
RESEARCH ARTICLE

Teacher Perceptions on Computer and Media Learning (ICT) in English Language Acquisition in Primary and Secondary Schools in Macedonia

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ABSTRACT

The recent reform of education in the Republic of North Macedonia has brought innovation in the use of technology in the teaching process as well as in the use of computers as a tool, and also as a method and a way to learn. Also, projects and curricula for computer learning have been developed in both primary and secondary schools. In this context, this theoretically-empirical research combines the reality of the use of ICT tools in English language classes in elementary and secondary schools with segments defined in the English language curriculum. With the empirical, descriptive, and conclusive results gained in this research, where 108 English language teachers in the primary and secondary schools of Skopje, Gostivar, and Tetovo were surveyed, a statistical difference ($\text{sig} = 0.028$) was observed in teacher attitudes per city in terms of level and the impact of ICT tools on the productivity of students in English language classes as well as the statistical difference ($\text{sig} = 0.043$) in teachers' attitudes by their age. In the end, the hierarchy of ICT tools was determined according to their level of use and the hierarchy of skills developed by the use of ICT tools in English language classes in elementary and secondary schools.

KEYWORDS

Computer usage; ICT tools; e-technology; teachers' perceptions

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1. Introduction

Schools in the Republic of North Macedonia are undergoing an enormous change process of their ICT readiness which reflects the wider social integration of ICT technologies leading to the creation of modern digital society and economy. School education sets the foundations for creating a society based on knowledge and citizens who are ready for active inclusion in the digital society and able to contribute to the development of the domestic economy. Seeing the long-term benefits of a quality and modern education system, The Republic of North Macedonia, as its strategic priority, determines the investment in education as the safest way to create strong individuals and a strong state. In this direction, a number of interconnected and dependent initiatives are being undertaken, which together lead to the modernization of the educational process and improvement of the quality of education, inter alia, by integrating digital technologies in teaching.

The use of computers and the Internet in schools has significantly increased in the last decade, and one of the most important reasons is the need for students to acquire knowledge and skills that are essential for life and work in the 21st century.

Since computers and the Internet enable the use of useful tools and access to a myriad of information, we can say that they:

- ✓ Give pupils access to information that would otherwise be difficult available
- ✓ to meet the different ways of learning students (each student is taught with a different tempo)

By using computers and the Internet, students can:

- find the desired information
- explore different topics
- develop the ability to find and collect information
- collaborate with other students on projects on the Internet

Anyway, computers and the Internet should be seen as an accessory and not as a substitute for the traditional way of learning. Teachers' obligation is to:

- identify strategies for collecting information
- determine the relevance of the information they find
- develop problem-solving skills
- evaluate its efficiency and effectiveness of the solutions

2. Literature Review

Technology began to cause an interest for teachers and researchers somewhere after the 80s. Numerous studies from then have shown the role of involving technology in language learning classrooms. However, Zhao (2013) found out that there are indeed limitations in some studies such as the setting of instruction, short-term experiments, the focus put only on one or two aspects of language, and so on. Technology-assisted language teaching is done in different ways and for different reasons. For instance, Kapp (2012) sees a great source of possibilities to learn English in e-learning through gamification. One of the reasons behind this idea, according to him, is creating authentic environments for learning where pupils are able to receive immediate feedback and be rewarded right away. From some studies, on the other hand, we learn that not all pupils like the use of technology at school, because the teacher chooses the activity, there is insufficient time for exploration learning is done on purpose instead of incidental as they would prefer, and there are limited resources (Murphy & Beggs, 2003). Whereas, in North Macedonia, there is a program prepared for the period 2005-2015, which has been aimed to see how technology can be incorporated in elementary and high schools. This includes thorough research on the conditions that schools in Macedonia are in and ways how technology can be used in the learning process. Among other plans, one that has been in the spotlight for many years, even after the draft program preparation, is teacher training in using technology in the whole teaching process (2010). Today, there are struggles because training teachers have been slower than the progress of young kids in the use of technology outside of the learning environments.

3. Methodology

3.1. Subject of research

This research provides an overview of the level and scope of the use of ICT tools as well as their impact on the productivity of students in the English language teaching class in the primary and secondary schools in the Republic of North Macedonia.

3.2. Purpose and nature of the research

The purpose of the research is to examine the attitudes and opinions of teachers in primary education in the subject of English language on the level and impact of ICT tools in this subject, how many of them are used, what kind of educational needs are there and what are the potential differences between their views. The objective will be tested in the sense of:

- The level of use of ICT tools in this subject;
- The type of ICT tools outlined in the program plan;
- The impact of these tools in developing a child in each segment;
- Hierarchy of indicators of the psycho-social development of the child from the use of these tools;
- Hierarchy of tools according to the level of use in this subject;

3.3. General hypothesis

According to the attitudes and opinions of teachers in the English language in primary and secondary education, the ICT tools allocated according to the curriculum for the subject in the English language are sufficiently used, and they have a positive impact on the productivity and development of the students.

3.4 A sample of research and their characteristics

1. Example of municipalities (teachers who teach the English language in the primary schools in Skopje, Gostivar, and Tetovo).
2. A sample of primary schools (a total of 10 elementary and 8 secondary schools, 5 elementary and 5 secondaries in Skopje, 2 elementary and 3 secondaries in Gostivar, and 1 elementary and 2 secondaries in Tetovo)
3. A sample of teachers in primary schools (a total of 108 teachers, 48 in Skopje, 33 in Gostivar, and 27 in Tetovo).

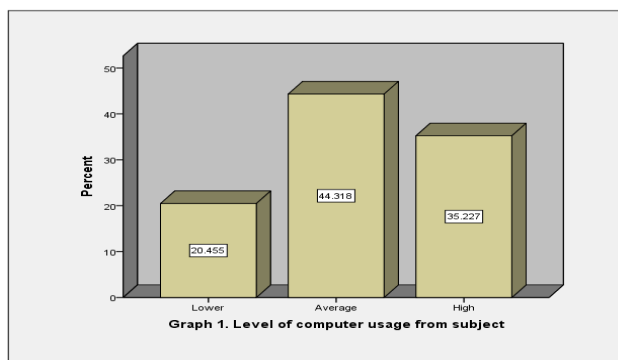
Table 1. Respondents by city

	Frequency	Percent	Valid %	Cumulative %
Valid	Gostivar	33	30.6	30.6
	Skopje	48	44.4	75.0
	Tetovo	27	25.0	100.0
	Total	108	100.0	100.0

Table 2. Respondents by Gender

	Frequency	Percent	Valid %	Cumulative %
Valid	Male	42	38.9	38.9
	Female	66	61.1	100.0
	Total	108	100.0	100.0

According to the level of knowledge and use of computers, survey data show:

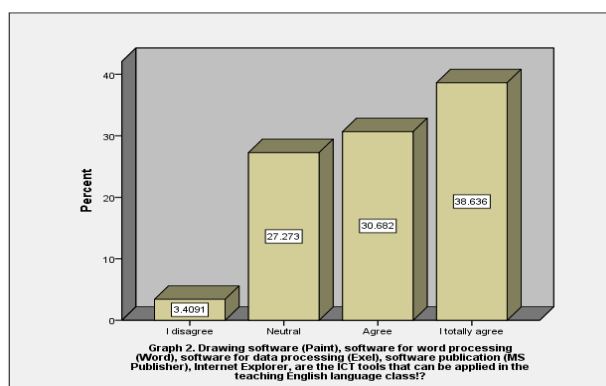


3.5. Data processing

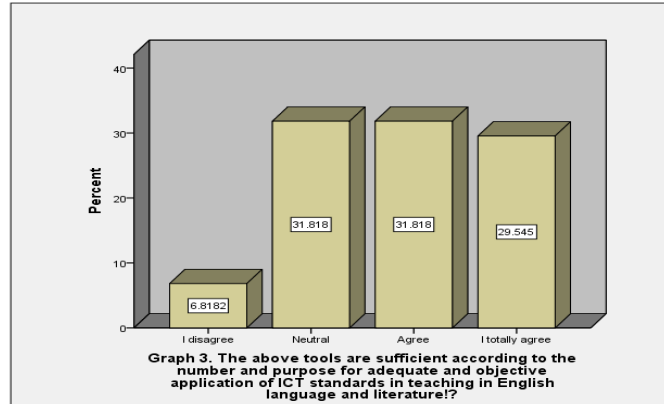
The research uses quantitative and qualitative data processing. In quantitative processing, several statistical procedures in the field of descriptive and inferential statistics are used, as follows: determines the frequency distribution, percentage and graphical representation of frequencies, t-test (data obtained from the questions from the native type). For the processing of data of this nature, the Statistical System for Social Sciences (IBM SPSS 20.0) is used. The remaining data, obtained from open issues, are qualitatively processed and analyzed.

4. Results and Discussion

After processing the data and their grouping, it was found that over 69% (30.682% Agree + 38.636% Totally Agree) of the surveyed teachers agree that Drawing software (Paint), software for word processing (Word), software for data processing (Excel), software publication (MS Publisher), Internet Explorer, are the ICT tools that can be applied in teaching English language class in primary and secondary education. This means that the percentage of teachers who do not agree with these tools as small and auxiliary tools that advocate for improving the productivity and development of the psycho-social skills of students in the teaching tools that are listed and in the plan of the ICT Prospectus teaching (Graph 2.).

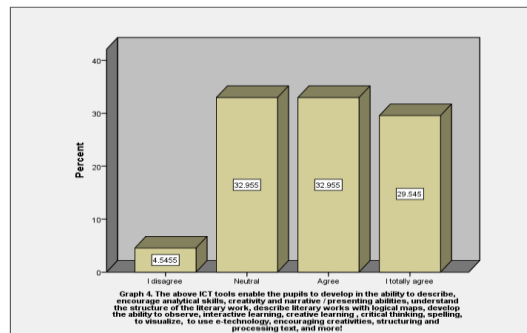


Regarding the question of whether the above-mentioned tools are sufficient according to the number and goal for appropriate and objective application of ICT standards in English language teaching, teachers have different opinions, and over 31% have no opinion on this, while around 7% think they are not enough, and over 62% think that these tools are sufficient and that there is no need for other such tools to be targeted in the prospectus for ICT teaching (Graph 3.)

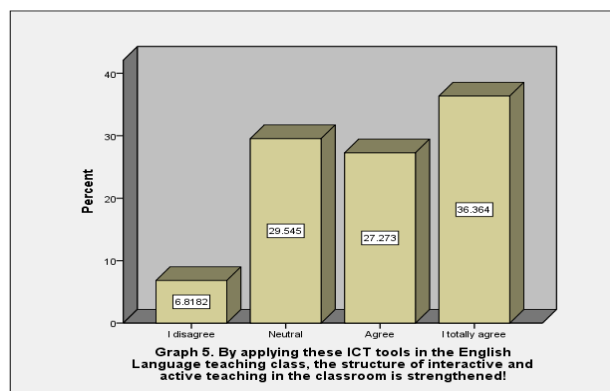


Almost the same proportion occurs on the next question that the above ICT tools allow the student to develop in the ability to describe, encourage analytical skills, creativity and narrative / presenting abilities, understand the structure of literary work, describe literary works with logical cards, develop the ability to observe, interactive learning, creative learning, critical thinking, spelling, visualization capability, developing the ability to use e-technology, encouraging the creative abilities, structured and word processing, and more!

In this, about 62% are in favor of this, about 33% have a significant percentage with no opinion, and a lower percentage of 5 think that these tools do not allow students to develop the abilities mentioned above (Graph 4.).



Also, with a similar percentage, the teachers think that using these ICT tools in the class English language strengthens the structure of interactive and active classroom instruction, and over 63% agree with this, about 30 do not have any opinion, and over 6% disagree with this (Graph 5.)

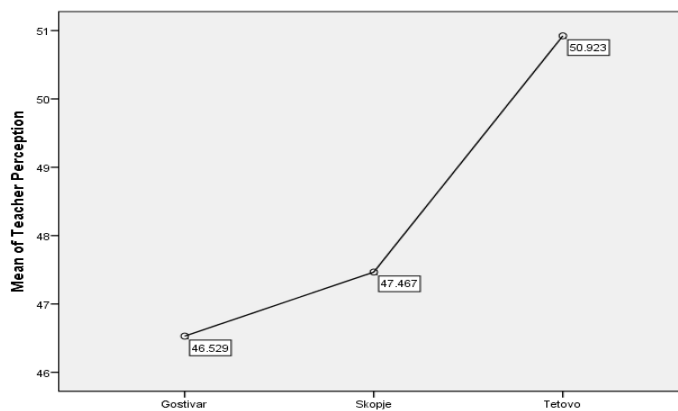


On the other hand, with statistical operations for significant statistical difference with T-test, these attitudes of teachers vary according to the city of living and acting, and according to significance in Table 3 below, we can conclude that there is a statistical difference ($0.028 < 0.05$) in the attitudes of teachers according to the city, and the teachers from the city of Tetovo have positive opinions about the application and impact of ICT tools in the English language teaching class versus the teachers from the city of Skopje and Gostivar.

Table 3. Significance for the mean of Teachers perception according to the city – ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	263.434	2	131.717	3.720	.028
Within Groups	3009.281	85	35.403		
Total	3272.716	87			

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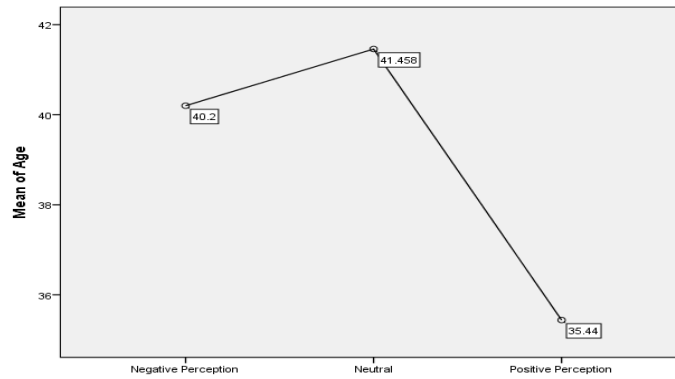
Graph 6. Distinction of the attitudes of subjects to the impact of ICT tools at the English language class by city

Also, a statistically significant difference ($0.043 < 0.05$) in teachers' attitudes towards the application of ICT tools in the English Language teaching curriculum also occurs according to the age of the teachers themselves, and younger teachers have positive attitudes (in this case, the processing of the data the smaller value shows by a positive attitude) about the application of ICT tools to the more experienced and seniors teachers who have lesser or more negative views on the use and application of ICT tools in the English language class in primary and secondary education.

Table 4. Significance for the mean of Teachers perception according to age – ANOVA

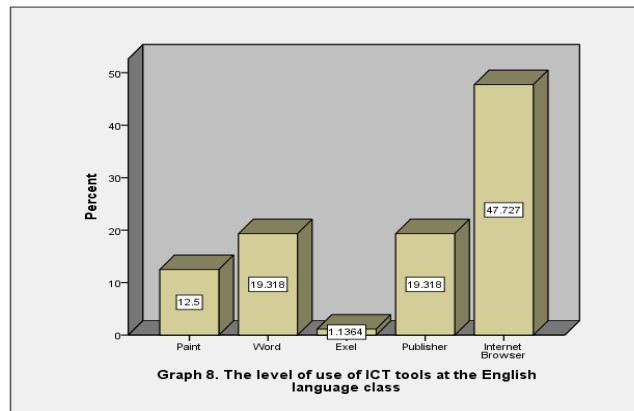
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	603.421	2	301.711	3.272	.043
Within Groups	7838.477	85	92.217		
Total	8441.898	87			

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Graph 7. Distinction of attitudes of subjects on the impact of ICT tools at English language hours according to their age

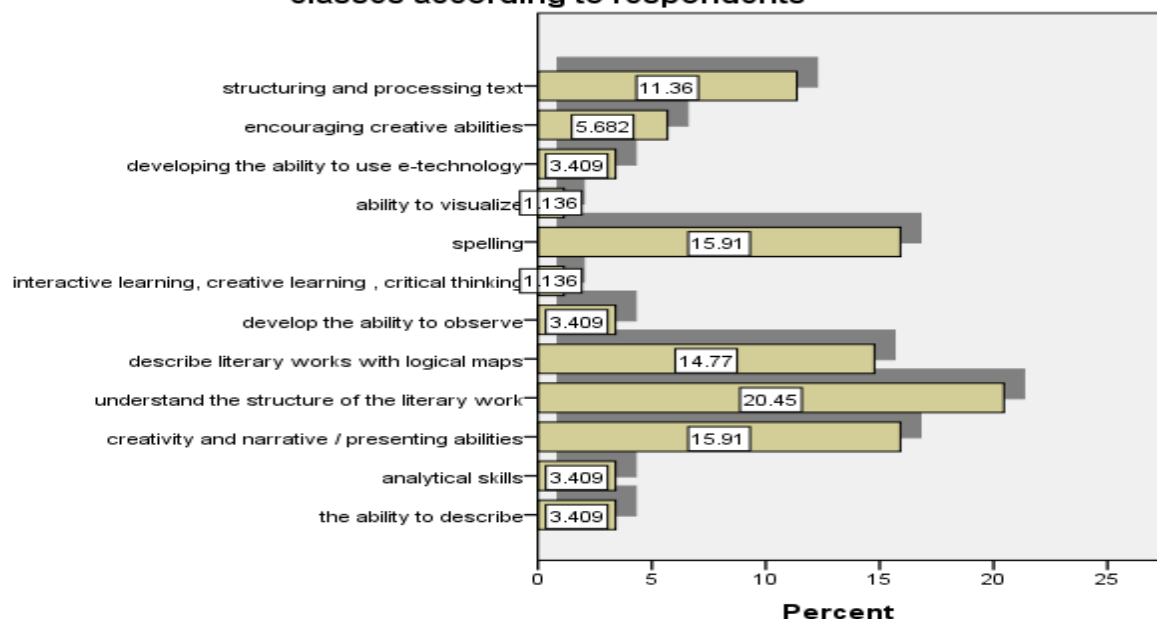
According to the determined research objective, the graphs below show the levels of use of ICT tools by the surveyed teachers and the hierarchy of indicators for developing skills and abilities of students according to teachers who use and apply these above ICT tools in English language teaching and literature in primary and secondary education. Thus, according to Graph 8, over 47% of teachers use an Internet Browser during English language classes, with about 19% using the Publisher and Word, and somewhat less, Paint and Excel.



Graph 8. The level of use of ICT tools at the English language class

Also, according to teachers, the above ICT tools enable the student to develop in the ability to describe (3,4%), encourage analytical skills (3,4%), **creativity and narrative/ presenting abilities (16%), understand the structure of the literary work (20,45%),** describe literary works with logical maps (14,77%), develop the ability to observe (3,4%), interactive learning-creative learning-critical thinking (1,2%), **spelling (16%),** ability to visualize (1,1%), developing the ability to use e-technology (3,4%), encouraging creative abilities (5,6%), structuring and processing text (11,36%).

Graph 9. Skills developed with the use of these ICT tools at English language classes according to respondents



5. Conclusion

According to the main objective, which resulted in the main hypothesis of the research, according to the attitudes and opinions of teachers in the English language in primary and secondary education, the ICT tools allocated according to the curriculum for the subject in the English language are sufficiently used and positively influence the productivity and the development of the students, we can conclude that a statistically significant number of teachers have a positive opinion on the use and application of ICT tools after the hour in English language tour and that the application of these tools allows students to gain new skills and abilities that are positive about their psycho-social development.

According to English language teachers, using the tools in the English language class, it is possible to develop creativity and narrative / presenting abilities (16%), understand the structure of the literary work (20,45%), excellent spelling (16%). This study shed light on the research that has been conducted previously in North Macedonia, but In individual schools, with a smaller number of participants. However, this study has its limitations, that of being conducted in three cities only. In the future, this could include schools from other cities and focus specifically on the impact of ICT learning in writing and spelling.

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Conflicts of Interest: The authors declare no conflict of interest.

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