

SELF-REGULATED LEARNING IN THE DIGITAL AGE: STUDENTS' PERSPECTIVES FROM SOUTH EAST EUROPEAN UNIVERSITY

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ABSTRACT

In the last decade the integration of Information and communication technology (ICT) tools has become the main focus of many studies. The technological advancements are seen in every sector, including education where the traditional teaching methods are being replaced with application of different ICT tools for learning and teaching purposes. The educators nowadays aim to respond to the new generation of students so called digital natives because they are being raised in a digital, media-saturated world. Self-regulated learning is closely connected to the ICT tools because it helps learners to control their own learning and reflect on their weakness.

The present study investigates 74 EFL students of two units: Faculty of Languages Cultures and Communication and Language Center of the South East European University. The study uses two different research methods: a student questionnaire consisting of four different parts, Learners' background, Perceptions of ICTs, Perceptions towards the Use of ICTs for Self-Regulated learning, and Perceptions towards the use of ICT for Metacognitive Regulation. Additionally, there was analysis of Google Classroom students' reflections and assignments submitted for evaluation.

Findings from the questionnaire and Google Classroom reflections proved that students hold positive attitudes toward the use of ICTs for their learning because they help them to monitor and plan their learning better.

Keywords: *Self-regulated learning, ICT tools, perception of technology, Google Classroom*

1. INTRODUCTION

With the world developments in the ICT industry and the application of the variety of information literacy tools in the 21st century, the South East European University has taken a strong role for integration of ICT tools in teaching and learning at this Institution. The Digital Development Country Profile of North Macedonia (2020) suggests that North Macedonia offers ICT subject in primary education and the curriculum includes digitalization as a mandatory school subject.

Furthermore, this report stated that the government made many efforts to help youth strengthen their digital skills and in this regard, the country which created a mechanism which supported youth creativity and development of their skills. All Universities in the country have included ICT skills in their study curriculum and teachers of primary and secondary schools are being trained to use ICTs in their teaching.

Collis and Moonen (2001 as cited in Tri and Nguyen, 2014, p. 34) “categorized the applications of ICT into three groups, namely “learning resources”, “instructional organization of learning” and “communication” consisting of email systems, and websites”

Also, MALL or mobile language learning is frequently used in the EFL classroom as a support tool for vocabulary learning, definitions and finding information quickly. “As a matter of fact, the use of technologies provides learners with unprecedented opportunities to practice English and involve themselves in authentic environments of language use (Kramsch & Thorne, 2002, as cited in Tri and Nguyen, 2014, p.32)”.

What is more, the digital natives’ generation or so called net generation, are believed to be “different from their predecessors since they think, behave and learn in a different way because of steady, pervasive exposure to ICT tools” (Bennett and Maton, 2010, as cited in Kizil, 2017, p. 2). Teo (2013) has developed a framework which includes the main elements of the native digitals and those attributes were grouped into the following categories: grew up with technology, are comfortable with multitasking, reliant on graphics and thrive on gratification. Patterson (2018) examined all advantages and disadvantages of the flipped classroom that is a combination of classroom content assigned as homework task and doing additional activities in the class.

The concept of self-regulatory learning was developed by Zimmerman (1986) and he was the first author who developed different models based on this. Self-regulatory involves learner’s cognitive, metacognitive, behavioral, motivational, as well as emotional/affective learning aspect (Panadero, 2017). Self-regulatory learning is very important because it help students become more independent learners and plan their learning.

The main aim of the present study is to find out students’ perceptions on the use of ICT tools at a University setting and if the use of ICT on daily bases corresponds to their self-regulatory skills. The study was conducted in South East European University in the academic year 2022/2023. The results of the study will provide teachers and students with some new insights related to the challenges while using ICT tools and if it improves their self-regulatory skills which can help them become life-long learners.

2. RECENT STUDIES

Many studies are being conducted to investigate the application of ICT in different teaching context worldwide. Kizil and Savran (2016) conducted a study on the role that ICT might have in language learning with the main focus on self-regulated learning skills. The study involved 177 university students attending an intensive English preparatory program. The research was conducted to examine English as a Foreign Language (EFL) learners’ use of ICT tools for the purpose of regulating self-regulated learning. Results of the study showed that EFL learners were involved in the use of ICT tools for self-regulation; nonetheless, there were differences between the study participants.

Another study was conducted by Argawati and Suryani in 2020. It aimed at revealing the challenges of using Digital Based Instruction (DBI) in ELT classes in Indonesia. The research methods used were: observations and interviews and the participants were 200 EFL students and five instructors of EFL. The study results revealed that the application of DBI provoked students' creativity, elevated digital literacy, involved the students more and creating of new applications. The main difficulties faced were limited devices and access, and limited digital literacy.

The results of both studies showed that participants did use ICT tools which support self-regulated learning and they also encouraged students' creativity. The main obstacle was the limitation of devices and digital literacy of the participants.

3. RESEARCH METHODOLOGY

The present study addresses three research questions:

1. What are teachers and students' attitudes towards the use of ICT tools at a University setting?
2. What ICT tools do EFL learners use and how frequently do they use them for learning purposes?
3. Do EFL learners' patterns of ICT use for both daily and language learning purposes correlate with their learning achievement?

3.2 Research instruments

The study follows a mixed-method design which included different ways of collecting and interpreting data. The main data collection instruments were online survey for EFL students of LCC and LC and Google Classroom reflections. The students' survey contains of four parts: Demographic information, Perceptions of ICTs, Perceptions towards the Use of ICTs for Self-Regulated learning, and Perceptions towards the use of ICT for Metacognitive Regulation. The participants were guided with some questions so they can reflect on the effectiveness and the frequency use of ICT tools in EFL learning.

The results obtained were presented, analyzed and discussed using graphs and charts. Further recommendations were given to teachers, students and educators on the benefits and potential challenges that they may face in applying ICT tools in teaching.

4. RESULTS

4.1 Student Questionnaire results

The aim of the student questionnaire was to find out the participants' perceptions of ICT for learning purposes and self-regulated learning, in addition to their metacognitive regulation. The following figures show the results obtained from the questionnaire and the results are discussed in details for every item.

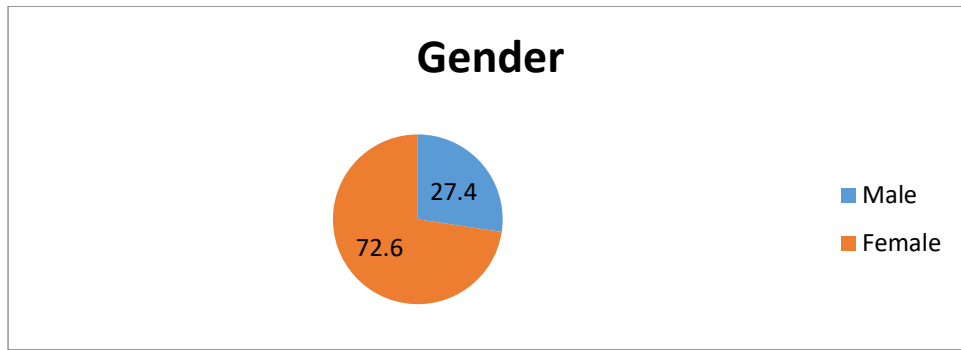


Figure 1: Students' gender

Figure 1 present the student gender and it can be seen that the majority of them were females with 72,6% and only 27,4% of male students.

<i>Age</i>	<i>%</i>	<i>total</i>
18	2,7	2
19	39,7%	29
20	35.6%	26
21	11%	8
22	4.1%	3
24	2.7%	2
28	1.4%	1
29	1.4%	1
32	1.4%	1

Table 1: Students' Age

Table 1 presents the participants' age which ranges from 18-32 years old. However, the majority, 39,7% were 19 years old, while 35.6% were 20 years old.

Architecture	15 participants
Computer Sciences	19 participants
English Language and Literature	26 participants
Business	11 participants
Public administration	2 participants

Table 2: Field of study

As it can be seen from table 2, the participants study at different departments at SEEU, and this includes English Language and Literature (26), Computer Sciences (19), Architecture (15), Business (11) and Public administration (2). However, the students from Law and Medical Sciences were not a part of this research.

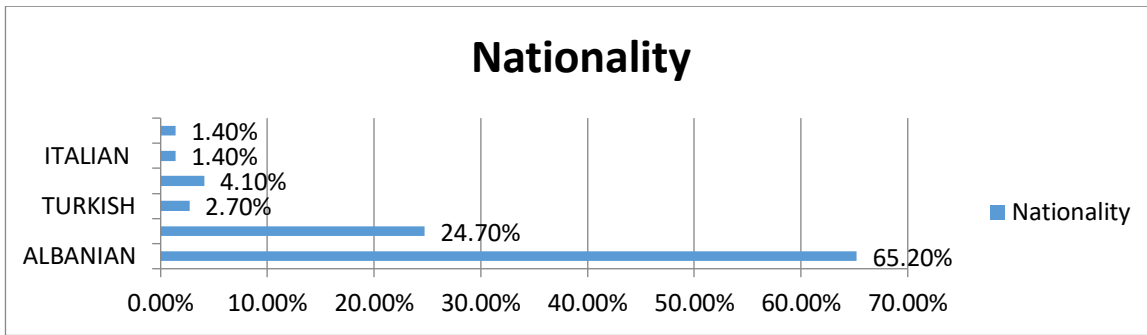


Figure 2: Participants' nationality

Figure 2 presents the nationality of the students who took part in this research. Majority of them are Albanians (65,2%), Macedonians (24,7%), Turkish (2,7%), Pakistani (4,1%), Italian (1,4%) and Roma (1,4%). This shows that SEEU is a very multilingual University and has signed a Memorandum of Cooperation with the Shams Foundation with the aim of internationalization of study programs. The Shams Foundation award. Scholarships to selected students in SEEU who enroll English language programs. These students come from Pakistan, Tajikistan, Azerbaijan, etc., and are very well integrated with other local students. Part 2 of the questionnaire asked the participants questions related to their perceptions about the use of ICTs in their learning. The results are presented in figures 2-5 and are discussed in detail.

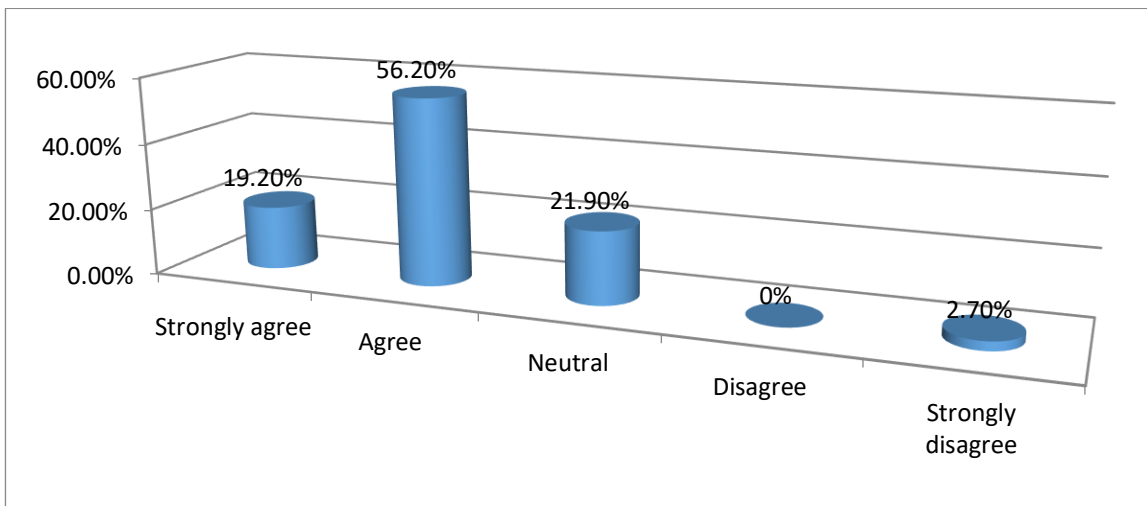


Figure 3: The importance of ICT tools for achieving learning goals

Based on figure 3 results, 56,20% of the participants agreed and 19, 20% strongly agreed that ICT tools are important to maintain students' interest to achieve their goals. However, 21,90% felt neutral towards this issue while 2,7 % strongly disagreed. These results show us that ICT tools are important sources for the students simply because they are surrounded by technology and Google Classroom is an inseparable part of teaching/learning at SEEU for every course taught.

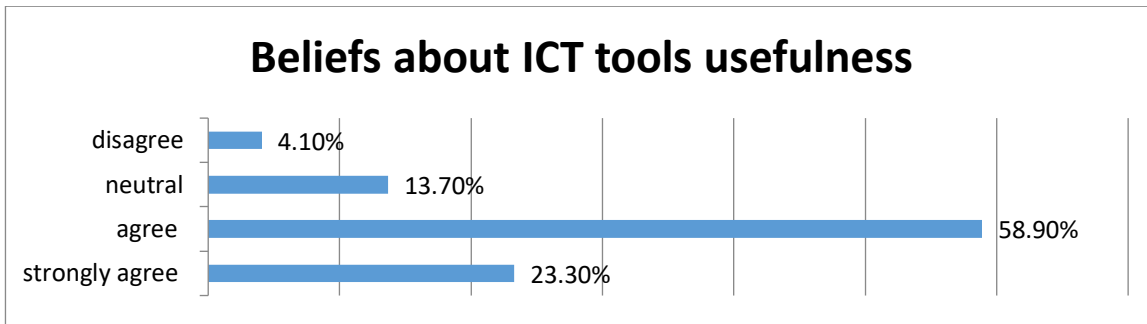


Figure 4: Beliefs about ICT tools usefulness

Analyzing figure 4 results, the data suggest that 58,9% of the participants agreed and 23,3% strongly agreed on the usefulness of ICT tools for learning purposes. On the other hand, 13,7% were neutral and only 4.1% disagreed. This is a very strong indicator which confirms students' beliefs towards the usefulness of ICT tools for their field of study.

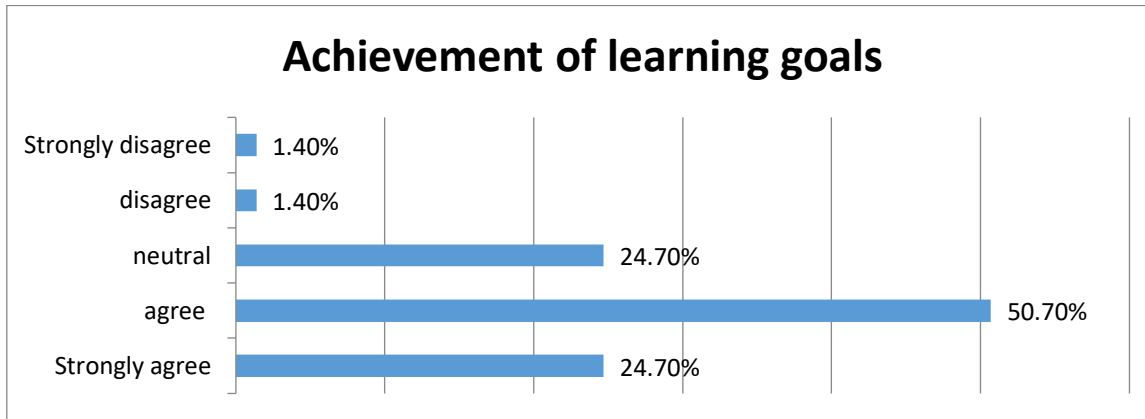


Figure 5: The effectiveness of achieving learning goals

Figure 5 is a presentation of the results for survey question related to the effectiveness of ICT in achieving learning goals. There is strong evidence of 50,7% agreed and 24,7% strongly agreed that students can achieve their goals using ICTs for learning. However, 24,7% expressed that they were neutral towards this question and only 1.4% disagreed and 1.4 strongly disagreed. There is no doubt, that the participants of this research are convinced that with the ICT tool they can achieve their goals in learning. Probably ICTs offer varieties and can respond to all learning styles therefore students feel confident in using them. In achieving these goals, ICTS has power to offer interesting solutions and enable learners to take part in their lifelong and learner autonomy.

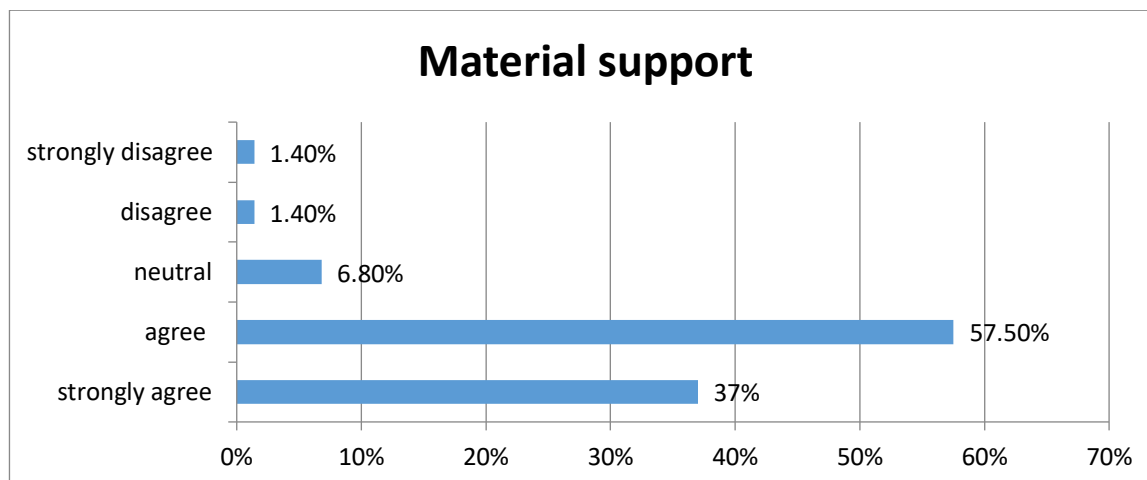


Figure 6: ICT support on finding materials

Based on the results presented in figure 6, it can be stated that ICTs support students with findings learning materials (57,5% agreed and 37% strongly agreed on this). Only 6,8% were neutral on this question and 1,4% either disagreed or strongly disagreed that ICTs support them in finding materials. What is more, students can access a wide range of resources related to their field of study. Also, teachers can have free access to different online databases, and suggest their student's different educational websites, and digital libraries in the world.

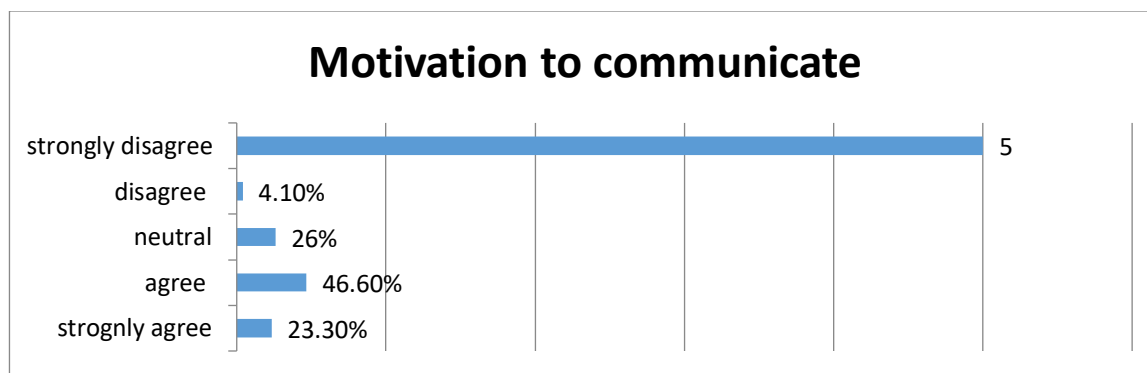


Figure 7: Motivation to communicate in English

Analyzing the results on figure 7, it is safe to say that majority of the participants are of the opinion that ICTs motivate them to communicate more with the others. This is confirmed by the 46,60% of the participants who agreed on this and 23,3% strongly agreed, while 26% were neutral on this matter and only 4,1% disagreed and 5% strongly disagreed. The data results clearly show that technology offers different opportunities for students to collaborate and communicate with each other and in this way their social and communication skills can be enhanced. In addition, social media are very powerful platforms where people from remote areas can communicate with each other.

PART 3: Perceptions towards the Use of ICTs for Self- Regulated Learning

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
10. The use of ICTs increases my enjoyment for learning.	25,7%	45,9%	25,7%	5,4%	0,0%
11. I use ICTs to make the task of language learning more attractive to me	21.9%	56.2%	16.4%	5.5%	2.7%
12. I feel ICTs effectively maintain my interest and enthusiasm in learning the language.	1.4%	50.7%	38.4%	4.1%	8.2%
13. When I start to resist learning the language, I use ICTs to help myself regain the interest and enthusiasm.	12.3%	38.4%	42.5%	4.1%	2.7%
14. When I feel I need more learning resources in the language, I use ICTs to expand my resources.	34.2%	43.8%	21.9%	0%	1.4%
15. I use ICTs to increase my learning experience outside the language classroom.	17.8%	53.4%	21.9%	5.5%	4.1%
16. I use ICTs to create and increase opportunities to learn and use the language	23.3%	47.9%	21.9%	4.1%	2.7%
17. I use ICTs to search for learning resources and opportunities to help achieve my goals.	26%	53.4%	13.7%	5.5%	2.7%
18. I search for attractive language learning materials and experience delivered by ICTs	21.9%	47.9%	21.9%	4.1%	6.8%

Table 3: Perceptions towards the use of ICT for Metacognitive Regulation

Table 3 provides the results of the third part of the questionnaire related to self-regulated learning which is a process where learners plan their learning tasks, monitor their own learning and then reflect on it. For all questions from 10-18, more than 65% either agreed or strongly agreed in favor of using ICTs for self-regulatory learning elements. The exception is the question related to the maintenance of the learning interest and enthusiasm where, 38.4% were neutral on this issue. Similarly, for question 13 which is related to the use of ICTs to regain the interest and enthusiasm for learning, 42.5% were neutral. Generally, Table 3 results are a very strong indicator that the participants use it as an umbrella which includes different variables to be discussed later in the paper.

PART 4: Perceptions towards the use of ICT for Metacognitive Regulation

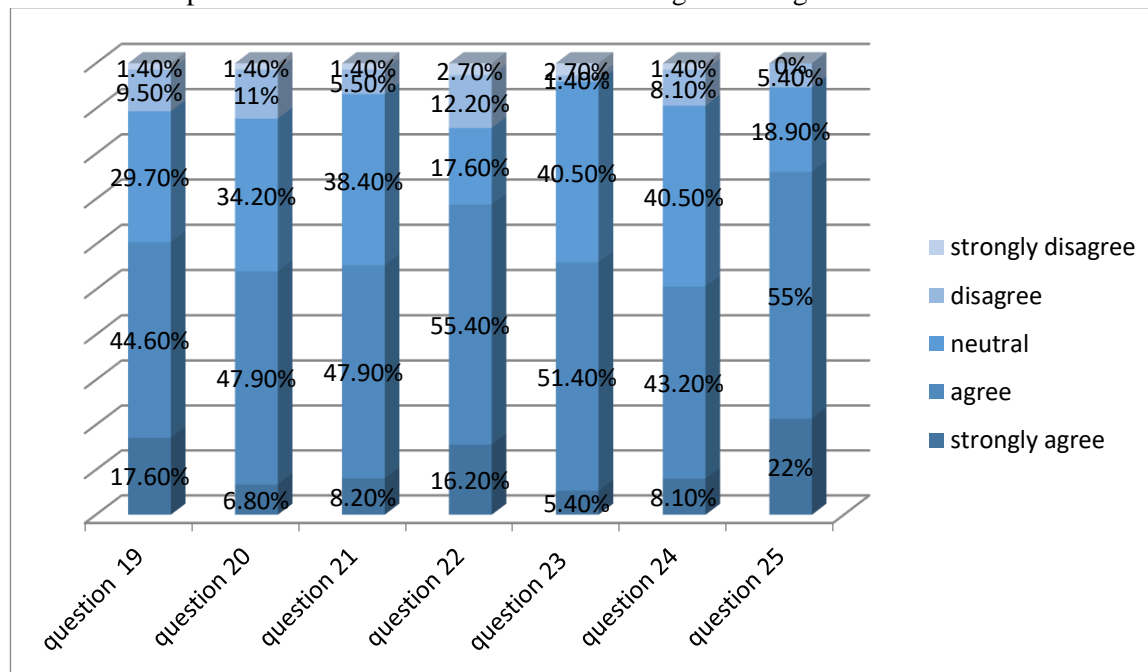


Figure 8: Perceptions of participants of ICTs for Metacognitive Regulation

Figure 8 data show more or less similar results between the questions. For question 19, if they knew how to use ICTs to effectively monitor themselves and achieve the learning goals at each stage, 44.6% of them agreed and 17.8% strongly disagreed on this. On the other hand, 29.7% were neutral while 9.5% disagreed and 1.4% strongly disagreed. Regarding question 20, if they learning tasks to do outside of school that involve the use of ICTs, 47.9% agreed and 6.8% strongly agreed on this. While, 38.4 were neutral and 5.5 % disagreed and 1.4 strongly disagreed. When it comes to question 21, whether they plan relevant materials to do outside of school that involve the use of ICTs, 47.9% agree and 8.20 strongly agree, however, 38.4 were neutral on this issue. The lowest percentage of 5.5% disagreed and only 1.4 strongly disagreed that they plan relevant materials outside the school. Regarding question 22 related to the participants' satisfaction with the way they use ICTs to reach their learning goals, more than half of the participants, 55.4% of them agreed and 16.2 % strongly agreed. On the other hand, 17.6% were neutral, and 12.2% disagreed with it and only 2.7% strongly disagreed. When discussing question 23 which is related to the adjustment of the language learning goals using ICTs, more than half of the participants 51.40% agreed and 5.4% strongly agreed. Surprisingly, 4.5% were neutral and a low percentage of 1.4% disagreed and 2.7% strongly disagreed on this issue. Question 24 asked the participants if they set their sub-goals for the next stage of learning in the light of using ICTs. 43.3% expressed that they agree with this and 8.1% strongly agreed. Nonetheless, 40.5% were neutral, 8.1% disagreed and only 1.4 strongly disagreed.

Finally, the data for question 25, which is related to the areas that they are weak in, if they knew how to select and use appropriate ICTs to improve the areas, the participants more than half of them 55.0% expressed their agreement and 22% their strongly agreed. While 18.9 were neutral with 5.40% disagreement.

Metacognitive regulation is a very strong element of self-reflection with is directly connected to the learning outcomes. The data reveal that the participants are aware that ICTs help them with learning, they regularly monitor and plan their own learning. Also, they showed to be self-reflected because they identify their weaknesses in learning and they immediately used ICTs to improve it.

4.2 Reflections

The second research method was students' reflection and its analysis. There were 10 students' reflections from the total sample of population, 74 participants, analyzed in terms of their perceptions of technology in developing their self-regulatory learning. The following are some excerpts taken from the reflection posted on Google Classroom.

Reflection 1

Technology plays a vital role in my own learning. YouTube videos help me learn new things related to topics relevant for me and they are done by different experts in the field of my study. What is more, they help me become more independent learner by searching different material of my interest.

Reflection 2

I use technology a lot when I learn or prepare for my exams. I usually search for the information that we discuss in the class but in a more relaxed atmosphere, at my home. I take as much time as I need to search the web for preparing for exams and I can go through them many times. I often, discuss those online materials with my classmates.

Reflection 3

All the time we try to memorize things. I use technology. Thanks to many YouTube videos, I was able to learn new ways of improving my memorization skills. One of the most important methods was repetition. Even though all of us are familiar with this technique it was interesting to listen to it in a more detailed way. If you truly understand what you are learning, then it will be easier for us to remember it and not forget it. Another way to remember things in long-standing is retelling what you have actually learned, if you say it correctly than you this method has been effective.

Reflection 4

I personally use technology a lot in my teaching because I feel more autonomous and I arrange my own learning. For example, I had used some examples of Sherlock Holmes and the movie Limitless to write a class assignment. Since I have heard about the tv show and the movie before, it was easier to connect the tips to familiar examples. Another thing I discovered by watching the video is that making up stories is very helpful if you need to memorize a lot of information in a particular order. This seems creative and I feel like it is something I would like to try when I am studying. Overall, I enjoyed the video and I will try to implement the advice into my own learning routine.

Reflection 5

We learn things all through our whole lives, and technology offers us a variety of materials. I personally like Google Classroom a lot because the teachers post all information there. There are posted all class materials and assignments that we have to do. What is more, it helps me to go through all materials whenever, I need them at my own pace. I feel very independent and I can regulate my own learning using Google Classroom for my courses.

Students' reflection showed that the participants are in favor of using ICTs for their learning purposes. YouTube videos were mentioned as tools to help them revise the topic that the teacher has presented in the classroom, when preparing for the exam as well. Additionally, the students showed to have strong metacognitive-regulation skills because they select the appropriate learning strategies and learning materials which means that they modify the way of their own learning to achieve their goals. It seems that ICTs strengthen the element of learner autonomy which means that they are in control of their own learning and are responsible for it.

5. CONCLUSION

The main aim of this study was to identify the perceptions of SEEU students towards the use of ICTs for their learning purposes with the emphasis on self-regulated learning. The data collected revealed interesting facts in favor of using ICTs by the participants of the study.

Based on the questionnaire results, students regularly use ICT tools in their everyday learning, and they have very developed digital literacy. In fact, students strongly believe that ICT are very useful for their field of study and help them to achieve their learning goals. What is more, learners are exposed to different learning platforms which allow students with different learning styles to use them. Then, there is the element of attractiveness because they are surrounded by technology and prefer them to include in their own learning as well. The innovative solutions technology offers, enables learners to become lifelong learners and learn independently. Furthermore, ICTs offer students opportunities to collaborate and communicate with each other and in this way their social and communication skills can be enhanced. Nowadays, social media are very powerful platforms which include 4.80 billion people around the world. The interaction is increased a lot because students can create, share, exchange, share information and ideas in virtual communities with other students.

Another focus of this study was students' self-regulated learning, and therefore, part 3 of the questionnaire offers insights on this. The participants reported that through ICTs, they effectively monitor their own learning. They also plan their learning due to intensive daily engagements also adjust and plan their learning goals with the help of ICTs because it allows space and offers different activities for learning. In fact, goal setting is the first phase of the self-regulated learning along with other two phases: performance and task strategies and the third one, self-reflection.

Finally, the results based on the data collected, the ICTs were proven to be very effective for students' Metacognitive Regulation. Metacognitive regulation is characterized by such strategies as planning, monitoring, and evaluating one's learning activities and using selective attention and evaluating one's learning activities and using selective attention (McDonough, 2001, as cited in Kizil and Savran 2016, p. 154). This finding regarding learners' positive attitudes towards the use of ICT for regulating metacognitive aspects such as knowing how to use ICTs to effectively monitor themselves and achieve the learning goals at each stage as reported by more than half of the participants. Also, participants' satisfaction with the way they use ICTs to reach their learning goals, more than half of the participants. These are promising facts that learners are moving towards metacognitive regulation for their own learning.

Based on the literature reviewed above, this study was an attempt to enrich the literature on the use of ICT for self-regulated language learning in North Macedonia and beyond. The study can serve a strong basis for further studies because we are offered technology but it is up to us to use it for positive or negative outcomes in the learning and teaching at the tertiary education.

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APPENDIX 1

Students' Survey

Dear student, please complete this questionnaire which will serve to find out your perceptions towards the use of ICT tools in learning English. There is no right or wrong answer, please be honest in your responses. Thank you for your time.

PART 1: Demographic Features of the Participants

1. Age:

2. Gender:

3. Major:

4. Nationality:

PART 2: Perceptions of ICTs

S A A N D SD

5. ICT tools are important sources to maintain my interest in achieving my language learning goals

6. I believe ICT tools can help me in reaching my ultimate goal in learning English.

7. I believe ICT tools can help me achieve my language learning goals quickly and efficiently.

8. ICT tools support me in finding different learning materials.

9. ICT increase my motivation to communicate in English.

PART 3: Perceptions towards the Use of ICTs for Self- Regulated learning

10. The use of ICTs increase my enjoyment for learning.

11. I use ICTs to make the task of language learning more attractive to me.

12. I feel ICTs effectively maintain my interest and enthusiasm in learning the language.

13. When I start to resist learning the language, I use ICTs to help myself regain the interest and enthusiasm

14. When I feel I need more learning resources in the language, I use ICTs to expand my resources.

15. I use ICTs to increase my learning experience outside the language classroom.

16. I use ICTs to create and increase opportunities to learn and use the language.

17. I use ICTs to search for learning resources and opportunities to help achieve my goals.

18. I search for attractive language learning materials and experience delivered by ICTs

PART 4: Perceptions towards the use of ICT for Self- Regulated learning

19. I know how to use ICTs to effectively monitor myself to achieve the learning goals at each stage

20. I plan learning tasks to do outside of school that involve the use of ICTs

21. I plan relevant materials to do outside of school that involve the use of ICTs

22. I a I am satisfied with the way I use ICTs to help myself continue in reaching my learning goals

23. I adjust my language learning goals using ICTs

24. I set sub-goals for the next stage of learning in the light of using ICTs

25. For the areas that I am weak in, I know how to select and use appropriate ICTs to improve the areas.

Student Questionnaire (Taken from Kizil and Savran, 2016)