardwaj, 2020).

Decentralized Exchanges

2020 is quickly shaping up to be the year for decentralized exchanges to take the mainstage. With optimized usability, deeper liquidity, and emerging composability, the DEX ecosystem is getting stronger by each day.

When it comes to exchanging crypto, many have long been focused on centralized players due to their fiat onboarding and ease of use. Despite these notions, many have been quick to point out that centralized exchanges come with their own inherent risks – namely those of custody.

Famously highlighted by hacks on once-prominent exchanges like Mt. Gox in 2014, many traders have come to recognize the value of non-custodial solutions offered by decentralized exchanges.

In the past year alone, DEXes have made serious improvements in both usability and liquidity – signaling that they are ready to compete with their goliath counterparts (Defirate, 2020).

A few other examples of products and use cases include: funding protocols, software development tools, index construction, subscription payment protocols, and data analysis applications.

The most important feature of DeFi: Composability

Money Legos

Everyone in the DeFi community likes to use “Legos” as the metaphor for composability. The core philosophy of the DeFi space: build for interoperability; this allows the ecosystem to benefit from individual progress, pushing decentralized finance continually forward (Totle, 2019).

There are roughly 200 projects listed on DeFi Prime alone, each with their own unique features and infrastructure (Defi Prime, 2020).

As people visit this large bin of random Legos, pieces get combined together in new and creative ways. This means that if you picked any 3 out of the roughly 200 listed tools, you’d have 1,313,400 different combinations to choose from to build a new financial product.

Then when new people dive into the Lego bin, they find preassembled combinations of Legos that they can use, creating bigger and better things. This eventually snowballs into a whole universe of exciting Lego creations.

Composability is a feature of design wherein the various components of a system can be easily connected to form any number of satisfying results. Beautiful examples of composable infrastructure as code in software design are seen in Dai-integrated Decentralized Finance blockchain applications. The Lego-like building blocks of the Maker Protocol allow developers to quickly and easily construct financial solutions that offer the benefits of Dai, Maker’s decentralized stablecoin, to their users. By taking advantage of Maker’s Github library of open-source code, DeFi components can be used over and over or reconfigured as building blocks for further innovation (MakerDao, 2020).

A perfect example of composability in DeFi: Utilizing the Gnosis Safe Vaults with the Makerdao DAI stablecoin, that you lend on a lending platform in order to have access to a token that you can invest in a decentralized exchange to implement a futures contract, all driven by a Flash Loan.

The emergence of the money Lego narrative is great because it focuses on the idea that blockchain is best used as the underlying framework for how we interact in general rather than as a platform for a single type of application.

Another theory, compares it to a puzzle, as pieces can be designed in multiple ways:

- One connecting side only (usually user-facing and not developer-facing);
- Two or three connecting sides (usually a middleware protocol);
- Infinite edges (platforms).

If more dApps are built with composability and open ecosystems in mind, we would start to build a larger puzzle with more possible edges. When puzzle pieces are latched onto existing pieces, they are deemed more innovative, but with less upfront work to build (B. Flynn, 2019).

There is a huge opportunity for DeFi founders to educate the public on their DeFi offerings. The wider the awareness is raised, the faster they can claim market dominance.

DeFi' s fragmentation problem

Despite its novel vision, DeFi is becoming overly complicated. From a user perspective, interacting with different protocols and even tracking your portfolio is a logistical nightmare. It's very rare to see dApps and wallets that facilitate direct transactions for multiple protocols. Consequently, a DeFi user who wants to put their money into 7 different DeFi assets most likely needs 7 open tabs to assemble their portfolio.

Users lose out because over time, the protocols and DeFi assets offered to them are not based on what they want, but rather on what's available to developers (C. Russo, 2020).

The Benefits of DeFi

Wider global access to financial services

Currently, 1.7 billion adults worldwide remain unbanked (World Bank Group, 2017) and have zero access to a financial institution. Decentralized Finance should help to tear down the status, wealth, and location barriers that prevent global access to the financial world most developed nations take for granted, bridging elementary financial services for all its participants by means of a smartphone and internet connection.

Affordable Cross Border Payments

By eliminating the need for certain intermediaries, DeFi services are predicted to lower the average global remittance fee from its current, often prohibitively expensive 7%, to a much lower 3% average (C. Hoffman, 2020).

Improved Privacy and Security

Data breaches at centralized institutions, like the May 2019 breach of First American Financial exposed approximately 885 million personal and financial records (Krebson Security, 2019). By definition, a decentralized system does not have a centralized single source of failure that would allow for this type of breach to occur.

Censorship resistant transactions

A full DeFi system cannot be censored or shut off by governments or large corporations. A system such as this can bring a sense of stability and an

alternative option in nations where existing governments and financial institutions may be corrupt or untrustworthy.

In efforts to bring their services to the mainstream, developers of these new DeFi applications will focus on creating a smooth and intuitive user experience to allow any user to take full advantage of the new system that is being put in place.

While each of these benefits are powerful in their own right, their combination can really bring profound implications.

The Dark Side

Despite all of the promises and benefits, there are still some considerable challenges that lie in the path. The major challenges that DeFi needs to overcome:

Legal environment

As it stands the legal financial system is deeply intertwined with the legal system in many countries of the world. As a result of this, any attempt to draw the financial system away from this interconnected setup will create a series of legal challenges that will need to be addressed in order to achieve wide scale adoption.

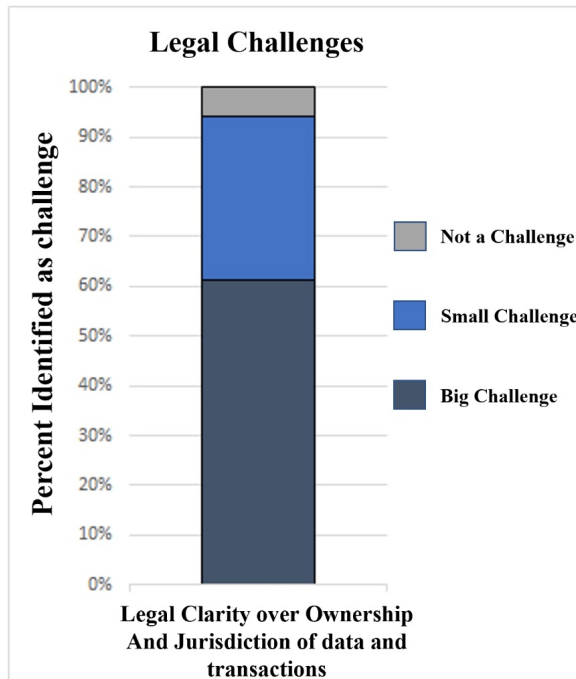


Fig. 3 - Legal Challenges around Distributed Ledger Technology. Source: International Chamber of Commerce, Trade Finance Global and World Trade Organization - Blockchain for Trade Survey, October 2019. Responses from corporates, banks, consultancies and vendors, n = 202. Retrieved from <https://www.tradefinanceglobal.com/posts/what-is-defi-decentralized-finance/>

Lack of interoperability between chains

An important issue that is addressed is a lack of interoperability between chains. In the permissionless world of DeFi applications, a lack of interoperability between chains means that an application built on one chain, say the Ethereum blockchain, cannot easily transact with an application built on a different chain, like the Bitcoin blockchain. While there are some bridging chains and protocols that allow this type of transactions, the infrastructure is still in early stages of development.

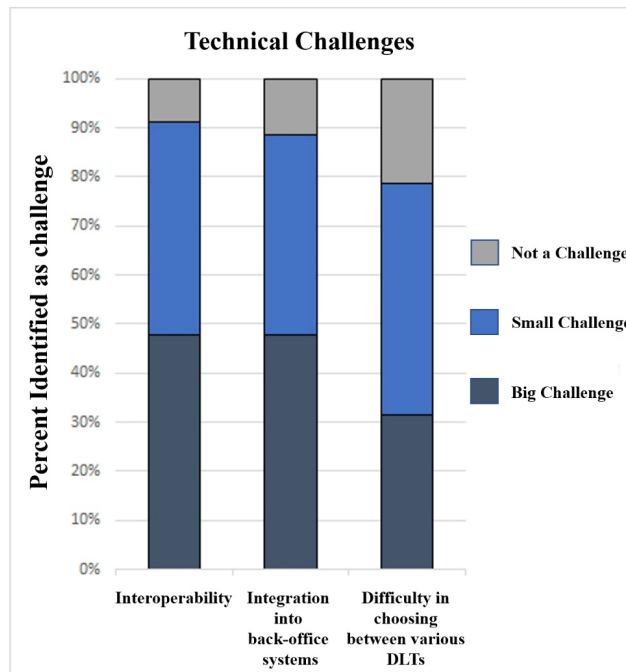


Fig. 4 - Technological challenges around Distributed Ledger Technology.
 Source: Trade Finance Group, International Chamber of Commerce and World Trade Organization - *Blockchain for Trade Survey*, October 2019. Responses from corporates, banks, consultancies and vendors, $n = 202$. Retrieved from <https://www.tradefinanceglobal.com/posts/what-is-defi-decentralized-finance/>

Transaction Speeds

A commonly cited drawback for blockchain based applications is their limited transaction throughput. The Bitcoin and Ethereum networks can each process 7 and 25 transactions per second respectively, but these numbers pale in comparison to Visa’s 24 000 transaction per second throughput (Visa, Security and Reliability, 2020). Overcoming the issue of speed will be a crucial challenge for DeFi to pass for scaling purposes.

Currently, most DeFi applications are built on top of the Ethereum blockchain. Examples of DeFi decentralized applications (dApps) include: Kyber Network, Maker, Nexus Mutual, Compound, and PoolTogether (Defi Prime, 2020).

DeFi has seen strong growth and in February 2020, it hit the \$1 billion mark for the first time, in total value locked in smart contracts (Defipulse, 2020).

DeFi - Total Value Locked (TVL) in USD



Fig.5 – DeFi - Total Value Locked (TVL) in USD. Source: Defi Pulse, Data as per 27th June 2020. Retrieved from <https://defipulse.com/>

Borderless Initiatives with Trustless Technology

With the new concept of DeFi, the questions of Know Your Customer (KYC) and Anti Money Laundering (AML) have been raised.

These issues are still in infant stages of debating, as these concepts do not really fit in the ecosystem of DeFi. Within DeFi, the platforms that have customers, they don't really need to know any other information about them, because the trust technology does not depend or rely on knowing the customers.

AML regulations require the platforms to behave without neutrality and to source destination, purpose and amounts. Without neutrality, the power dynamics change, due to the fact that the platform acts as a centralized body. Those who decide which purposes are permissible for every jurisdiction and who is vetted to participate in the financial services environment act similar to the current centralized financial system, therefore cannot be incorporated as DeFi.

This will result in fragmentation, because in different jurisdictions, the law encompasses different actions as legal or illegal, which means that the system can no longer be borderless.

Because the participants need to be vetted, the system can no longer be open, and of course, because you have to restrict permission of certain types of activities, the system can no longer be censorship resistant. Clearly at this point, the proof of concept is no longer DeFi.

Decentralized Liquidity

Protocols rely on network effects based on liquidity for their success. More volume equals more credibility. This can create a wall for other protocols trying to innovate. Even if they compete on commission, they lack the credibility and liquidity to attract dApp and wallet developers to integrate with them, which means they lose out on market share.

The idea of bringing together the liquidity of multiple Decentralized Exchanges, comes down to having a common order book which will significantly improve the operations of DEXes and not only.

The main problem about this type of scenario, is that when we pull the liquidity in this way, you're also pulling risk, especially in this emerging ecosystem. Basically, in all of the cases where you're using a smart contract to concentrate funds from many different entities, the risk is directly

proportionate with the amount of funds concentrated, as it will be seen as a target for individuals who will try to exploit its vulnerabilities.

In the long run, as these contracts become more mature and secure, they will be stress tested by the environment and they can be trusted to operate by consensus.

The ways that DeFi succeeds and it remains borderless, neutral and censorship resistant is by attempting to reduce the amount of applications that essentially become an exception to the blockchain's ability to resolve through the smart contracts. The solution clearly is to keep the transactions and operability, as much as possible, contained within the blockchain, so you do not run into legal arguments outside. By doing so, by reducing the burden on judicial access, representation and jurisdiction, DeFi can not only remain global and transnational, but also it can remain open to more participants and give everyone the same opportunities where they have been effectively excluded from traditional financial systems.

Risks

DeFi has not reached its full potential yet, due to several challenges related to fraud, volatility, usability, and regulatory uncertainty. First, decentralized finance can be vulnerable to fraud as well as to the proliferation of untested financial innovations (Y.Chen, C. Bellavitis, p.6-8, 2020).

A DeFi savings account allow you to effectively lend to others by providing collateral that can be used to collateralize other activities that are happening in the DeFi ecosystem. So when you're saving, just like in the traditional bank, your savings are used to finance other people's spending, the difference being that in traditional finance, your savings are expanded through fractional reserve banking to extend many times more than the actual amount of savings, whereas in DeFi it's the opposite, because DeFi requires over

collateralization. It's more of a negative fractional reserve rate, as you can only lend less than what you have in savings.

However, when you're putting your savings in an account that is part of a smart contract in a DeFi system, there is a new category of risks.

The risk is not a counterparty risk, that your bank will go bankrupt and the deposit insurance will not be able to support all the covers, but that of a coding security fault of the smart contract itself. The smart contract may have a bug that leads to liquidation of your savings account or theft by another party.

This can be extended to all DeFi applications at this stage. It's not a matter of "if there are bugs", it's a matter of "how bad the bugs are" and "how easy is to exploit these vulnerabilities". Countermeasures need to be in place to rescue or bailout the smart contract if such a vulnerability is detected.

It's a very complex environment so the risk has shifted from counterparty institutions and third-party custodians, into software coding risk, where the developers of that specific smart contract made a mistake or several.

Aspirational versus Reality

As of now, DeFi is interoperable and composable mostly in theory. We need to create the instruments that allow us to easily integrate different protocols, or we run the risk of gradual centralization. This is not because dominant protocols like Maker and Compound are purposefully trying to hold back innovation, but because the way they are built creates invisible constraints on developers.

To make DeFi work as intended, it needs infrastructure that enables scaling and innovation at low cost. A good analogy is how in the late 19th and early 20th centuries, railroads connected different economic agents like factories, ports and cities (protocols) and were able to transport goods (tokens)

via a network of tracks. It was this standardization of transport that allowed for the exponential growth of the global economy (E.Yurtaev, 2020).

The value in making it easier for people to build and try out different protocols is that they may not gain huge traction, but they offer a glimpse into viable alternatives that could propel the space into more robust, sophisticated or user-friendly territory. Right now, the way DeFi is set up, that kind of diversity is not plausible.

Although most DeFi protocols have reached a high degree of architectural decentralization, full political decentralization is hard to achieve. As such, most protocols are still partially centrally governed by their central developer teams or foundations (K.Lau, 2020).

One possible reason for protocols having high brand awareness but low usage is that the protocols do not offer a strong reason for users to use them, they have a low perceived value, or, users simply do not understand the product offerings.

For protocols that have low brand awareness and low usage, it is likely that users are not actively looking for the products or do not understand the product offerings at all.

DeFi is not really focusing on banking the unbanked, but there are few cases to take in consideration. More specifically, the case of stablecoins, that can be pegged to a national currency which are recognized and used as a unit of account.

The best case to analyze is “Dai”, which is a decentralized, unbiased, collateral-backed cryptocurrency soft-pegged to the US Dollar. Dai is held in cryptocurrency wallets or within platforms, and is supported on Ethereum and other popular blockchains.

Users generate Dai by depositing collateral assets into Maker Vaults within the Maker Protocol. This is how Dai is entered into circulation and how

users gain access to liquidity. Others obtain Dai by buying it from brokers or exchanges, or simply by receiving it as a means of payment.

Once generated, bought, or received, Dai can be used in the same manner as any other cryptocurrency: it can be sent to others, used as payments for goods and services, and even held as savings through a feature of the Maker Protocol called the Dai Savings Rate (DSR).

Every Dai in circulation is directly backed by excess collateral, meaning that the value of the collateral is higher than the value of the Dai debt, and all Dai transactions are publicly viewable on the Ethereum blockchain. (Makerdao, 2017).

This perspective, makes things a bit easier in the current environment, where cryptocurrencies are still quite volatile because of their limited liquidity.

What began as a handful of DeFi projects has given way to a wave of experimentation and innovation in the space, including offerings of decentralized versions of mainstream financial products. Think of Dai as the financial “glue” that connects many of these services.

Based on CoinGecko data, Stablecoins are the key entryway into DeFi and DAI is more popular than its market capitalization ranking. Stablecoins plays an important role in the DeFi ecosystem and serves as an indicator of the broader adoption of DeFi (E.Azmi, 2020).

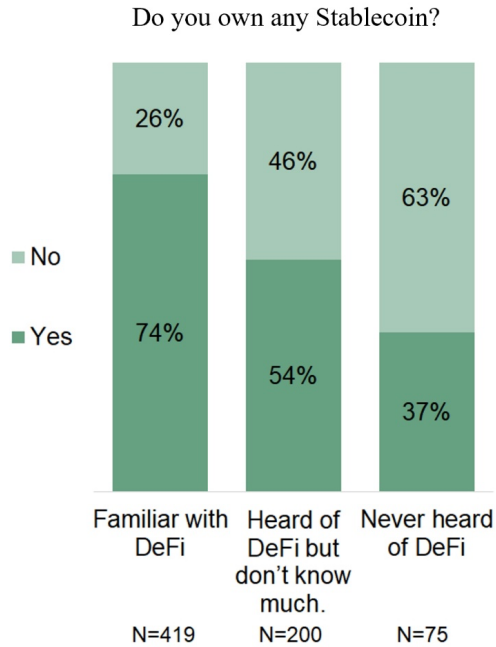


Fig.6 – Do you own any Stablecoin? Source: CoinGecko, May 2020 Survey. Familiar with Defi- N=419, Heard of DeFi but don't know much N=200, Never heard of Defi N=75. Retrieved from <https://www.coingecko.com/buzz/defi-survey>

As DeFi matures, it is imperative that these financial dApps have a deeper understanding of who their main users are and how they are solving the problems of their users. DeFi can be accessible to all ages and gender and based from CoinGecko's data, adoption can be accelerated by bridging the gender gap (E.Azmi, 2020).

People who have at least heard of DeFi

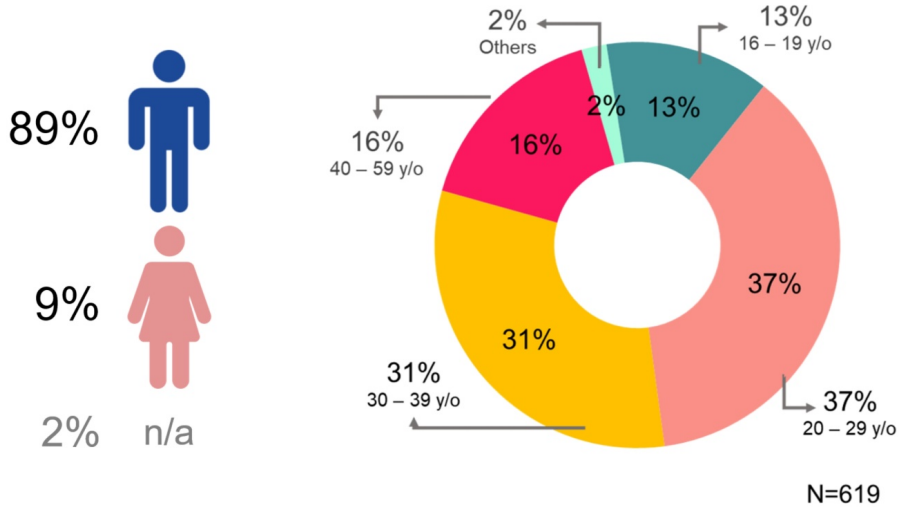


Fig.7 – People who have at least heard of DeFi. Source: CoinGecko, May 2020 Survey, N=619. Retrieved from <https://www.coingecko.com/buzz/defi-survey>

Among those who have heard of DeFi, Millennials, aged 20-39 years old, are the largest group, dominating at 68%. Gen-Z, below 16 years old, currently made up less than 1% of the participants in DeFi. We expect that the upcoming Gen-Z to be an important demographic for DeFi in the coming years as they are tech-native who grew up with full access to new technology. Stakeholders need to pay attention to this generation in particular, as they are anticipated to be the main drivers for DeFi adoption in the coming years (E.Azmi, 2020).

Conclusions

Many of the most popular decentralized applications today are products built for developers rather than users. The applications that are

designed for users tend to struggle to attract users and undermine decentralization in order to create a better user experience.

Decentralized finance may be the next big disruption to the financial system. Powered by blockchain technology, this new wave of applications and services will help bring financial services to the underbanked, reduce transaction costs, and enhance security all while providing users a seamless experience from anywhere in the world. Like any new technology, it is important to take a step away from the hype and critically examine the challenges that lie in the path to mass adoption. For DeFi, these include challenges reach into the legal sphere, and touch on interoperability as well as transaction speeds. Only by addressing and overcoming these challenges, DeFi will reach its full potential.

At the moment DeFi requires a lot of understanding as the technology is still immature and prone to problems, risks and security bugs.

One major step that needs to be addressed are the user interfaces for accessing DeFi, which are not yet mature and this is something that applies to all crypto assets in general. The vision, against the reality, will take quite some time for improving the interfaces, broadening access, increasing liquidity, reducing volatility, maturing the underlying security of the smart contracts and building a more robust infrastructure so that it can be broadly applied.

The most important infrastructure developments with regards to DeFi, as per now, are happening on the Ethereum Blockchain, for the reason that it is the dominant platform in smart contracts.

It is quite a stretch to think that the network effect of Ethereum can be overcome and it can be dethroned so easily, because as with a lot of technologies, the effort required by a developer to learn the tool chain and its intricacies of a specific platform is quite high. It's not easy for developers to switch from one platform to another, and, these things especially in the smart contacts space, are driven by developer loyalty.

Reimplementing traditional financial services in a more decentralized manner is valuable and novel because it changes the power dynamic.

The incentives of power usually change the outcomes of social environments, so by changing the incentives of power, because of the decentralized nature, they change the outcome of social systems and that's one of the most powerful and novel things DeFi can do.

From a technical perspective, what we're seeing is mostly the reimplementation of most traditional financial services: borrowing, lending, savings, exchanges, derivatives, futures and various forms of currency pegs.

While they're implemented in novel ways, the functions they are fulfilling, are basically the same. This will change accordingly as the technology evolves.

All technologies usually have as a starting point, a shadow of the previous technology model within, before they gradually evolve. This makes sense, as most of the financial services come from a centralized framework.

Over time, as the capabilities increase we're going to see more novel applications that expand the range of what is possible and start reaching outside of the box of centralized financial services and moving into applications that are simply not possible with traditional financial services.

Another interesting feature of the entire ecosystem is "composability"; this is the reason that people have named DeFi as the "Lego of Money" or the "Lego of Finance". The idea behind this feature is that you can merge a series of matured infrastructure components and combine them together.

The ability to string together all these components and create a more complex financial service that is built out of these more specialized features is really interesting. This allows developers and users to create these novel financial services and also to increasingly reuse existing components.

The reusability of such features and components will basically improve the maturity of these components, as more users try to use them in

different ways and observe their vulnerabilities, weaknesses and problems overtime.

The “perfect fit” of composability is still an illusion. Interacting with smart contracts in any language other than JavaScript means you need to create your own library for each protocol, which increases complexity. Even the simplest things such as user balances and prices are usually grossly miscalculated, not to mention asset returns and more complicated metrics. Consequently, most wallets simply do not support complex DeFi derivatives or perpetually show inaccurate data.

As the maturity increases, the burden of reinventing the wheel and having to program everything from scratch is reduced, because that will allow the users to depend on these more mature contracts with the confidence that they can operate successfully and without security problems.

Thus, the focus can shift from feasibility to new novel applications that can be built.

This resonates with the current traditional centralized financial system that we are using, where most of the central, commercial & investments banks, along with any other financial services’ company, is building and using their own proprietary software solutions with few sharing solutions optimized even in the age of the internet.

With DeFi, this step is skipped, as composability brings out this very interesting environment where you can share fundamental components and build those as a common infrastructure that is based on trustless technology and gradually mature it, which means that the pace of development and maturity grows much faster than in centralized finance.

We can argue that these are not novel applications, but this is definitely a novel architecture and mechanism for development.

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DISINFORMATION DURING THE CORONAVIRUS PANDEMIC. AN ANALYSIS OF THE TYPES OF FAKE NEWS IN FOUR STATES

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Abstract

Disinformation is currently a real globally danger, and during the coronavirus pandemic it has reached alarming levels in the European Union and beyond. Studies in the field show that, in the first six months after the outbreak of the Covid-19 epidemic, false information was distributed through millions of false accounts on social networks, but also on messaging platforms such as WhatsApp. This paper analyzes, through the qualitative and quantitative method, the types of false news topics that have been published on various obscure sites and then distributed on social networks or messaging platforms. The analysis is made in three countries of the European Union (Romania, Italy and France) and in Russia, and news examples were selected from highly trusted fact-checking platforms, such as the one developed by the European Commission. The research highlights the extremely similarity between the news broadcast in the European Union and reflects the message differences of the fake materials distributed in Russia.

Keywords: Fake news, Covid-19, social media, propaganda, freedom of expression

Introduction

If the power was held in the past by the one who had access to information, now the power is held by the one who knows how to manage the information. (Pulido et al, 2020). The emergence of the Internet and, implicitly, of social networks have facilitated the circulation of news, opening up the possibilities of communication (Del Vicario et al., 2016). But today, many online sites and social networks have become intensively used platforms for spreading false and misleading information (Lazer et al., 2018). And misinformation threatens the proper functioning of states and even democracy itself through the short, medium, and long-term impact it can have on citizens. Misinformation erodes trust in institutions and digital or traditional media and harms our democracies by preventing citizens from making informed decisions. Thus, changes in the media ecosystem "raise new concerns about the vulnerability of democratic societies to false news and the limited capacity of the public to contain them." (Lazer et al., 2017). It can polarize debates, create or intensify tensions in society, undermine electoral systems and have a wider impact on European security. Disinformation affects freedom of opinion and expression, a fundamental right enshrined in the Charter of Fundamental Rights of the European Union. The problem has become so serious that the subject is high on the agenda of world leaders. In the fight against false news, the governments of many states are looking for strategic solutions to stop this phenomenon. And this phenomenon has seen astonishing proportions since the outbreak of the coronavirus pandemic.

The World Health Organization (WHO) has announced that humanity is already facing an "infodemia" in addition to the virus and the disease caused by the virus. Specifically, just like the virus, a wave of fake news is spreading

around the world, and a lot of information is being used as a way to exert political influence. (World Health Organization, 2020)

In the European Union, the Council and the Commission have addressed this issue in terms of priorities. Furthermore, an EU action plan has been developed to combat Covid-19 misinformation (European Council, 2020). In fact, attempts are being made on all levels to counteract this growing phenomenon. A comprehensive report by the EEAS European External Action Task Force has uncovered hundreds of cases of coronavirus misinformation. Between January the 22nd and March the 19th, 2020, 110 false news items of Russian origin about coronavirus were identified. "The authors and the messages are always the same and have a long tradition in the Russian system of influence abroad." (European Commission, 2020)

The number is high comparing to the same period last year, and the danger is even greater as disinformation campaigns become more sophisticated and develop without sufficient regulation, and self-regulation of social platforms is no longer enough.

Internally, the fight against fake news is present in the National Strategy for National Defense 2015-2020, approved by Decision no. 33/2015 of the Romanian Parliament, where it is mentioned in the defense directorates including "the development of the necessary capabilities to react in case of asymmetric and hybrid threats (misinformation being integrated in this concept). (Parliament of Romania, 2019)

False news topics in Romania

In Romania, even before the Covid-19 epidemic broke out, social networks were already loaded with phase information. The first widespread topic was related to vaccines and the occult powers of the global level, which would be of interest for this virus to reach apocalyptic proportions and then a miracle treatment to be sold on a large scale. (News Guard, 2020). In the

foreground was the billionaire Bill Gates, who was allegedly forcibly removed by 1000 policemen from a secret place where he was hiding in Seattle, being accused of biological terrorism. Bill Gates was also the target of another fake news related to the fact that the virus was created in the laboratory and intentionally escaped and then put a vaccine on sale. Obviously the two news, widely spread in Romania, on social networks, turned out to be fake, which have been redistributed countless times. This information was published on obscure sites that appeared overnight in Romania, but which paid for advertising on social networks and the information spread with astonishing speed. But information of this type has greater credibility if someone assumes it, and another fake news related to Covid-19, which also stars Bill Gates around the country and beyond, after being told by a well-known Russian film director, who said that the founder of Microsoft wants to control the world by implanting microchips, and vaccination is a pretext to obtain the biological information of all people. but who paid for advertising on social networks and the information spread with astonishing rapidity. But information of this type has greater credibility if someone assumes it, and another fake news related to Covid-19, which also stars Bill Gates around the country and beyond, after being told by a well-known Russian film director, who said that the founder of Microsoft wants to control the world by implanting microchips, and vaccination is a pretext to obtain the biological information of all people, but who paid for advertising on social networks and the information spread with astonishing rapidity.

All this misinformation reached the public through social networks such as Facebook or Twitter, but with the coronavirus pandemic, a new trend could be observed in the spread of false information in Romania, namely on the WhatsApp platform. In this way, false information was circulated about possible miraculous treatments for the disease caused by Covid-19. For example, the news about the healing power of vitamin C in Romania appears

straightforward "Case 191", on the euvsdisinfo.eu site, a portal of the European Commission built in order to detect the false news coming from the East.

In addition, an audio message from a study conducted by researchers in Vienna has shown that Ibuprofen amplifies the symptoms of Coronavirus disease has been distributed mainly to large WhatsApp groups to create the impression that the authorities are doing a lot, emphasizing that there is actually a real conspiracy against humanity.

Another favorite topic of conspiracy theorists is related to 5G technology, the topic addressed long before the Sars-Cov 2 pandemic. This time the idea was spread that the radiation emitted by 5G technology weakens people's immune system, and this would make them vulnerable. in front of the virus.

Information regarding the measures taken by the authorities at national level has also sparked a wave of fake news. From the idea that the data provided by the authorities are falsified for obscure purposes, especially financial, to the fact that the whole pandemic is a hoax.

Internally, several measures have been taken to limit the distribution of fake news, but not all of them have had the expected result. During the Sars-Cov 2 pandemic censorship was sometimes instituted (Lupu, 2020). For example, one of the measures was to close 15 sites during the state of emergency, but the measure did not prove effective because some publications were reopened and once reopened having a much higher number of views. Many of these sites published articles on conspiracies before the coronavirus pandemic broke out, and now they have done nothing but raise this topic to alarming levels to create panic. In fact, there are currently hundreds of sites that spread millions of posts globally about coronavirus, according to data provided by the European Commission, in the context in which Russia is conducting a disinformation campaign against EU countries, including

Romania. The European Commission has identified, on the basis of a fact checking portal, no less than “110 narratives related to Covid-19, present in over 2,700 fake news articles from sites close to Moscow ”.(European Commission, 2020)

The fake news epidemic in Italy

False information has been orchestrated in almost all European Union countries. Italy, one of the countries most severely affected by the Sars Cov 2 virus, was also one of the most affected by the infodemia created around this disease. „The major problems of the moment are how to avoid ourselves, how to fight, how to stop through sociology, psychology and technology the fake news phenomenon.” (Vlăduțescu&Voinea, 2019)

Social networks have been preferred by those who want to spread false information. (Cinelli et al. 2020). Extensive misinformation campaigns took place on the Twitter social network (Kouzy et al., 2020.) Researchers at News Guard conducted a study and analyzed who started the disinformation related to coronavirus in Italy. Thus, they identified 5 fake accounts, from which nine posts went viral and reached about 250,000 followers, who in turn redistributed fake news, so that the information reached about 1 million Twitter users. The focus was on hidden healing methods, such as vitamin C, vitamin D injection or impregnation of the theory that the coronavirus is a big hoax, that it is a simple cold that heals on its own, and cases of death are almost non-existent. And in Italy we find the conspiracy theory related to Bill Gates, vaccine and microchipping to control humanity, and this information was posted and shared hundreds of thousands of times on Twitter by a freelance journalist, who also owns a news site. He also posted false information that the Sars Cov 2 virus was created in the laboratory from an HIV strain. (News Guard, 2020) vaccine and microchipping to control humanity, and this information has been posted and shared hundreds of thousands of times on

Twitter by a freelance journalist, who also owns a news site. He also posted false information that the Sars Cov 2 virus was created in the laboratory from an HIV strain. (News Guard, 2020)

Similar information was posted on Facebook. In addition, distributors of misinformation have gone further and even spread false rumors that the Rome government is preventing migrants from being tested for coronavirus. The information appeared as a result of the falsification of the quotations of Angelo Aliquo, representative of the health authority from the province of Ragusa. The website euvsdisinfo.eu found that in Italy the misinformation also aimed at weakening the institutions of the European Union or NATO. A lot of false news were related to the fact that Russia helped Italy when it needed it, while the partner organizations stayed and did nothing. (Euvsdisinfo, 2020)

But a lot of false information was spread, in Italy, through the WhatsApp platform. The messaging application has become the preferred means of distributing fake news. A lot of information about the dramatic situation in hospitals, but also videos about the fact that the virus was created in the laboratory were distributed mainly in large groups. The influx of false information was so great that Facebook decided to work with a local company Facta to remove the fake content.

Fake news in France

1.2 As early as March 2020, in France, a large-scale campaign to misinform the population about the spread of coronavirus began. Many Facebook and Twitter pages were created for this purpose, and others, already existing, were reprofiled on false information related to COVID-19. (Noufou Ouedraogo, 2020)

News Guard found that out of 7 Twitter accounts, 9 separate information about the coronavirus were distributed, which reached over 251,000 followers, and they, in turn, redistributed the untrue rumors. False

information includes themes from other EU countries, such as the global vaccination campaign launched by businessman Bill Gates, at the initiative of which the virus was created. Another piece of information was related to the fact that the virus was created in the laboratory and intentionally released, then spread around the world for a military game. In France we also find the false rumor that this virus is spread through 5 G technology. The same themes are distributed hundreds of thousands of times on Facebook, and on WhatsApp, the multitude of false messages spread has made it difficult for the authorities. Many medical messages that allegedly came from a doctor spread around France. The message was one that used family language, in which a so-called doctor addressed a friend in a friendly tone and explained what to do to avoid contracting the virus. After France, the message was translated into several languages and circulated in several states of the European Union, being redistributed millions of times. In France we discover another kind of fake, from a Twitter account is distributed a fake interview of the Japanese Nobel Prize winner Honjo Tasuku, who allegedly stated that he does not believe that Sars Cov 2 is a natural virus.

Fake news in Russia

1.3 The member countries of the European Union were nor the only ones invaded by fake news. And in Russia, which is found guilty of throwing false information at the EU, untrue rumors have been spread countless times on social networks. However, the message is a little different from the one launched on social networking sites and pages in the European Union. It is centered on an anti-American current. (Sukhankin, 2020)

For example, on Facebook a news item about the fact that the Covid-19 virus is an American biological weapon used to give birth to a large biological war. Another false news, spread thousands of times on social media was that the Sars Cov 2 virus was thrown by the Americans, on China territory,

in the fight between the two states due to economic reasons. Another conspiracy issue is related to the fact that the mortality rate caused by Covid-19 in Russia is very low due to the fact that Russian citizens have not been vaccinated in the past with influenza serum bought from the West. Also in Russia, it is clear that there is false news with direct attack on the European Union or the United States, and as an example we have a news published in Russia by the site rusvesna.su, then taken over thousands of accounts on social networks, about the fact that the United States is to blame for the outbreak of the pandemic. NATO has also been the target of false news spread across Russia. For example, the website novorosinform.org provided news that NATO is using the COVID-19 pandemic to mobilize Western forces against Russia, obviously false information. The Russians also received information about healing medicines such as ginger or salt, but the frequency of its spread was much lower than in European Union countries - obviously false information. (Euvsdisinfo, 2020)

The Kremlin authorities have decided to take action to spread false news, and those who spread false information, presenting it as true, risk up to five years in prison. Furthermore, the censorship authority decided that 44 sites should remove the content of more articles that presented "false information" related to the COVID-19 pandemic. And this had a positive side on the one hand, but there were no negative effects. For example, a radio station promoting the interests of the Russian opposition interviewed a political analyst, who claimed that the government was lying when it said no one had died in the country from the coronavirus. The president and the interior minister pressured the station to delete the interview from its website. This request was motivated as part of the government's campaign against what the authorities called "fake news", but many saw this as a real censorship of freedom of expression.

Conclusions:

In recent months, the health sector has been overwhelmed by false information - published and distributed intentionally or unknowingly regarding COVID-19. More than 3.4 million suspicious accounts targeting coronavirus discussions have been suspended on Twitter since the COVID-19 pandemic broke out, thanks to the EU institutions' collaboration with online platforms. Facebook removed hundreds of accounts from the social network - more than half from Russia, Iran and Georgia - after discovering that they belonged to networks that carried out campaigns to influence followers. However, the message sent to the public was different depending on the countries where the false information was disseminated. In Romania, false news about miracle treatments hidden by the authorities predominated, conspiracy messages related to obscure financial interests and an attempt was made to impose the idea that businessman Bill Gates was behind the Sars Cov pandemic 2. Similar messages were sent in Italy and France, and sometimes the same news was translated into several languages and published on various news sites, so that later, they can be spread on social networks. The WhatsAapp platform was also used to distribute messages in all three countries. They had a family tone to give as much credibility as possible. Instead, the fake messages spread on Russian websites and social networks have a strong anti-American message and a Russian nationalist current. Also, the idea was imposed that important institutions such as NATO or the European Union were weakened during the pandemic, and Russia became an increasingly important international pawn. In fact, the idea that the European Union institutions are weakening has been very present in Italy as well.

In this context, it can be seen that the wave of fake news is increasingly dangerous, and those behind these conspiracy theories are waging a hybrid war targeting more and more states, so the multinational effort to

combat this phenomenon must be increasingly otherwise it risks destabilizing democracy and the rule of law.

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ACACIA PROTOCOL – A PROPOSAL OF STRUCTURED PRODUCTS FOR AND WITHIN THE DECENTRALIZED FINANCE ECOSYSTEM

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Abstract

Decentralization matters. Decentralized Finance covers a range of products and services which aim to make participation in financial services more accessible to everyone. This paper presents a plan to create sophisticated products usually reserved for UHNWIs, Institutional investors and Asset Managers within the traditional finance world for the Decentralized Finance ecosystem. Structured Capital Market Products are innovative, ever evolving and well established in traditional finance and by this decentralized creation, a catalyst that will speed up the capacity of “decentralized” for everyone’s economic empowerment and the real accessibility to the global financial marketplace.

Introduction

This paper will present a case for development of Structured Products for and within the Decentralized Finance (DeFi) ecosystem. In order to

determine the requirements of both the product and its environment, it is necessary to analyze its form and function.

Structured Products refer to combinations of individual financial instruments, such as bonds, stocks and derivatives. The payoff for the investors is dependent on a combination of bond rates, interest rates, equity prices and FX rates. At first glance, most of these composite products are very similar to plain vanilla coupon bonds (*R. Rebonato, 1997*). What sets them apart from bonds is that both interest payments and redemption amounts depend on, in a rather complicated fashion, the movement of stock prices, indices, exchange rates or future interest rates.

Since structured products are made up of simpler components, we usually break them down into their integral parts when we need to value them or assess their risk profile and any hedging strategies. This should facilitate the analysis and pricing of the individual components. Mathematically, the price of the Structured Product must equal the sum of the prices of the individual components, otherwise, an arbitrage opportunity to net a risk-free profit would present itself.

The concept of designing and “offering” such beautiful and complex products for low barrier entry within the Decentralized Finance universe, would enable this tool of Wealth Management to continue to evolve and develop within open source software on top of P2P protocols, for the benefit of the ecosystem and all its Market Participants.

To reach toward this, we will explore a simple form of a Structured Product in traditional finance, to provide an in-depth analysis of its replication techniques and mapping out into its simpler components “Zero-Coupon Bonds” and Options, both Calls and Puts.

We will assess the available tools within the DeFi ecosystem, along with those currently in development and describe implementation, its use cases and potential adoptability.

Reference Names

Like many financial product groups, uniform naming conventions are evolving and even where naming conventions exist, some issuers still use differentiating “alternative” names. This paper will use the market names for products that are common; we endeavor to be as accurate as possible. As these names can be rather unclear in practice, it is not possible to categorize and value a product on this basis alone; valuation is only possible on the basis of cash flow structure.

Pricing Safe Assets

The value of assets is the reciprocal of the value of money and credit. The value of money is the reciprocal of the quantity of it in existence. When central banks produce a lot of money and credit thus making it cheaper, it is wise to be more aggressive in owning assets.

As a reference, recently, a combination of negative interest rates and ECB asset purchases appear to have given rise to a persistent negative pressure on the “Swiss safety premium”. A move to negative rates make government debt less attractive and the continued safe asset purchases by foreign central banks reduce the supply and in effect reduce the relative uniqueness of the Swiss confederation bonds within the class of highly safe assets. This points to an important international spillover channel that impact on the relative scarcity of safe assets (*J.H.E. Christensen, N. Mirkov, 2019*).

The prospect that even the safest assets can become unattractive provided interest rates are sufficiently low is not new. Unattractiveness is also becoming from relative illiquidity. Yet in traditional finance, any convenience yield in their pricing mainly reflects a safety premium and is unlikely to represent any liquidity premium.

The current blockchain environment does not offer the opportunity for Safety Asset pricing. As the decentralized ecosystem evolves and develops,

new products would eventually shed light on the role of credit quality, liquidity and convenience. Allocations by traditional finance funds into Structured Products could embrace the DeFi space and fast track of Safe Haven Asset pricing for the benefit of all yield participants, supply and demand.

What are Structured Products?

Structured products can be loosely defined as investment products where the return is linked to an underlying asset with pre-defined features such as maturity date, coupon date, capital protection level, etc. They can be seen as a product package using three main components:

1. A bond;
2. One or more underlying assets; and
3. Financial instruments linked to these underlying assets, or a derivative strategy.

The three biggest advantages of structured products are the products' defined returns, market protection barriers and known maturity dates. They are an attractive addition to many portfolios because they can diversify the risk of portfolios and they can be selected with their defined outcomes to meet specific financial objectives – considering factors such as goals, risk tolerance and time.

The vast majority of structured products are offered by high investment-grade issuers, mostly large global financial institutions that include Barclays, Deutsche Bank, JP Morgan, UBS and Credit Suisse.

This paper will focus on, as an analysis, the simplest form of structure: a Capital Guaranteed Structured Product.

Conventions Applied

In the case of options, a unit of the underlying asset invariably serves as the imputed unit of trading. While this will mostly differ from the actual unit of trading, the valuation process will thus be easier to understand.

The term “foreign currency” refers to currencies other than the product’s issue currency or base currency. In practice, the investor’s reference currency determines whether a given currency is foreign or not (*D.F. DeRosa, 2013*).

Black-Scholes Model

The valuation formulas used for embedded options are based on the Black-Scholes model (*E.G. Haug, p41-47, 1997*), which makes the following central assumptions:

- (1) Changes in the price of the underlying products (stock, index) follow geometric Brownian motions, with volatility constant over time;
- (2) Trading is continuous;
- (3) No market participant has market power and all participants are price takers, which means that no one can influence an instrument’s price;
- (4) The short selling of securities is permitted without restriction;
- (5) There are no transaction costs or taxes;
- (6) The market offers no arbitrage opportunities; &
- (7) The risk-free interest rate is constant over time.

In practice, a multitude of methods is used to determine the fair value of such sophisticated products. Simple valuation models are applied even if they are not really appropriate or attempts may be made to replicate structured products in the form of portfolios of simple products which at any time pay off at least as much as the respective structure.

Traditional Capital-Guaranteed Structured Products

Capital-guaranteed products have three distinguishing characteristics:

1. Redemption at a minimum guaranteed percentage of the face value (redemption at 100% face value is frequently guaranteed);
2. No or low nominal interest rates; &
3. Participation in the performance of an underlying asset; this participation is sometimes referred to as interest that is always paid out at the same time as the redemption amount (In this paper this is interpreted and treated as part of the redemption amount).

The products are typically constructed in such a way that the issue price is as close as possible to the bond's face value (with adjustment by means of the nominal interest rate). It is also common that no payments (including coupons) are made until the product's maturity date.

The investor's participation in the performance of the underlying asset can take an extremely wide variety of forms. In the simplest variant, the redemption amount is determined as the product of the face value and the percentage change in the underlying asset's price during the term of the product. If this value is lower than the guaranteed redemption amount, the instrument is redeemed at the guaranteed amount.

This can also be expressed as the following formula:

$$\begin{aligned} R &= N \cdot \left(1 + \max \left(0; \frac{S_T - S_0}{S_0} \right) \right) \\ &= N + \frac{N}{S_0} \cdot \max (0; S_T - S_0) \end{aligned}$$

Where:

Notation	Explanation
R	Redemption Amount
N	Face Value
S_0	Original Price of Underlying Asset
S_T	Price of Underlying Asset at maturity

Therefore, these products have a number of European call options on the underlying asset embedded in them. The number of options is equal to the face value divided by the initial price (*cf.* the last term in the formula). The instrument can thus be interpreted as a portfolio of zero-coupon bonds (redemption amount and coupons) and European call options.

The possible range of capital-guaranteed products comprises combinations of zero-coupon bonds with all conceivable types of options. This means that the number of different products is huge.

The most important questions and characteristics for classifying these products are as follows:

1. Is the bonus return (bonus, interest) proportionate to the performance of the underlying asset (like call and put options), or does it have a fixed value once a certain performance level is reached (like binary barrier options)?
2. Are the strike prices or barriers known on the date of issue?
3. What are the characteristics of the underlying asset? Is it an individual stock, an index or a basket?
4. Is the currency of the structured product different from that of the underlying asset?

Traditional Zero-Coupon Bonds

Zero coupon bonds represent the most basic type of interest rate instruments. They do not pay interest periodically but involve only a single

cash flow at the end of a fixed maturity. The issuer does not pay any interest up until the bond matures. The investor's income equals the spread between the issue price and the redemption price. The yield on a zero-coupon bond is called spot rate. Depending on the compounding technique used, the outcome is either:

$$(1 + s(T))^T \cdot P(T) = 100\%$$

or

$$P(T) \cdot e^{r(T)T} = 100\%$$

Where:

Notation	Explanation
T	Time to maturity (years)
$P(T)$	Present Value (in % of principle)
$s(T)$	Discretely compounded annual spot rate
$r(T)$	Continuous compounded annual spot rate

Depending on the issuer's default risk, different spot rates apply to identical times to maturity. Vice versa, it is possible to value a zero-coupon bond based on the spot rate for the relevant time to maturity and the respective default risk. When we consider the annualized spot rates as a function of the time to maturity, we refer to the term structure of interest rates.

“Foreign currency” bonds may be valued by using two equivalent techniques:

- (1) Use the respective spot rate of the “foreign currency” for valuation and convert the outcome at the current exchange rate;
- (2) Convert the (known) cash flows into the issue currency and value the resulting cash flows at the issue currency spot rates.

Both techniques must result in (almost) the same outcome; otherwise, arbitrage opportunities would exist. For some types of structured products, future cash flows are not known at the time of valuation. In such case, we can

only use the first technique.

We cannot break down zero coupon bonds into simpler components. To value a zero-coupon bond, it suffices to know the spot rate applicable to the time to maturity and the respective default risk.

Traditional Options embedded – Calls and Puts

The simplest of Capital Guaranteed products are distinguished by the fact that the redemption amount is made up of a guaranteed percentage of the instrument's face value, often 100%, and a bonus return which varies in proportion to the performance of an underlying asset between the issue and maturity dates. The bonus return is calculated as a percentage of the difference by which the underlying asset's price on the maturity date exceeds its price on the issue date.

For Capital Guaranteed products with embedded Call Options, if the price falls, no bonus return is paid out (*D.F. DeRosa, 2013*). Thus, the investor profits from a rise in the price of the underlying asset. However, if the price drops, the investor does not have to bear the loss.

For Capital Guaranteed products with embedded Put Options, if the price rises, no bonus or "interest" return is paid out. The investor can thus profit from a drop in the price of the underlying asset without having to bear losses if the price rises.

Note that with capital-guaranteed products, it is often the case that no payments are made, including coupons, until the maturity date.

Capital-Guaranteed Bond with Call Options embedded

Face Value – 100

Capital Guaranteed – 95%

Participation rate b – 50%

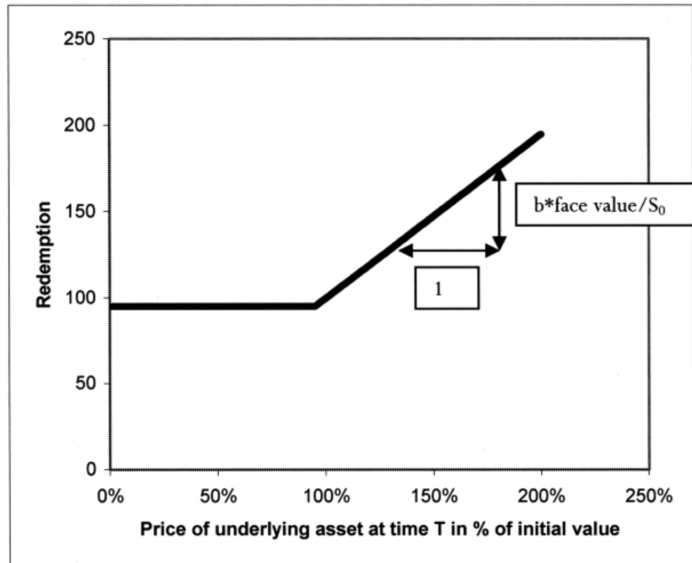


Fig.1 – Payment diagram for capital-guaranteed bonds with call options embedded – face value 100, 95% capital guarantee and participation rate b). Retrieved from J. Christl, (2004). *Financial Instruments – Structured Products Handbook*, p70.

Capital-Guaranteed Bond with Put Options embedded

Face Value – 100

Capital Guaranteed – 95%

Participation rate b – 50%

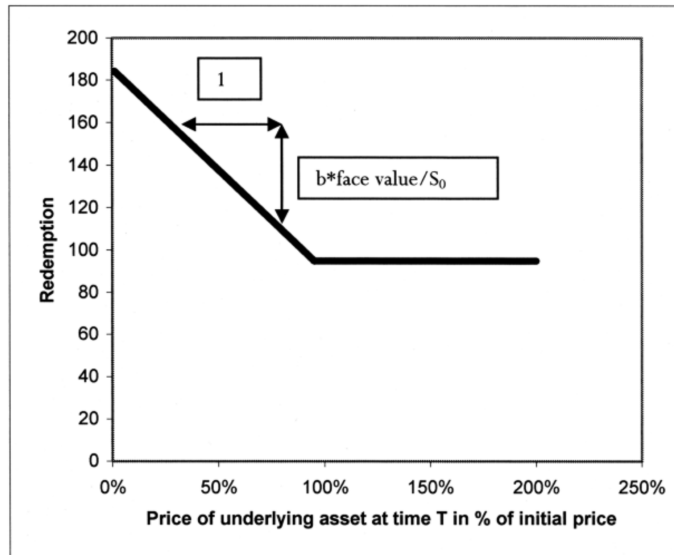


Fig.2 – Payment diagram for capital-guaranteed bonds with put options embedded – face value 100, 95% capital guarantee and participation rate b). Retrieved from J. Christl, (2004). *Financial Instruments – Structured Products Handbook*, p76.

These Capital Guaranteed structured products can be broken down or replicated as:

Zero-Coupon Bonds with embedded Call Options or Put Options

$$\text{ZeroCoupon Bonds} + \frac{N \cdot b}{S_0} \text{ Call Options}$$

or

$$\text{ZeroCoupon Bonds} + \frac{N \cdot b}{S_0} \text{ Put Options}$$

The Face Values of the Zero-Coupon Bond: Coupon payments and the guaranteed redemption amount of the bond. Note that cash flows typically do

not take place until the maturity date.

The strike price of the Call Option is:

$$S_0 \left(1 - \frac{1 - a}{b}\right)$$

The strike price of the Put Option is:

$$S_0 \left(1 + \frac{1 - a}{b}\right)$$

For some issuers, the redemption payment for Call Options is described:

$$R = N \cdot a + \frac{N \cdot b}{S_0} \cdot \max(S_T - S_0; 0)$$

For Put Options, is described:

$$R = N \cdot a + \frac{N \cdot b}{S_0} \cdot \max(S_0 - S_T; 0)$$

Where the investor's participation in the performance of the underlying asset is also equivalent to the Call or Put Option, but with a strike price of S_0 .

Where:

Notation	Explanation
R	Redemption Amount
N	Face Value
S_0	Original price of Underlying Asset
S_T	Price of Underlying Asset at Maturity
a	Guaranteed Redemption Amount
b	Participation Rate

Valuation

**Where the currency of the product and that
of the underlying asset are the same**

Note that all payments typically take place at the end of the instrument's term. The products are valued using the relevant spot interest rates. Under the Black-Scholes Model, there is a closed formula for calculating the option premium. This formula applies to individual "assets", i.e. stocks as well as indexes but not to baskets of assets, equities or indexes.

For Call Options:

$$c = S_e^{-qT} N(d_1) - X_e^{-rT} N(d_2)$$

For Put Options:

$$p = X_e^{-rT} N(-d_2) - S_e^{-qT} N(-d_1)$$

Where for both:

$$d_1 = \frac{\ln(S/X) + (r - q + \sigma^2/2)T}{\sigma\sqrt{T}}$$

$$d_2 = d_1 - \sigma\sqrt{T}$$

Where:

Notation	Explanation
c	Premium of a call option (European) on 1 unit with price S at $t=0$. X is the exercise price and the option expires in T years.
p	Premium of a put option (European) on 1 unit with price S at $t=0$. X is the exercise price and the option expires in T years.
r	Risk free interest rate (constant) over the period of the option.
q	Dividend Yield

σ	Volatility of the asset
$N(d)$	Cumulative standard normal distribution at d

Valuation

Where the currencies are different, we distinguish two types:

(A) The price of the underlying asset is “translated” at the current spot rate on the issue date as well as the maturity date.

For Call Options:

$$R = N \cdot \left(a + \frac{b}{100} \cdot \max \left(\frac{E_T S_T - E_0 S_0}{E_0 S_0} \cdot 100; 0 \right) \right)$$

For Put Options:

$$R = N \cdot \left(a + \frac{b}{100} \cdot \max \left(\frac{E_0 S_0 - E_T S_T}{E_0 S_0} \cdot 100; 0 \right) \right)$$

Where:

Notation	Explanation
R	Redemption Amount
N	Face Value
S_0	Original Price of Underlying Asset
S_T	Price of Underlying Asset at maturity
a	Guaranteed Redemption Amount
b	Participation Rate
E_0	Exchange Rate on the Issue Date
E_T	Exchange Rate on the Maturity Date

For some issuers, the redemption payment for Call Options is described:

$$R = N \cdot a + \frac{N \cdot b}{E_0 S_0} \cdot \max(E_T S_T - E_0 S_0; 0)$$

For Put Options, is described:

$$R = N \cdot a + \frac{N \cdot b}{E_0 S_0} \cdot \max(E_0 S_0 - E_T S_T; 0)$$

The last part of the equation describes a European call/put option. The option is exercised when the price of the underlying asset in the product's issue currency ($E_T S_T$) is greater than the strike price ($E_0 S_0$), which is already known at the time of issue. Such options are referred to as “**foreign equity struck in domestic currency**” options and can be valued with a closed formula.

For Call Options:

$$c = E_0 S_0 e^{-qT} N(d_1) - X e^{-rT} N(d_2)$$

For Put Options:

$$p = X e^{-rT} N(-d_2) - E_0 S_0 e^{-qT} N(-d_1)$$

Where for both:

$$d_1 = \frac{\ln(E_0 S_0 / X) + (r - q + \sigma_{ES}^2 / 2)T}{\sigma_{ES} \sqrt{T}}$$

$$d_2 = d_1 - \sigma_{ES} \sqrt{T}$$

Where:

Notation	Explanation
c	Premium of a Call Option “ foreign equity struck in domestic currency ” with price S at t=0. X is the exercise price and the option expires in T years
p	Premium of a Put Option “ foreign equity struck in

	domestic currency” with price S at t=0. X is the exercise price and the option in T years
r	Risk free interest rate
q	Dividend Yield
σ_{ES}	Volatility of asset in the product’s issue currency
$N(d)$	Cumulative standard normal distribution at d

(B) The change in price is measured in the original currency and then “translated” into the product’s currency at the spot rate. The bonus return

For Call Option:

$$R = N \cdot a + \frac{N \cdot B}{S_0} \cdot E_T \max (S_T - S_0; 0)$$

For Put Option:

$$R = N \cdot a + \frac{N \cdot B}{S_0} \cdot E_T \max (S_0 - S_T; 0)$$

The options are valued in the underlying asset’s currency using the usual Black-Scholes formula. The value in the product’s currency is then determined by simply translating it at the current spot rates (*J. Christl, 2004*).

DeFi Composability

Composability is a feature of design wherein the various components of a system can be easily connected to form any number of satisfying results. It focuses on the idea that blockchain is best used as the underlying framework for how we interact in general rather than as a platform for a single type of application.

Now those elements can interact and even be configured into composite structures or flows with interoperable smart contracts. Any protocol or platform is composable if its existing resources can be used as building blocks and integrated into higher order decentralized applications. Composability leads to rapid and compounding innovation. The fact that most DeFi protocols are open source, developers across the globe can collaborate to create new products leading to innovation and maturation.

Current Decentralized Protocols

There are no existing decentralized protocols that support the building of decentralized Structured Products. There are however, few existing decentralized protocols that support derivatives although none that have any significant usage. There is also a protocol in development that will resemble the building or interest rate discovery toward that of a Zero-Coupon Bond.

In order for a decentralized structured product protocol to operate, there needs to be an effective way to price exchange digital blockchain assets. *Acacia* will work with any standard Ethereum-based decentralized exchange that enables token exchange at rates supplied by users.

DAI – the stablecoin “base currency”

Stablecoins are the fabric that attempt to peg their market value to some external reference. They are designed to tackle inherent volatility and are normally collateralized, meaning that the total number of stablecoins in circulation is backed by assets held in reserve.

The Maker Protocol employs a two-token system. The first being Dai, a collateral-backed stablecoin that offers stability. The Maker Foundation and the MakerDAO community believe that a decentralized stablecoin is required to have any business or individual realise the advantages of digital money. Second, there is MKR, a governance token that is used by stakeholders to

maintain the system and manage Dai. MKR token holders are the decision-makers of the Maker Protocol, supported by the larger public community and various other external parties (*MakerDAO Whitepaper, 2020*).

The new version of the **Maker Protocol**, Multi Collateral Dai (MCD) is being released and live on the main Ethereum network; the biggest change is that it now accepts any Ethereum-based asset as collateral to generate Dai given that it has been approved by MKR holders and has been given specific, corresponding Risk Parameters through the Maker decentralized governance process.

Even though MakerDAO has some of the most secure smart contracts around, the traditional finance world does have a much longer history and with better studied and understood risks. A stablecoin needs something much more to rise above this competition. A dedicated community greatly assists in creating the necessary network effects and could make all the difference in the long run.

MakerDAO does have a broad support from the Ethereum community and is an ever increasingly established and thriving ecosystem; it's future is properly aligned with the democratising potential and the impending success of the open finance movement we are currently experiencing.

yToken – the “Zero-Coupon Bond”

Buying yTokens is economically similar to lending the target asset. Because yTokens are not redeemable until expiration, they are likely to trade at a discount until maturity, particularly if there is demand to borrow the target asset. This means the value of yTokens (denominated in the target asset) will tend to appreciate over time as they approach maturity. This is analogous to the interest earned by lenders in other protocols. Thus, a yToken resembles a secured Zero-Coupon Bond in DeFi (*A. Niemerg, D. Robinson, 2020*). Upon expiration, the yToken can be redeemed for its face value.

yTokens from different vaults in the same token contract are fungible. yTokens enable a fungible market for fixed-term secured lending on-chain. By minting, holding and/ or trading yTokens, users can synthetically borrow and lend the target asset. Users are guaranteed a particular interest rate if they hold the position to maturity.

dYdX – Decentralized Options

The dYdX option protocol uses one Ethereum Smart Contract per type of option. A type refers to a given set of input parameters including the *base token*, *quote token*, strike price, and expiration date. *Base token* refers to the asset the option is for and *quote token* refers to the token in which the premium and strike price are denominated. Each option contract is able to issue new options of its type at any time before the option expiration date. The contracts can act as either a put or a call option by simply switching the *base token and quote token* and inverting the strike price (A. Juliano, 2018).

Writers of the option list offers for a specified lot size and premium on an off blockchain platform. Buyers can buy options from a writer by sending a transaction containing a write offer to the smart contract. After receiving such a transaction, the smart contract transfers the premium in *quote token* to the writer, and the offered amount of *base token* to itself. The buyer is issued options which can be transferred and traded as any other ERC20 token. The smart contract holds on to the *base token* until the option is either exercised or expired.

Any holder of the option can choose to exercise at any time before the expiration date. Upon exercise, the option holder pays $strike\ price \times (\# options)$ of *quote token* to the smart contract and is sent $\# options$ of *base token* from the smart contract. The *quote token* paid to the contract is distributed to the writer or writers of the option. After the option expires, all writers can withdraw *base token* from the smart contract corresponding to:

$$\frac{\text{Options written}}{\text{Total Options written}} \cdot \text{Total tokens held}$$

Acacia Protocol

To be built on top of other protocols, the Acacia Protocol will enable the building of these sophisticated products, beginning with the simplest of them all, the Capital Guaranteed Product. Future developments within the DeFi space should allow for the product development to develop in tandem.

The ability for sophisticated investors to build towards portfolio optimization, tailoring to their respective specific requirements based on a broad array of underlyings, designed to facilitate highly customized risk-return objectives, will definitely increase the allocation flows into the space.

In its current limited form, this perilous space is unaccommodating to sophisticated investors desiring protection strategies i.e. principle guarantees, or portfolio optimization i.e. bespoke structures, or even, when speculative and willing to trade off some or all protection in favour of more attractive performance potential, strategies allowing for a more potent performance feature i.e. conditional 2x or 3x performance on an underlying asset. We foresee that continued development in this space would increase investment allocations, thus increasing further development in even more complex structures opening the doors for ever increasing allocations into a growing menu of strategies in the space.

Some examples of sophisticated structured products that could be developed in the future:

- Floored/ Capped/ Collared/ Reverse Floating Rate Notes;
- Multitranche “Bonds”, Step-up/Step-down “Bonds”;
- Barrier Notes and Binary Barrier Options;
- Interest Rate linked notes and other various asset linked notes;

- Thematic and other Bespoke strategies.

Translation of Acacia Protocol

Thanks to the advent of smart contracts, tokenized strategies for structured products can be created without the need for a third party. Counterparty agreements are now able to be programmatically encoded thus considerably reducing the risk for malicious activity. This development will permit retail investors access to investment opportunities previously restricted only to institutions, family offices, UHNWIs and other sophisticated investors.

The Acacia Protocol aims and intends to tailor and customize solutions for all major smart contracts distributed ledger infrastructures.

Governance

Acacia will consider using a DAO to govern upgrades to the protocol.

Especially important governance questions we ask in an era when the greatest efficiencies can be gained by technologies:

“Whom are we optimizing these efficiencies for?”;

“What should be done if the benefits are not broad-based?”;

“Will we modify so that it both increases the size of the pie and divides it well?”.

Market Participants

Market players looking for liquidity, should stay within the traditional markets. With the global Covid-19 pandemic, government mandated central bank enabled quantitative easing has recently been offered as relief to much of the traditional currencies, such helpful interventions have been lacking in the digital blockchain asset markets. Many investors thus still remain uncomfortable allocating meaningful amounts to digital blockchain assets.

This is the main struggle of blockchain players, a struggle that is no longer about being that of legality, but a lack of allocation from traditional finance.

Investors who are looking for investments with a limited downside, as well as a possibility of having a return connected to “the market” would find attraction toward structured products that have a high focus on capital protection. These are usually risk-averse investors who would only be looking at traditional portfolios with stocks and bonds combinations. Products that can provide a lower downside risk than competing traditional mixed funds will be an attractive investment alternative to them. With an increasingly sophisticated products offering, the DeFi space affords amplified allocations from safe yield seeking investments from the traditional finance arena.

Adoptability

Structured Products can provide tailored solutions in line with a specific strategy in all market configurations. Whilst they are a useful tool for portfolio management and risk control, they are nonetheless very sophisticated. This sophistication is needed to meet the specific requirements of investors who each have their own investment profile and market knowledge.

However, there remains a lack of understanding between the various stakeholders within and without the decentralized space; most blockchain enthusiasts do not yet understand traditional finance markets, nor have the ability to describe, examine, question, and analyse the sequence of past events and its many patterns of “cause and effect”. Likewise, traditional finance also needs to understand what digital blockchain assets are all about. The pseudonymity nature of blockchain may raise issues with transparency, however as more traditional finance institutions engage with the digital blockchain world, the more transparent it becomes. This fastening situation

could be achieved with increased adoptability via the launch of decentralized Structured Products.

Conclusion

Humans have always been driven by a strong desire to improve speed, security, and convenience in everything we do; the decentralized finance space offers us some of these attributes although the cost of transactions and the resistance to change in time-honored financial settlements between financial institutions and investors remain ongoing challenges. Applications in Decentralized Finance have chiefly centered on building a parallel financial system to the functions and services of the traditional banking stack. Like all previous technology shifts, many issues remain open and quite predictably, methodical challenges will continue to make impromptu appearances.

The DeFi ecosystem's exponential growth endorses its capacity for automating trust and facilitating collaboration while enabling liquidity. It strives to approach a convergence of protocols and platforms that reduces inefficiencies. The world's appeal of blockchain assets has begun shifting from that of privacy and anonymity to that of convenience and security. This brave new frontier is now at a point of no return, with new use cases fueling development and vice versa. These technologies and their usage have yet to congregate to an accepted standard for all.

Acacia Protocol's endeavor at developing this new DeFi use case will surely influence "top down" progression, expand "bottom up" democratic market reach by lowering high entry barriers and address habitual financial standards; it will also be an exciting catalyst for future challenges in the financial world, both decentralized as well as centralized.

Glossary

Call option price on a	The right to buy the underlying asset at a specified predetermined date (or dates).
Put option price on a	The right to sell the underlying asset at a specified predetermined date (or dates).
European option	An option which can only be exercised at expiration.
Strike price purchased or sold	The price at which the underlying asset can be purchased or sold when the option is exercised.
Underlying asset	The instrument which the parties agree to exchange in a derivative contract.

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AUTHENTICITY AND DRAMA, LIMITS OF CONTEMPORARY MEDIA

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Abstract

In this study, we aim to analyse the notion of "media authenticity", that might be slightly in contradiction with the message type, which is transmitted, mediated, resumed, and even retold. We will highlight that media authenticity does not mean "reproduction as realistic as possible" of an event, but refers to the way in which the meaning of the event is assimilated and communicated by the journalist.

Keywords: authenticity, message, circumstance, media

Introduction

Professional communication (journalism, public relations, advertising) means a field that has its limits in modernity. Nowadays, the context of communication is defined, more insistently, by social media, by personal communication, as well by self-communication (Voinea et.all, 2015). We can find this idea also in the observations of the researchers in communication. The changes of logistics paradigm have been defined by communication researchers as a shift from broadcast code to narrowcast code.

The type of many-to-many communication generated by the logistics of the digital age also means developing the subjective discourse, the personal perspective, the individual perspective that communicates and seeks its own answers and echoes in the external communication environment.

Thus, we are talking about a communicative environment of subjectivity, of the personalizing rhetoric. The resulting polyphony is the environment, the circumstance in which the institutional communication must function (producing and achieving its goals).

In this study we aim to engage in a discussion about the rhetoric of authenticity in which we see a possible response to the challenges of institutional discursive construction in the context of the contemporary communication polyphony.

From polyphonic communication to authenticity

The media writing has as discursive rules: fluency, coherence, orality, colloquiality, authenticity, credibility. However, it seems that it does not insisted too much professionally on cultivating authenticity. Authenticity is/can be, from our point of view, the answer to the competition of the polyphonic communication on the democratic market.

Professional communication can slip quite easily on the slope of too rigid procedures, which are based on rules generated by redundancy, rules that

depend too much on circumstances and which involve an externalization of discourse and not an assimilation of it. This turns communication into a set of repetitive, redundant, predictable, finally catachrestic statements, so it is more difficult to identify a partner willing to negotiate/trade a message. We should not forget that the receiver pursued is also an actor on the same polyphonic market and this removed it even from the classic profile of the recipient of the media message: who is bored, hurried, and demands to understand quickly and be amazed.

The intermediate response from the media institutions was I-journalism or citizen-journalism (Voinea, 2017), but, from our point of view, the messages constructed in this context covered the amazement and sensationalism, but they could not pass to the level of communication hard messages, with impact on mass communication. Also, the degree of narcissism and the implosive effect cannot be ignored. The citizen-journalist transmits his own message, according to his own interests and needs, without taking into account other sources of reception, which a professional communicator thinks about (Voinea, 2015). Under these conditions, it is quite difficult to follow the professional protocol of the journalist (verification, selection, ranking). Instead, the professional, institutional message of the journalist competes with the explosion of subjectivity, personalization, meaning authenticity, of some mediated messages like any other journalistic message (Vlad, 2018). However, the correct information is the professional responsibility of the journalist, not of the citizen.

How the message of the journalist can be distinguished in this context of subjectivities? How should journalistic communication be positioned in the conditions in which its voice must be heard in the sea of personal voices, assumed as such?

Authenticity, a very old discursive concept

One answer can be authenticity. The institutional authority of the journalist doubled by a stylistic of authenticity. Several researchers from different fields have analysed this concept. We talk also about authenticity in history, in anthropology, in ethnology, then in art, and literature. There were debates about authenticity in genetics, but also in terms of ethics. Etymologically, authenticity refers to the idea of control, of domination of meanings and facts. From our point of view, in the context of digital openness and postmodernity, authenticity is a response to the weakening of concepts such as truth and sincerity. The researchers delimited the two concepts from the perspective of subjectivity and intentionality. Thus, authenticity is defined in terms of self-referentiality. Sincerity is a way (subject to rational and assumed decision) of response to an external stimulus (Erickson 1994, 1995; Vannini, Franyese, 2008). From this perspective, authenticity is a form of self-manifestation. According to Anton (2001), the self presupposes four dimensions: the embodiment, physical side, the self delimited by social conditions, the self of symbolic capital and the temporality of the self. (Vannini, Franyese, 2008, p. 1625).

Taking into account, unlike sincerity, authenticity presupposes, according to researchers, a high emotional load, implicitly less (self) control. We bear in mind that a discourse of authenticity includes several indices of the manifest subjectivity. In this point, we move away from theories that see authenticity very close to the irrational and which observe a social danger in the constant manifestation of authenticity (Strauss, 1978). This is a radical vision. The social and the authentic are not mutually exclusive. Adopting socially harmonious codes does not exclude a honest self-expression.

Self-control can be a form of dosing and balancing the emotional that feeds the true self. In fact, some researchers (Vannini, Franyese, 2008) have defined authenticity as "fidelity to oneself." In the issue of authenticity, the

two cited researchers say that it should be taking into account both the way in which the individual/public relates (emotionally) to the idea of authenticity, but also the degree of self-knowledge (Vannini, Franyese, 2008). This is why we subscribe to the idea of the two researchers of authenticity that this concept is an item of communication dynamism, and the control of the emotional we mentioned above is based on gestures more related to dramatization, controlled movement in order to catalyze an existing meaning (Hughes, 2000 ; Peterson, 2005; Vannini, Franyese, 2008, pp. 1632). These theories continue analysing interpretations and representations of Erving Goffman (1959).

It is the same performative perspective highlighted by Auslander (1999). As the dramatic and the dramatization presuppose the assimilation not the imitation of some actions and their meanings, the authenticity, the dynamic communication of the self means the creation of some passages of direct emission between itself and social. The success of the authentic speech can also mean the use of right codes/passages, suitable to convey meaning. But we are talking about a kind of control different from the case of sincerity. The relationship between codes and meaning is constantly changing, as a manifestation of the adaptability of the self and meaning to the circumstances of communication.

Media authenticity can mean:

Speech personalization - the sender appropriates its message, information, the story it has to convey. It assumes an implicitly subjective perspective and does not hide the fact that information is filtered through its own intellectual and spiritual filters.

The speech is clearly detailed in space and time, without astonishment. In order to show, to prove what is often said, journalists try to reproduce the circumstances in which the event they report took place. For example, to report an event with medical implications, an accident resulting in injuries or arrests, the reporter creates together with the so-called source the

atmosphere by starting the sound and light signals of an ambulance or police car. Through this dramatization, however, one can only prove the artificiality of the journalistic story, because both the sender and the receiver know that that ambience is built, it is not spontaneous. The authenticity of the circumstance does not presuppose scenographer skills, but the recognition by the reporter of those elements eloquent for the facts and which can constitute by themselves the framework/circumstance of the communication.

The reporter assumes the act of communication, not the role of reporter himself. The act of communication implies the care from the issuer that his message, which he catalyzed, contains all the verbal and nonverbal elements, all the explanatory crutches that lead the meaning in the best conditions for reception. Therefore, gestures, mimicry, temperate phrasing and a balanced semantics are supporting elements for a path as direct as possible to the receiver.

Conclusions

Authenticity may seem like a paradoxical requirement in the context of media communication. However, as we have shown above, authenticity has become a structuring principle in media communication. In order to build, maintain, rebuild the receiver's trust in the media institution, the reporter is the first to go beyond the limits of professional conformity and he has to focus on the message he has to convey. The ostentatious assertion of the institutional framework, the issuer's tendency to fit within the predefined limits of a context related rather to the bureaucracy of media communication, not to its realization, it means many ways of falsifying the message, crediting the form, not the content. Therefore, we believe that media authenticity does not mean re-creating a reality, an event, a meaning, a story, but revelling and transmitting the meaning of that reality, as it was received by the reporter.

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BARRIERS OF COMMUNICATION IN THE MEDICAL SYSTEM

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Abstract: Good communication is a linchpin of effective health care, and if it's missing, your entire business is likely to suffer. Health communication is extremely important for both physicians and patients. Effective communication between doctor and their patients is crucial to improving healthcare outcomes and patients' satisfaction. Studies conducted during the past three decades show that the clinician's ability to explain, listen and empathize can have a profound effect on biological and functional health outcomes as well as patient satisfaction and experience of care.

Keywords: health, communication, strategy, barriers, medical, system

Introduction

Communication is undoubtedly the most fundamental aspect of any patient-doctor relationship. It forms the basis to trust, improved patient outcomes and increased patient safety. Communication is vital in the medical field, because health is the one that takes care to reduce everything, in the end.

Communication is a core element of healthcare activities with community health nurses.

All nursing activities such as assessment, planning, intervention, evaluation, health teaching, encouragement, counseling, and caring are never be achieved without effective communication. When considering the importance of communication in health care, patient safety is one of the top reasons to create an effective communication structure in any health care organization. Inadequate communication is often a leading cause of in-hospital deaths.

Attributing a breakdown in information exchange to simply a generic “communication error” without further specification is ineffective and a gross oversimplification of a complex phenomenon. Further dissection of the communication error using root cause analysis, a failure modes and effects analysis, or through an event reporting system is needed. Generalizing rather than categorizing is an oversimplification that clouds clear pattern recognition and thereby prevents focused interventions to improve process reliability. We propose that being more precise when describing communication error is a valid mechanism to learn from these errors.

Why is it important to know about barriers to health care?

A barrier to health care is anything that restricts the use of health services by making it more difficult for some individuals to access, use or benefit from care. Being aware of barriers to health care can help health professionals be more sensitive to the challenges faced by their patients. They can also take steps to reduce or overcome some of these barriers, help their patients to overcome others, and improve quality of care.

Identifying Communication Barriers in Health Care

One of the most common barriers encountered nurses in health communication is their limited training in using proper strategies in communication with patients and families such as listening, focusing or assertiveness. Also, many doctor provided intervention, counseling, health education and caring without using the principles and different types of therapeutic interaction and empathy.

- Patients need to be able to convey information about their health complaints to healthcare workers;
- Healthcare workers may make mistakes due to lack of comprehension of the patient's concerns;
- Other types of barriers represented in the patients and their families are: culture variations, level of education, health belief, and level of acceptance of the disease, nature of signs and symptoms, and language misunderstanding;
- The absence of teamwork and sense of cooperation may be a big difficulty to establish the nurse-patient communication.
- Inability to share information across departments: Healthcare staff across multiple departments often collaborate to improve the quality of care of the patient. Failure to coordinate these collaborative efforts could lead to miscommunication and duplicate work.
- Hurdles in upgrading to new communication systems: Many healthcare providers are stuck with outdated legacy tools due to their inability to change without experiencing downtime.
- Cost of hardware and infrastructure: While upgrading communication systems, the cost of infrastructure can be very high. In such cases, justifying the of new investments can be hard.

Health literacy barriers present themselves in various ways. Differences between the provider and the patient with regard to culture,

gender, sexual orientation, race, socioeconomic status, religion, age and/or language can all be potential barriers, as can the cultural competence of health professionals. Studies indicate that culturally diverse patients are more likely to experience multiple health disparities in access to care, communication with healthcare providers, and medical quality of care and outcomes.

„The design of all patient care services should be patient-centered, timely, efficient, evidence-based, safe, and coordinated. The Expanded Care Model delineates the above guidelines for healthcare teams to be prepared and take proactive steps in ensuring positive patient health outcomes. Consequently, patients would be informed about healthcare processes and empowered to become active participants in decisions regarding their health”. (AHRQ, 2015)

Problems with communication also occur among personnel within the same hospital. Intrahospital communication is any information sharing within a singular institution — whether it involves coordinating room changes, scheduling surgeries, assigning further tests, or even setting up appointments. Each health care system has multiple forms of communication that administrators and staff must be trained to use properly and efficiently. When even one of these communication methods fails, patient safety can be put at risk.

„Excellent HCP–patient healthcare communication further empowers patients to become active participants in their healthcare management; this is a key aspect of patient-centred care which has been linked to improved patient satisfaction and outcomes” (Bradley, S. and Mott, S., 2014, p. 23)

A review of the literature reveals consistent and significant differences in understanding and compliance when a communication challenge exists. This may be due to the fact that patients who had more difficulty understanding their physician are less likely to follow treatment

directions, and also because good communication can be a source of motivation, reassurance and support, as well as an opportunity to clarify expectations. Recent studies continue to identify communication as an important factor in the delivery of health care in three key areas: quality of care, access to care, and cost of care.

„It is equally important for the healthcare team to have the communication skills to provide health information that is easily understood by patients, families and caregivers. In this sense, health literacy is a shared function and responsibility: The patient must communicate effectively with the healthcare team, and the clinicians must be skilled in and committed to providing the education and support the patient needs to understand the illness and treatment decisions. It is relevant that the level of health literacy of a patient is the single most important indicator of health status. It directly impacts patient’s adherence to treatment regimens and health outcomes” (Abdellatif et. al, 2007, p. 1)

Patients need information that is easy to understand in order to make informed choices and take charge of their healthcare. The healthcare team should be aware of and respect a patient’s cultural and spiritual beliefs. There are several communication tools a provider and patient can use to help ensure that what is said is understood. The “teach-back method” is a research-based intervention with the goal of promoting the development of a shared treatment plan, quality and safety.

Non Verbal Communication. Non-verbal communication is a process of communication without using words or sounds. Non-verbal communication uses gestures, body language, facial expressions, eye contact, clothing, tone of voice, and other cues to convey a message. Like verbal communication, this method of communicating is rarely used alone. Non-verbal communication could be considered like a spice we use when communicating to add a little flavor. You might raise your eyebrows

emphatically when speaking to help make a point, or shake your finger at your child when you're angry. These are all non-verbal cues that help convey a message.

Benefits of Effective Communication in Healthcare

The benefits of improved communication will show in a number of ways. Some of them are (Spector, 2004):

- Improved diagnostic accuracy: patient and provider interviews will be more accurate, useful, and helpful.
- Higher patient satisfaction: by reducing the risk of human and system errors, you increase the chances of patients having a positive experience.
- Greater team satisfaction: effective team communication will enhance relationships, improve job satisfaction, and reduce job turnover

Conclusions

The purpose of any system is to provide services with optimal quality and quantity, and health care systems are no exception. One of the best ways to gain the patients' satisfaction, as major clients of health care systems, is through establishing effective and appropriate communication.

Consequently, doctor-patient communication ought to be considered carefully by both nurses and patients. Both must be understood that is shared experience and to reach healthy promoting behaviors and high quality of healthcare services, mutual understanding of must taken place among them. Communication is contextual, and improving physician-nurse communication about appropriate catheter use may require innovations that address the identified contextual barriers.

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THE EVOLUTION OF CORONAVIRUS RELATED NEWS IN ROMANIAN MEDIA

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Abstract

This paper examines the evolution of COVID-19 news coverage in Romanian media throughout 2020, analyzing how various media outlets responded to the unprecedented public health crisis. The research explores five key dimensions: the relationship between mainstream and independent media, the spread of misinformation alongside factual reporting, public trust in media sources, government influence on media coverage, and the accuracy of scientific reporting. The study reveals that Romanian media initially aligned closely with government messaging during the early emergency phase, but later developed more diverse approaches as the pandemic progressed. While some outlets maintained responsible journalism standards, others drifted toward sensationalism or became platforms for conspiracy theories. Government interventions, including emergency decrees to combat "fake news" and financial support for media organizations, raised concerns about press freedom and independence. The "infodemic" of misinformation significantly influenced public behavior, with surveys indicating troubling levels of belief in conspiracy theories among Romanians. By the end of 2020,

public trust in media had become notably polarized, with implications for subsequent public health initiatives. This analysis underscores the crucial role of responsible journalism during health emergencies and highlights the delicate balance between combating misinformation and preserving press freedom.

Keywords: COVID-19 Media Coverage, Romanian Journalism, Misinformation, Media Trust, Government Influence

Introduction

The outbreak of the COVID-19 pandemic in early 2020 posed an unprecedented challenge not only to public health systems, but also to information ecosystems worldwide. In Romania, as in other countries, media outlets became a primary source of news about the novel coronavirus, its spread, and the measures needed to combat it. Romanian media – including print newspapers, online news sites, television broadcasts, and radio – were tasked with keeping the public informed under rapidly changing circumstances. At the same time, they had to navigate an "infodemic" of misinformation and public anxiety. This research paper examines how coronavirus-related news coverage evolved in the Romanian media up, analyzing the interplay between various types of media and the broader social context.

Multiple dimensions of this evolution are explored in the study, including: The role of mainstream vs. independent media in disseminating COVID-19 news; The spread of misinformation and disinformation (the so-called "infodemic") alongside factual reporting; Public perception and trust in media during the health crisis; Government influence and official narratives, including emergency measures affecting the press; and Scientific reporting and accuracy in communicating health information.

By exploring these themes, the paper aims to provide a coherent understanding of how Romanian media coverage of the coronavirus developed over the course of 2020. It draws on news reports, surveys, and analyses published during that year to highlight key trends. The findings reveal a media landscape striving to inform the public and support health measures, yet hindered at times by sensationalism, political interference, and false information. Clear patterns emerge of an initial phase of alarm and compliance, followed by growing challenges related to misinformation and public skepticism. The analysis underscores the crucial role of responsible journalism in a public health emergency, as well as the delicate balance between combating fake news and upholding press freedom.

Early Coverage of COVID-19 in Romania

Romanian media first began reporting on the coronavirus in January 2020, when the outbreak was largely confined to China. Early coverage was limited to international news segments describing the situation in Wuhan and initial precautions. As COVID-19 spread to Europe – notably with the significant outbreak in Italy in February 2020 – Romanian outlets increased their reporting, recognizing the imminent threat. The first confirmed COVID-19 case in Romania was reported on February 26, 2020, which prompted a sharp rise in domestic media attention. Throughout late February and early March, news coverage intensified, with daily reports on new cases, expert warnings, and government preparatory actions.

This initial stage of coverage was marked by an urgent and often alarmist tone. By early March, Romanian news broadcasts and headlines were dominated by dramatic framing of the virus. Sensational phrases such as “killer virus” became common in some mainstream outlets, fueling public anxiety (Newman et al., 2020, p. 98). For weeks leading up to the official declaration of a state of emergency, television news bulletins opened with

ominous reports on the coronavirus threat. This persistent emphasis on the danger contributed to a climate of fear, but also arguably prepared the public for drastic measures. When President Klaus Iohannis announced a nationwide state of emergency on March 14, 2020, it came after days of wall-to-wall coverage that had primed the public for lockdown measures. In fact, political observers noted that the level of public concern was so high that all major parties in Parliament – government and opposition alike – rallied in support of the emergency measures, reflecting a rare moment of consensus (Newman et al., 2020, p. 97).

While the tone was often urgent, most mainstream media in this early phase aligned closely with public health messaging. Journalists largely relayed information from authorities and health experts about the need for hygiene, social distancing, and eventual lockdown. Live televised statements by officials, such as the health minister or the head of the Department for Emergency Situations (Dr. Raed Arafat), were covered extensively. This alignment of media with official guidance helped to amplify critical health directives. Compliance with initial restrictions was reportedly high, in part due to the unified message across media and politics that the pandemic was a serious threat requiring collective action.

However, even in these early weeks, some cracks in the information environment began to appear. A few fringe online platforms and social media posts started spreading rumors or false claims about the virus before the first cases hit Romania. For example, in mid-March 2020, just as the state of emergency came into effect, a website called stiridemoment.ro published alarmist false stories – one claiming that major supermarket chains were shutting down, and another alleging that the government was “secretly” planning a mass operation to bring Romanians abroad back into the country. (Euractiv Network, 2020) These unfounded reports were widely shared on Facebook and WhatsApp, creating confusion until officials debunked them.

In response, Romanian authorities took the unprecedented step of shutting down that website on March 18, 2020, under the new emergency decree provisions. It was the first instance in Romania's history of a news site being closed by authorities for spreading fake news.

The State of Emergency: Official Narratives and Media Freedom

On March 16, 2020, President Iohannis signed an emergency decree that included special provisions to counter the spread of COVID-19 disinformation online. Under this decree, authorities were empowered to order the removal of online content deemed to be “false news” about the pandemic and even to shut down entire websites hosting such content. (OSCE, 2020) The implementation of these measures was entrusted to the National Authority for Management and Regulation in Communications (ANCOM), a body that previously had little experience in policing online content. ANCOM acted on recommendations from a Strategic Communication Group set up by the government to manage pandemic information on a daily basis.

During the two-month state of emergency (March 16 – May 14, 2020), the Romanian government tightly controlled the flow of official information. The Strategic Communication Group became the central source of data on new cases, deaths, and regulations, issuing daily press releases. Notably, the membership of this Strategic Communication Group was kept secret, which later raised questions about transparency and accountability. Journalists, often confined to newsrooms or home offices by lockdown, were almost entirely reliant on these official updates for information on the pandemic. In practice, this centralized system meant that most news outlets – mainstream and independent alike – repeated the same figures and announcements each day, with limited opportunities to ask questions or seek additional data. (Newman et al., 2020, p. 99)

While centralizing information helped streamline public messaging, it also stirred concerns about press freedom. The decree's broad censorship powers alarmed free speech advocates. In late March 2020, the OSCE Representative on Freedom of the Media cautioned that Romania's approach, though motivated by a legitimate need to combat false information, risked overreach. (OSCE, 2020) He noted that removing content without clear criteria or judicial review "poses a risk of undue restriction to the work of journalists" and could lead to self-censorship in newsrooms. Romanian civil society and even the national Ombudsman echoed these concerns, urging the government to ensure any content removals were transparent and had defined justifications. The lack of an appeal mechanism for websites shut down under the emergency decree was a particular point of criticism.

Despite these warnings, authorities did invoke the decree multiple times. Several websites known for propagating conspiracy theories or sensational misinformation were blocked in April 2020. From the government's perspective, these actions were necessary to prevent dangerous rumors from undermining the pandemic response. Indeed, officials argued that certain false narratives (for instance, that COVID-19 was a harmless cold or that hospitals were installing 5G antennas under the pretext of the pandemic) could lead people to ignore life-saving health advice. Nonetheless, the effect of this aggressive approach was limited. Observers noted that only a small number of websites were actually taken down, and those could easily resurface under new domains. Once the state of emergency ended in May, the legal basis for such shutdowns lapsed and the blocked sites became accessible again.

During the emergency period, mainstream media generally complied with the official narrative out of public interest and legal obligation. Television channels and newspapers disseminated the guidelines on lockdown rules, travel restrictions, and hygiene measures as they were handed down. Public service announcements and informational graphics became common in

broadcasts and on front pages. However, journalists sometimes grew frustrated with the limited access to independent sources. Some investigative reporters complained of delayed or unanswered requests for information on issues like medical supply acquisitions and the situation in overwhelmed hospitals. The government's communication was occasionally perceived as one-way, with officials preferring to broadcast statements rather than engage in in-depth questioning by the press.

Independent media outlets and NGOs kept a watchful eye on the balance between necessary health messaging and government overreach. Organizations like ActiveWatch (a Romanian press freedom group) and international observers monitored any undue limitations on journalists. By May 2020, as the first wave eased and Romania transitioned to a “state of alert” (a less restrictive emergency), the consensus was that the government's clampdown on misinformation had a temporary and limited effect. It may have signaled that blatant fake news would not be tolerated, but it did not stop misinformation at its source. Meanwhile, the mainstream press emerged from the state of emergency with a mixed reputation – it had helped convey crucial information, but its heavy reliance on official sources and occasional sensationalism also drew some public criticism.

Mainstream Media vs. Independent Media Coverage

Romania's media landscape is diverse, but uneven in reach and influence. Mainstream media – particularly national television networks and well-established news publications – command the largest audiences. Television is still the most familiar source of information in the country, especially for older generations, with around 186 TV channels available at national or local level. By contrast, independent media outlets, often digital-born and smaller in scale, target niche audiences with investigative journalism or fact-checking initiatives. The pandemic put both mainstream and

independent media to the test, revealing differences in their roles and approaches.

In 2020, the top television stations like Pro TV, Antena 1, and the 24-hour news channel Digi24 were primary conveyors of coronavirus updates. Pro TV and Digi24, in particular, were noted for providing frequent news reports and live updates on the pandemic. These outlets also scored relatively high in audience trust – surveys found them among the most trusted brands in Romanian media. Media analysts attributed this trust to their consistent, factual reporting style during the crisis. For example, Digi24 often invited medical experts or officials to explain the latest developments, maintaining a moderate tone rather than indulging in panic or conspiracy. The public radio station Radio România Actualități similarly gained listeners by offering sober, objective news and was one of the most-followed radio sources in summer 2020.

Nevertheless, a significant portion of Romanian news coverage remained sensationalist or politicized, even amidst the pandemic. Outrage-driven commentary is “stock in trade” for many Romanian talk shows and tabloids. Some private TV channels and online outlets have a tabloid or partisan bent and continued this style during the pandemic. For instance, channels like România TV (a popular news station) and certain talk shows on Antena 3 are known for a more sensational and sometimes speculative approach. Media researchers observed that these entertainment-oriented formats – emphasizing scandal, dramatic personal stories, and emotional debates – could exacerbate fear and insecurity during the pandemic. In fact, the continuous coverage of alarming news without sufficient context may have led parts of the audience to feel overwhelmed or distrustful of official reassurances

Independent media tried to fill gaps that mainstream coverage left. Outlets such as PressOne, Recorder, Rise Project, and G4Media continued

their work of investigative reporting and myth-busting in the COVID-19 context. For example, PressOne, an independent news site, took a significant interest in exposing false information; it published a series of articles debunking COVID-19 fake news and highlighting the sources of disinformation.

These outlets often tackled stories that larger media did not, such as detailed analyses of how fringe conspiracy theories were spreading on Facebook, or fact-checks of dubious claims made by public figures. In doing so, independent journalists played an important watchdog role, both over government actions and over the accuracy of information circulating in society.

One notable difference between mainstream and independent media was their susceptibility to political and commercial pressures. Major TV stations and newspapers in Romania are frequently tied to business interests or even direct funding from political actors. This can subtly (or not so subtly) influence their editorial line. During 2020, there were reports that some national outlets toned down criticism of authorities, possibly related to the government's financial aid to media (discussed later) or to existing contracts for political advertising. (eurotopics.net, 2020). Independent outlets, by contrast, often have clearer editorial independence but struggle with funding and reach. They rely on grants, subscriptions, or crowdfunding, which limits their scale. Thus, while independents might produce high-quality, critical journalism, their audience is mostly the urban online readership, and their impact on mass public opinion is smaller compared to prime-time TV news.

In summary, mainstream media served as the primary information pipeline to the Romanian public about COVID-19, with varying degrees of quality and responsibility. Some mainstream outlets rose to the occasion with diligent reporting, while others occasionally drifted into sensationalism or partisan framing. Independent media, though smaller in voice, contributed by

investigating underreported angles and challenging misinformation. Together, both sectors formed the information ecosystem in which Romanians navigated the pandemic news – an ecosystem that would soon be tested by an onslaught of false information and conspiracy narratives.

The Infodemic: Misinformation and Disinformation Spreading

Alongside the public health crisis, Romania – like all countries – faced an “infodemic” in 2020: a surge of misinformation and disinformation about COVID-19. False or misleading information spread rapidly through social media, messaging apps, and sometimes even through mainstream channels, complicating the public’s understanding of the virus. The evolution of Romanian media coverage cannot be understood without examining how these false narratives emerged and how they were handled (or, at times, enabled) by media.

In the initial months (February–March 2020), misinformation was present but not yet dominant. However, as the pandemic progressed into the summer, COVID-19 conspiracy theories began to enter the mainstream discourse. (Disinformation Fuels Romania’s Coronavirus Spike, 2020). By mid-2020, surveys indicated a troubling level of belief in such theories among the Romanian public. For example, one poll found that 41% of Romanians believed COVID-19 was a man-made bioweapon created by the United States. This astonishing statistic points to the reach of a specific disinformation narrative that had circulated online since the early days of the pandemic. Romanian fact-checkers traced that claim to assorted fringe websites and foreign propaganda outlets, but its uptake by a large portion of the public suggested that mainstream discussions had not fully countered it.

Several major strands of COVID-19-related misinformation could be identified in Romania by mid to late 2020. These included:

Denial or Trivialization of the Virus: Claims that the coronavirus was a “hoax” or that its dangers were grossly exaggerated were propagated on social media and occasionally on talk shows. Some commentators insisted COVID-19 was “just a common cold” or “no worse than the flu,” contradicting official data on hospitalizations and deaths. Such narratives often went hand-in-hand with accusations that the media was needlessly scaring people.

Conspiracy Theories about Origin and Purpose: Multiple theories alleged nefarious origins of the virus. A prominent one held that the virus was artificially created as a biological weapon by a great power (the U.S. or China, depending on the variant). (Buturoiu et al., 2020) Others suggested the pandemic was orchestrated by global elites (such as a “New World Order”) to control populations or to profit from vaccines. In Romania’s information space, these theories were popular on fringe websites and Facebook groups, but occasionally found their way into mainstream coverage when, for instance, a politician or public figure mentioned them.

Misinformation about Government Actions: As seen with the stiridemoment.ro case, false stories about government plans or secret operations gained traction. Later in 2020, whenever new restrictions were anticipated, rumors would precede them – such as unfounded claims that the army would enforce a total lockdown or that grocery stores were about to close nationwide. The Strategic Communication Group often had to debunk such stories in press conferences.

Anti-mask and Anti-lockdown Narratives: When the government introduced mask mandates and social distancing rules, a counter-movement of skepticism formed. Disinformation campaigns targeted these health measures, arguing they were ineffective or violated personal freedoms. Notably, officials observed well-financed efforts aimed at young people, urging them to defy mask-wearing recommendations. Online videos and influencers promoted the

idea that masks were harmful or that COVID restrictions were a prelude to dictatorship. By the summer, small protests against masks and lockdowns took place, fueled in part by these messages.

Disinformation in Romania was amplified by a mix of domestic and foreign actors. Domestically, several politicians and media personalities gave voice to misleading narratives. An analysis by the Center for European Policy Analysis noted that some mainstream Romanian politicians “amplified and gave weight to online disinformation” (Disinformation Fuels Romania’s Coronavirus Spike, 2020) as part of their opposition to the government. In fact, one security expert pointed out that Romania’s largest opposition party at the time (the Social Democratic Party, PSD) harbored a significant number of outspoken coronavirus skeptics and deniers. Such figures used media appearances to question official COVID-19 statistics or to allege that restrictions were politically motivated. These messages, coming from familiar public figures, likely lent credence to conspiratorial ideas in the eyes of some citizens.

Foreign disinformation also played a role. Romanian-language platforms of foreign state media became active in sowing doubt. The most cited example was the Romanian edition of Sputnik (a Russian state-run outlet), which consistently promoted content undermining the severity of the virus and the legitimacy of Romania’s response. Sputnik ran stories suggesting that the virus’s effects were exaggerated by authorities and gave favorable coverage to anti-lockdown protests and conspiracy proponents. This mirrored tactics seen in other Eastern European countries, where Russian media sought to exploit the pandemic to erode trust in Western governments. The presence of these narratives required Romanian media consumers to discern between credible news and propaganda, a task that not everyone was prepared for.

Mainstream media's relationship with misinformation was complicated. On one hand, major news organizations frequently debunked rumors and gave airtime to doctors and scientists to dispel myths. On the other hand, in some instances they inadvertently became channels for questionable information. For example, national TV talk shows sometimes hosted guests who espoused conspiracy theories or promoted unproven remedies. Raed Arafat lamented that certain individuals "appeared in the mass media with opinions that lacked scientific basis, including doctors who are not specialized in COVID-related fields, arguing against preventive measures". These appearances could confuse viewers, especially when presented in a debate format without clear fact-checking by the hosts. Moreover, the drive for ratings may have led some shows to feature controversial figures for shock value, blurring the line between reporting on misinformation and amplifying it.

The Romanian government and fact-checkers tried to combat the infodemic through multiple means. The government's approach combined public warnings – officials often implored citizens to ignore "unofficial sources" spreading virus misinformation – with the more heavy-handed tactic of ordering website closures as described earlier. Authorities also launched a dedicated online platform to provide verified news (stirioficial.ro, "official news"), aiming to create a one-stop hub for accurate information and to rebut falsehoods circulating online. Meanwhile, independent fact-checking organizations and media projects sprang into action. Journalists translated and amplified international fact-checks for local audiences, and media literacy guides on how to spot fake COVID-19 news were shared by outlets. (romania-insider.com, 2020). Despite these efforts, misinformation had a tangible impact on public behavior by mid-2020. As new cases surged in Romania over the summer, officials partially attributed the spike to poor adherence to rules caused by false beliefs. Arafat stated that disinformation "definitely had an

impact on the population, creating confusion and recruiting a number of people who stopped following the rules, stopped wearing masks and began propagating conspiracy theories,” thereby contributing to wider virus spread. This assessment indicates that the infodemic was not just a side-effect of the pandemic, but a factor that worsened the crisis. It underscores why the quality of media coverage – especially efforts to counteract disinformation – was so critical.

Studies of the Romanian public found clear correlations between media consumption and belief in COVID-19 conspiracies. One survey in 2020 showed that individuals with a higher tendency to believe conspiracy theories were more likely to rely on social media and information from friends/family, and less likely to trust traditional media or official sources. (Buturoiu et al., 2020). In other words, people who distrusted mainstream media often turned to alternative channels, which sometimes fed them even more misinformation, creating a vicious cycle. This dynamic presented a major challenge: how could credible information reach those segments of the population that were tuning out or doubting the mainstream press? Romanian independent outlets and some mainstream journalists worked to break this cycle by actively debunking conspiracies, but success was only partial.

Public Perception and Trust in the Media

Public perception of the media’s performance during the pandemic was mixed and evolved over time. Trust in media is a longstanding issue in Romania – even before COVID-19, confidence in journalists and news institutions had been relatively low compared to European averages. The pandemic, however, put media trust to the test in a new way: people’s lives depended on accurate information, so the credibility of news could directly influence compliance with health guidelines. How the Romanian public viewed the media’s COVID-19 coverage by the end of 2020 was shaped by

both the media's actions and the tidal wave of misinformation described above.

Surveys conducted in 2020 provide insights into whom Romanians trusted for information about the coronavirus. In a national poll from late March 2020 (just after lockdown began), trust in official government sources was notably high. On a 7-point scale, respondents rated their trust in government-provided information (such as official statistics and specialized public health websites) at an average of 5.36. By contrast, trust in "legacy media" (TV, radio, newspapers, and journalists as a whole) was moderate, averaging 4.18 out of 7. Social media fared worst, with an average trust score of only 3.25. This early snapshot suggests that in the immediate crisis, many Romanians looked first to authoritative sources for guidance, and were wary of what they saw on Facebook or other social platforms. The low trust in social media aligns with people's perception of those platforms as hotbeds of "questionable information". (Buturoiu et al., 2020)

Despite only moderate trust ratings, mainstream news outlets were still a primary source of COVID-19 news for most citizens. The majority of people reported following pandemic news daily, mainly via television and online news sites. As long as media messages reinforced the official narrative (e.g., the necessity of lockdown), public opinion tended to follow suit. Indeed, during the strict lockdown in spring 2020, polls showed broad approval of the government's measures and a generally serious attitude toward the virus. This implies that the media's largely serious stance in that phase (coupled with the gravity of events in countries like Italy) effectively convinced the public of the risk.

However, as the year wore on, public trust in media became more polarized. Those who were predisposed to trust media and authorities continued to consume mainstream news and generally complied with recommendations. Others grew more skeptical, influenced by misinformation

or fatigue with restrictions. By the second half of 2020, one could observe divergent segments of the population: one segment that believed the pandemic was real and serious (often aligning with trusting mainstream news), and another segment that was doubtful or cynical (often aligning with alternative narratives). The latter group's outlook was reinforced by the echo chambers of social media. If a person fell into a social network rife with conspiracy theories, they were likely to encounter reinforcing content and see mainstream media as part of a cover-up or propaganda machine.

The reasons for low trust are not solely pandemic-related – they also stem from years of political influence over media, sensationalism, and corruption scandals in journalism. But the pandemic may have further eroded trust among some groups. Frequent changes in rules and recommendations (for example, shifting messages about mask usage or travel restrictions as scientific understanding evolved) made some people feel the media was “flip-flopping” or not providing clear answers, even when the changes were justified by new evidence. Additionally, instances where media exaggerated aspects of the crisis for dramatic effect could have backfired; if later those were seen as overblown, audiences might become cynical.

On the other hand, it's worth noting that trust in specific outlets actually increased for certain high-quality media by the end of 2020. Research by the Reuters Institute noted an “extraordinarily high degree of consensus” in Romania around COVID-19 containment measures by late 2020, which may have contributed to increased trust levels for most media brands surveyed. Essentially, when facing a common threat, people tended to rally around sources that consistently provided useful information. In Romania's case, outlets like Digi24, Pro TV, and Europa FM likely gained goodwill by being reliable and informative during the crisis. Many Romanians could see the difference between media that tried to inform and those that mainly

agitated or spread confusion. The former were rewarded with trust, the latter perhaps gained an audience among skeptics but not broad respect.

Public perception was also shaped by how media handled contentious issues such as the economic fallout and the conduct of authorities. News coverage of hospitals overwhelmed by patients, or of officials caught violating their own rules, affected whether people felt the media was holding power to account or not. Throughout 2020, Romanian media did report on problems like insufficient medical supplies, doctors speaking out about conditions, and other critical stories. These reports assured some in the public that the media was not just a mouthpiece for the government, but also scrutinizing the pandemic response. Nonetheless, those inclined to distrust might have viewed critical reports as confirmation that “something was being hidden” or, conversely, might dismiss them as media exaggeration.

By the end 2020, Romania had a public whose trust in media was notably divided. Many Romanians still tuned in regularly to TV news and trusted that the mainstream media was conveying the important facts – these people tended to accept health measures and acknowledge COVID-19’s seriousness. A significant minority, however, distrusted mainstream media deeply; they saw COVID coverage as either exaggerated or deceptive, and they gravitated to alternative voices. This split would have implications for the subsequent vaccination campaign and ongoing public health efforts. It also highlights how crucial the media’s credibility is during a crisis: once lost, it is very hard to regain among skeptics.

Government Influence and Financial Pressures on Media

The Romanian government’s influence over media coverage during the pandemic was both direct and indirect. Directly, through its control of information flows and legal measures, the government shaped much of what was reported about COVID-19. Indirectly, through financial initiatives and

political ties, it affected media behavior and raised questions about independence.

One significant government intervention was the financial aid package for media launched in May 2020. The government created a fund of €40 million to pay media outlets for running public information campaigns about COVID-19 prevention. This program was ostensibly meant to support a struggling media industry (which had lost advertising revenue due to the economic slowdown) and to amplify health messages. Funds were disbursed as payments for advertising the state's COVID-19 safety campaign. Allocations were based on audience size, which meant some worried the scheme rewarded sensational and click-bait outlets simply because they had large audiences. While this infusion of money provided relief to many organizations – especially local newspapers and TV stations that were financially hurting – it was met with controversy. Media watchdogs immediately raised concerns about the lack of transparency and qualitative criteria for how the money was allocated. It turned out that a number of outlets with reputations for ethical lapses were among the beneficiaries, which critics argued could “end up favouring media outlets with a reputation for ethical lapses, and encouraging self-censorship” (Free Press Unlimited, 2020).

Opposition politicians and independent journalists accused the government (led by the National Liberal Party, PNL) of using the COVID-19 media campaign as a way to buy positive coverage in an election year. Romania had local elections in late 2020 and parliamentary elections in December 2020, so the timing of these payments raised suspicions of ulterior motives. Some termed it a “bribe” to the press. The government defended the program as a necessary public health measure and noted that contracts required media to run official health advertisements, not to alter their own reporting. Nonetheless, the perception lingered that certain media might go

soft on criticizing government policies because they were effectively on the government's payroll through year's end.

Aside from the funding scheme, it is important to note that even before the pandemic, many Romanian media outlets had close ties to political figures or parties. Investigations (such as Recorder.ro's 2019 exposé "The Price of Silence") revealed that both major parties – PSD and PNL – had funneled significant money to media via intermediaries in exchange for favourable or at least toned-down coverage. (eurotopics.net, 2020). In 2020, these practices likely continued behind the scenes. This meant some news organizations were financially motivated to align with either government or opposition narratives. During the pandemic, that could influence how statistics were interpreted or how blame was assigned. For example, an outlet sympathetic to the opposition might highlight missteps by the PNL-led government in handling the crisis, whereas a pro-government outlet might focus blame on citizens' behavior or on local authorities (many of whom were from PSD). Thus, the political leanings of media intersected with pandemic coverage.

Government influence also came through the control of the official narrative by the Strategic Communication Group, as discussed earlier. The fact that journalists were basically limited to official communiqués for core facts gave the government tremendous agenda-setting power. They decided what data to release and when. There were instances where reporters questioned the accuracy or completeness of official data – for example, concerns about under-testing or delays in reporting – but investigating those was challenging when all roads led back to government sources.

On the regulatory side, the National Audiovisual Council (CNA), which oversees broadcast media, took steps during 2020 to respond to pandemic coverage. The CNA issued recommendations to TV and radio channels to ensure accurate information and at times sanctioned broadcasters for spreading false or harmful claims. For instance, if a television station aired

a talk show where a guest claimed “COVID-19 doesn’t exist” or promoted panic, the CNA could fine the station for disseminating information contrary to official health advice. These fines did occur, adding a layer of accountability (though CNA decisions often came after the fact). In essence, state institutions actively policed media content to keep it aligned with public health needs – an action that, while arguably justified in a health emergency, raised debates about censorship.

The combined effect of these influences was complex. On one hand, the Romanian public did receive a steady stream of information campaigns and mostly uniform messaging about COVID-19 precautions, which likely contributed to higher awareness. On the other hand, the media’s dependence on official information and funding might have made some outlets less aggressive in investigative reporting or less critical of authorities. An example of potential self-censorship was the relative scarcity of stories investigating government procurement of medical supplies or questioning high-level decision-making – topics which independent media touched upon, but many mainstream outlets did not pursue in depth. Journalists aware of their outlet’s financial ties may have avoided “biting the hand that feeds,” consciously or not.

It’s also worth noting that not all government interactions with the media were heavy-handed; some were part of a natural crisis response. Media benefited from government briefings as ready content, and the government relied on media to disseminate urgent announcements (like curfews or school closures) widely and quickly. There were instances of effective collaboration, such as coordinated campaigns to encourage mask usage or to counter early vaccine misinformation, where media outlets and authorities worked in tandem for public benefit.

Overall, government influence permeated the COVID-19 media coverage through both regulation and financial support. While much of the

information provided by authorities was valuable and accurate, the environment in which Romanian journalism operated was constrained. This raises the question: did the media truly hold power accountable during the pandemic, or were they too closely integrated into the official narrative? The answer likely varies by outlet. Some independent voices maintained a critical stance, whereas much of the mainstream press walked a line between public service and pliancy to officialdom.

Scientific Reporting and Accuracy of Information

The COVID-19 pandemic was as much a scientific story as it was a political or social one. Communicating complex epidemiological information, virology insights, and evolving medical guidelines to the public was a formidable task for journalists. Romanian media had to rapidly educate themselves and their audiences on concepts like virus transmission, exponential case growth, and clinical trial results. The accuracy and clarity of scientific reporting were crucial for public understanding and for dispelling myths.

In Romania, as in many countries, early scientific reporting leaned heavily on international sources. When the virus was new, Romanian outlets largely relayed findings from the World Health Organization (WHO), the European Centre for Disease Prevention and Control (ECDC), and reports from countries hit earlier by the virus. There was an emphasis on explaining what COVID-19 is, how it spreads, and why measures like hand washing and lockdowns were necessary. Visual explainers and infographics (often adapted from international agencies) appeared in newspapers and TV segments to illustrate concepts like flattening the curve and the importance of not overwhelming hospitals.

As the local medical community gained more experience with COVID-19 patients, Romanian experts began featuring more prominently in

the media. Epidemiologists and infectious disease doctors from major hospitals became regular guests on news programs. For example, Dr. Alexandru Rafila, a well-known microbiologist (and Romania's representative to the WHO at the time), appeared frequently on television to provide updates and answer questions. These experts often corrected misconceptions in real time – if a rumor spread that a certain drug was a “cure,” doctors would explain on TV that it was unproven or dangerous. In many instances, journalists deferred to medical authority, which generally helped maintain scientific accuracy and consistency.

However, conveying scientific nuance to the general public is challenging, and not all coverage hit the mark. One issue was the fast-changing nature of scientific knowledge about COVID-19. Guidance that was given in March might be updated by June as more was learned (for example, early on there was ambiguity about mask use, but by mid-2020 masks were strongly recommended). Some media reports did not always clearly communicate the uncertainty or rationale behind changing guidelines, leading to confusion. For instance, if one week the news said “scientists aren't sure about mask efficacy” and a month later it said “masks are essential,” some audience members perceived a contradiction and lost trust.

Another challenge was the presence of pseudo-experts and conflicting opinions. While many programs featured qualified experts, there were also cases where individuals with medical titles but lacking relevant expertise offered misleading commentary. Romanian media occasionally gave airtime to contrarian voices under the banner of providing balance or covering controversy. As noted, even doctors not specialized in epidemiology sometimes downplayed the virus or spread false claims. For example, a doctor of alternative medicine might have been interviewed and cast doubt on vaccines or promoted an unverified treatment. Such segments, if not clearly contextualized, could misinform viewers. Moreover, in live debates,

journalists were not always prepared to fact-check scientific falsehoods on the spot, which meant incorrect statements could slip through unchallenged.

Overall, many Romanian journalists strove for accuracy. Major news outlets frequently consulted the Ministry of Health or the Department for Emergency Situations for the latest verified information. When reporting on potential treatments (like the much-discussed drug hydroxychloroquine), the more responsible outlets noted when something was experimental or not yet approved by health authorities. There was also an effort to localize the science: for instance, covering Romanian researchers involved in international vaccine trials, or interviewing local specialists about their clinical experiences, which helped bring authority and relevance to the coverage.

One notable aspect of scientific communication was the handling of statistics. Every day's new case numbers, death tolls, and test counts became a staple of news coverage. Media reported these diligently, but the interpretation varied. Some outlets provided context – comparing case numbers to the number of tests done, explaining what a positivity rate means, or using simple charts to show trends over time. Others simply reported the raw figures, which could be misleading without context (for instance, 1,000 cases in a day might not mean the same thing in July as it did in March, if testing had increased significantly). The public's understanding of the pandemic's trajectory depended heavily on how well media explained these numbers.

By late 2020, with vaccine developments making headlines, scientific reporting took on a new challenge: addressing vaccine information and misinformation. Romanian media reported on the progress of leading vaccine candidates and the national plans for vaccination, which began in the final days of 2020. In doing so, they also started to tackle emerging vaccine skepticism. Outlets published explainer pieces about how the new mRNA vaccines work (and clarifying that they do not alter DNA, countering a myth),

and news programs featured doctors debunking false claims about microchips in vaccines – all to preempt the inevitable wave of vaccine-related misinformation.

In summary, the accuracy of scientific reporting in Romanian media up to December 2020 was a mixed but generally earnest effort. The mainstream media largely conveyed the core scientific facts about COVID-19: that it is a serious and contagious disease, that masks and distancing help, and that collective action is needed to curb its spread. They did so by leveraging expert voices and official sources, which helped keep outright scientific falsehoods at the margins of their news coverage. The lapses mostly came in the form of giving a platform to unqualified voices or occasionally sensationalizing scientific developments. Nonetheless, considering the magnitude of the task, Romanian media helped educate millions of people about an entirely new disease in a short span – an accomplishment that likely saved lives by informing people how to protect themselves. The lesson going forward is that rigorous, clear science communication needs to be a priority in journalism to maintain public trust and ensure compliance with health recommendations.

Conclusions

By the end of 2020, Romania's media has undergone a profound trial by fire in covering the COVID-19 pandemic. The evolution of news coverage, from the first whispers of a distant outbreak to the all-consuming domestic crisis, tested the capacity and integrity of the press. In many ways, the media's role was indispensable – it kept the public continuously informed about restrictions, health advice, and the progression of the virus. At the same time, the pandemic exposed and sometimes amplified underlying weaknesses in the media ecosystem, from tendencies toward sensationalism to vulnerabilities to political influence and misinformation.

Several key themes emerge from this analysis:

Unified Messaging vs. Pluralism: In the early crisis, a relatively unified media message (echoing official guidelines) helped reinforce urgent public health directives. Over time, however, pluralism in media reasserted itself – with some outlets maintaining a sober tone and others injecting skepticism or political spin. The balance between speaking with one voice for public safety and allowing open debate was continually tested.

The Infodemic and Countermeasures: Misinformation and conspiracy theories proliferated alongside factual news. This infodemic required active responses: some media took on the challenge by fact-checking and debunking falsehoods, while others (including authorities) resorted to censorship measures. The Romanian experience showed that fake news can significantly sway public behavior, making it vital for media and officials to counter false narratives without undermining free expression.

Public Trust and Media Credibility: Trust in media proved to be both fragile and vital. Quality, consistent reporting earned increased trust for some outlets, whereas evident biases or errors fueled public skepticism. The pandemic highlighted that trust is the result of long-term credibility – and that in times of crisis, people will gravitate to sources they find reliable, while tuning out those they suspect.

Government Relations with the Media: The Romanian government became a major player in the information space, from controlling data releases to funding media campaigns. This heavy involvement helped disseminate essential information but also posed risks to media independence, as noted by international observers who warned against undue restrictions. The interplay of government influence and media freedom was a defining tension in Romania's pandemic story.

The Role of Independent Media: Independent outlets, though smaller in reach, played a crucial role in broadening the coverage – investigating

authorities, exposing disinformation, and representing alternative voices. Their work underscored the importance of media pluralism: a media landscape dominated solely by large, influential outlets might have missed important stories or failed to check those in power.

Overall, the evolution of coronavirus-related news in Romanian media reveals a media sector that is adaptive and resilient yet fraught with challenges. Romanian media managed to keep the public continuously informed in the face of a fast-moving and deadly pandemic – an accomplishment in itself. But the journey was uneven, marked by periods of exemplary journalism as well as moments of faltering under pressure from political, economic, or social forces. The COVID-19 experience in Romania highlights the importance of bolstering journalistic standards and independence, improving collaboration between media and authorities with respect for free expression, and investing in public media literacy. These steps are crucial to ensure that when the next crisis hits, the media can perform its democratic duty effectively, earning and maintaining the public’s trust. Ultimately, a well-informed society is better equipped to handle a pandemic, and the media are the key intermediaries in that knowledge process – a fact made clearer than ever by the events of 2020 in Romania.

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