

COMPUTERS IN TEACHING ENGLISH

Introduction

Among all foreign languages it can be presumed that it is the English language that has expanded as a language of international communication. A growing number of people use this language on daily basis, in view of this it is crucial to provide teachers with most suitable aids which would help them teach this language effectively. The types of teaching aids have been changing throughout the past, yet since the second half of the 20th century education has been mostly affected by advances in technology. In the 1950s a milestone was introduced to foreign language teaching – the computer. Since its invention scientists and methodologists have been striving to take advantage of the power of computer in education. The key concept while discussing the issue of computers in teaching English is Computer Assisted Language Learning (CALL). It has evolved significantly from its first implementation and the development of CALL can be divided into several stages. Each stage of CALL stems from the shifts in the paradigms of CALL which would not have happened without innovations in the technological as well as pedagogical areas. First, it was the mainframe which was the main focus of CALL, then the introduction of personal computer led to a shift in CALL and finally the networked computer took precedence over the previous inventions and created the last stage of CALL. As far as the pedagogy is concerned, the first CALL programmes focused on accuracy as it had been behaviourism and structuralism that provided the theoretical background to this stage, in the next stream of CALL the concept of fluency was added to the concept of accuracy and finally in the current stage of CALL the agency became of primary importance. It can be presumed that CALL software has been significantly enhanced and these days the use of computers in teaching foreign languages ought to be widespread therefore this paper will focus on this issue with regard to Polish schools. Furthermore, it will diagnose it not only from the technical point but also practical one concerning teacher's attitude towards this novelty.

1. The implementation of computers in Polish schools

Owing to the capabilities of computer and its extensive effectiveness this tool has established a new role for itself. Computer has become a productive tool to en-

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rich language teaching and for that reason it is worth analyzing whether computers are being incorporated into Polish schools. In order to diagnose it, a research was conducted in April 2006. The subjects of the analysis were sixteen schools. Eleven of them were primary schools; five were secondary schools including technical schools. From the findings of the research it can be inferred that the implementation of computers in Polish schools started in the 1990s. As far as the access to computer labs is concerned, there is no discrepancy between primary and secondary schools since each school is equipped with such a facility these days. Furthermore, some schools have more than one computer lab at their disposal and they constitute 38% of all the schools which were diagnosed. The highest number of computer labs which are available at one school is estimated at 5. As for the history of implementing computers in schools, it can be divided into three subsequent stages. The stages can be attributable to the substantial investments in schools.

The first stage of implementing computer labs started in the 1990s. Since then the importance of incorporating of information technology has been recognized by the Ministry of National Education and Sport; as a result it has launched a project which helped to establish computer labs at schools. The project aimed at equalling the chances of rural and urban areas. Owing to it, five computer labs were created. Furthermore, several schools attempted to purchase computers by means of their own financial resources. Nevertheless, most of the schools had difficulty allocating enough money for such a facility. Hence, there is only one school which established a computer lab owing to its own funds.

A subsequent shift which appeared after 2000 was connected with new projects which were initiated either by the Polish Ministry of National Education and Sport or by the President of Poland. Many schools were still lacking such a facility at that time, as a result certain projects were launched which aimed at supporting the implementation of computer labs at schools. The Ministry of National Education and Sport created projects which helped in implementing such laboratories in primary and secondary schools respectively. Schools had to apply for them and funds were granted if the school had fulfilled all the requirements. The project which was started by the President – ‘Internet at Schools’ also supported infusing computers and the Internet into schools. Owing to those funds, provided either by the Ministry of National Education and Sport or by the President, five computer labs were established in schools which were diagnosed.

Yet, the most noticeable change in the field of creating computer labs can be seen after 2004. A correlation can be drawn between this date and the accession of Poland to the European Union, the implication being that the European Union has provided several financial resources which supported the policy of the Ministry of National Education and Sport concerning computer labs. Owing to the European Union several projects have received financial support. The proliferation of computer labs which can be seen since 2004 is mainly attributable to the cooperation of the Polish Ministry of National Education and Sport with the Eu-

European Social Fund and the PHARE programme. Owing to the European Social Fund ten computer labs were established, which constitute 44% of all existing laboratories. Among the schools which received such financial support are five primary and five secondary schools. The premise of the project of the Polish Ministry of Education was to provide each school with a computer lab, the aim being the development of human resources. In this way computer labs reflect the European Social Fund priority regarding the employability because the project supports students' access and familiarity with technology as having such a classroom enables students not only to learn computer science but also other subjects with the aid of this teaching tool. Apart from the European Social Fund another programme which contributed to the implementation of computers at schools, although in a small percentage, is the PHARE programme. It is PHARE 2001 and PHARE 2002 that have provided the financial resources to Polish schools. Those two projects are subsumed within a programme of National Human Resources Development. The schools which received support from PHARE are those which educate not only their students, but also their graduates and future employers. The schools which have been granted support by means of PHARE programme are two technical high schools among 16 schools which were diagnosed.

The implementation of computers in schools is not only restricted to computer labs. The Ministry of National Education and Sport strives to provide students with multimedia centres as well, the rationale being giving students a range of opportunities for using computers not only during computer science lessons or other subjects taught with the aid of this teaching tool. Some schools which were diagnosed provide students with self-access centres. In 4 out of 11 primary schools such a centre is available, the number of such centres in secondary schools is estimated at 3. Although the number of schools which provide students with multimedia centres is comparatively low, the fact that they are established cannot be neglected with reference to implementing computers at schools.

The findings suggest that the incorporation of computers into Polish schools is regarded a priority these days; as a result the Ministry of National Education and Sport initiates several projects so as to support the additional implementation of computers in schools apart from computer labs. By diagnosing 16 schools, it can be presumed that most of the schools which were diagnosed have benefited from it.

2. The questionnaire

According to the findings of the research, it can be purported that computers are widely distributed at Polish schools therefore the next aspect to be diagnosed was connected with revealing teachers' attitude and knowledge in the field of using computers in teaching foreign languages. A further research was conducted in a form of a questionnaire and was distributed among 24 foreign language teach-

ers. The questionnaire was compiled and its questions can be divided into parts which were devoted to such aspects as teacher's knowledge of computers, teacher's knowledge of CALL, the organization of lessons in computer labs and the future of this concept. It aimed at indicating whether infusing of technology in language learning environment is taking place. From the responses of teachers it can be assumed that the attitude towards CALL ranges from eagerness to rejection, however, it is the majority (79%) who are in favour of having lessons in a computer lab.

2.1. The theory of diffusion of innovations

A correlation between the incorporation of computers into teaching English and Rogers' theory of diffusion of innovations ought to be drawn here as it is likely to be helpful in predicting the future of computers in teaching English in Poland. Extrapolating from Rogers' definition of diffusion of innovations it can be inferred that diffusion of innovations with regard to CALL is a process of using computers in language learning and language teaching among students and teachers which happens in a period of time. According to Rogers (1995), the end of the diffusion cannot be predicted as it is an ongoing process. Rogers defines time as an innovation-decision process which consists of five stages. The implementation of computers into language learning environment started in Poland in the 1990s and it can be assumed that the diffusion of CALL has not finished yet. Moreover, from the results of the research it can be purported that this concept is likely to be in the second stage these days, which Rogers describes as the persuasion stage. The persuasion stage implies that computers are already available at schools, teachers are aware that such an innovation exists and it is now their choice whether to use this tool or not therefore teachers' attitudes are of paramount importance. Besides, in his theory Rogers also states that the age factor is of prime consideration in the innovation-decision process. He purported that in most cases early adopters are usually younger, have more tolerance for risk and are simply more innovation-minded. The number of years of teaching experience is significant since the findings suggest that it is the variable that differentiates the views of computers.

2.2. The teaching experience factor

The research conducted in 16 schools provided a piece of information about two groups of teachers. The first group consists of teachers who have been teaching for less than five years. The second group includes teachers who have been working in schools for more than five years. An account of those groups will focus on their knowledge of computer use in teaching foreign languages, the pedagogy of Computer Assisted Language Learning in particular, and their knowledge of the changes such an environment imposes on them.

The group of teachers who have just started their teaching experience or it is no longer than 5 years consists of 11 teachers. Among those teachers only one responded to have lessons in a computer lab, yet 82% of them reacted positively to the prospect of the use of computers during their lessons. When taking their knowledge of computers in teaching a foreign language into consideration, it can be inferred that they constitute the group which is most familiar with pedagogical implications computer has on the language learning environment. 55% of them claim to have been provided with knowledge in this subject. It is also reflected in the answers to the questions connected with several aspects of working in a computer lab. The less experienced teachers are among those who are conversant with certain changes the computer imposes on the language learning environment. According to their answers, the role of the teacher is not similar to the one a teacher has during an ordinary lesson. 73% of them agreed with such a statement. The discipline is another issue which is seen as typical of a computer lab – 46% of the teachers claimed that working in a computer lab may entail disruptive behaviour.

The second group of teachers which was questioned consists of 13 teachers whose teaching experience ranges from 5 up to more than 15 years. Their familiarity with computers in terms of participating in computer training is relatively high as 69% of them responded to have taken part in such a course. Nonetheless, knowledge of operating computer and knowledge of using computer in teaching is not the same since it is the latter one that is necessary in order to conduct a lesson in a computer lab successfully. Among teachers in this group, 31% of them responded to have basic knowledge in the field of Computer Assisted Language Learning. The same percentage of teachers in this group stated that they have participated in training which aimed at gaining ability to conduct a foreign language lesson in a computer lab. When it comes to lessons in a computer lab, 38% of the teachers conduct them. On one hand the score may be regarded as relatively high since less number of teachers has knowledge in this subject (31%) and the less experienced teachers who claim to have attained such knowledge do not virtually conduct such lessons. On the other hand, the score may be viewed as comparatively low if it is correlated with the fact that 69% of those teachers have basic knowledge of operating this teaching tool by means of a formal training in computer literacy. Although 69% think that preparing a lesson in a computer lab is time-consuming, this factor does not discourage them from using this tool, as 77% expressed their willingness to the opportunity of working in computer lab.

Nevertheless, as it has been stated a great discrepancy between those two groups can be drawn, particularly with reference to the way they perceive teacher's role in the new teaching environment. Only 46% of more experienced teachers, compared to 79% of younger teachers, assume that their role may change.

It can be purported that the more experienced the teachers are the less they see the necessity to modify the way they teach. The survey has shown that more experienced teachers create the group which fails to notice the changes in a computer

lab in terms of their roles. Only 46% of them stated that such a shift may occur. If the level of experience is crucial here, it can be inferred that there are certain roles that the teacher has preferred throughout the years of his teaching experience and the computer seems to be a threat to it. Any possibility of modification in the teaching style may be a reason for resistance towards technology. Furthermore, conducting a lesson in a computer lab may create a less teacher-centred environment, the implication being that students will gain more control and teachers may have difficulty accepting it. Perhaps, those teachers who fail to see such a change prefer the authoritarian type of teaching where the teacher is in charge of the class. Undertaking any type of a subordinate role by them seems impossible as it purports that their role will diminish and they will no longer be in control.

If the teacher with longer teaching experience is reluctant to changes with reference to his role in the class, it can be inferred that less experienced teachers will show greater enthusiasm and flexibility to such a shift. The most crucial factor which seems to differentiate the less experienced teachers from the more experienced ones is their personal interest in technology. Teachers who are adept at using computers find this teaching tool appealing to their learners as well and it is consistent with Rogers' theory as such a teacher is not afraid of undertaking the role of a learner which the new language environment imposes on him. Besides, a teacher who spends more time working with computer at home is more aware of the merits the software and the Internet can bring to the language learning environment. Presumably, such a teacher is also among those who responded to be using the Internet and computer software to search for useful materials, the implication being that they do not want to be regarded as the only source of information.

The amount of teaching experience may be a significant variable as far as teachers' attitude towards this innovation is concerned, yet it seems that it will not prevent the process of diffusion of innovations as the responses of teachers indicate that the thought that the computer may be a threat to the overall position of the teacher in the classroom does not appear plausible for teachers who were questioned. It can be inferred from their responses that teachers are not afraid that they will be no longer needed in the classroom. However, not being substituted by computer does not imply that no shift is required in the role the teacher performs in the class. The computer will never replace the teacher, yet this tool is likely to modify language learning environment. As Tella (cited in Warschauer *et al.* 2000) highlights, teacher will no longer be *sage on stage* but a *guide on side* and *guide* is only one of the roles that the teacher will have to perform.

2.3. Teacher training programme

The assumption that can be drawn from teachers' responses can be correlated with their knowledge and familiarity with computers. Obviously, in order to im-

plement technology into language learning environment teachers ought to be confident of their ability to operate computers, otherwise they will be incapable of providing guidance to students. The results of the questionnaire show that most teachers have access to computer at home. Furthermore, 54% acquired their computer literacy by means of professional training. Thus, it can be concluded that teachers have legitimacy in this field. Yet, their pattern of responses raises the question of pedagogical background in using computers in teaching. The findings of the research suggest that the pedagogy of working with computer also needs to be paid attention to as it is crucial to increase teachers' eagerness towards computers in teaching. Apart from experience and expertise in using computer, which teachers claim to have, they should also attain some basic rules and strategies connected with the theory of using computers during a language lesson. Hence one of the conclusions drawn from teachers' responses is the fact that teacher training programmes ought to be established in order to develop teacher's knowledge of CALL.

First of all, a distinction should be drawn between training in the use of computer software and training in teaching with computers. The former one implies that it is the software and the basic programmes that are learnt and practiced during such a type of training. The questionnaire showed that 54% of the teachers participated in such computer training. Yet, taking part in training which goal is to develop the computer literacy does not ensure conducting a lesson in a computer lab which will be pedagogically sound. Therefore, the latter one is more important as it is connected with the pedagogy of language learning and language teaching which is enhanced by the use of a computer. Among the teachers who were questioned only 17% stated to be knowledgeable in this field. The conclusion is that such programmes are particularly lacking these days. Thus, a training programme in using and teaching with computers has to be established. What is more, the teaching experience factor is again significant as the teacher training programme should also entail a distinction between in-service and pre-service teachers.

Owing to the training programmes the in-service teachers would become familiar with computers and the applications which are needed in language teaching. Furthermore, they will receive guidance and support in the area of organizing such a lesson, implementing of this teaching tool and authoring the software. The in-service teachers who expressed a negative opinion about implementing computers into language teaching should recognize the importance of this tool in language learning and language teaching. Owing to such training teachers will become conversant with the way of using computer and its resources effectively.

As far as the pre-service teachers are concerned, exposing them to technology and its pedagogical merits before they become teachers can be beneficial in the future as those teachers will constitute the majority of those who will not be reluctant to conduct a lesson in a computer lab. Still, in order to evoke such an attitude a liaison should take place between schools and the institutions which prepare teachers to work, otherwise their knowledge of the pedagogical implementations

of computers will be dissipated. The pre-service teachers should get accustomed to using technology in the classroom while having their teaching practice. Nevertheless, each aspect of teaching is correlated; the pre-service teachers will not have such opportunities unless the in-service teachers are trained in this field. The teaching practice can bring benefits to both groups of teachers. The in-service teacher will provide the pre-service teachers with guidance and support; as a result the practices of using computers will diffuse.

Regardless of the fact how long it takes to improve teacher's knowledge of computer and teaching with this tool by means of teacher training and teaching practice, it seems that those factors are of paramount importance in overcoming the obstacles and difficulties that the foreign language teachers encounter these days.

3. Modifications generated by the computer

Having analyzed the incorporation of computers into Polish schools and teachers' attitudes towards this novelty, it is worth diagnosing why computer should become a vital part of the language teaching and language learning process.

Firstly and most importantly, there appears to be no point of similarity between computer and other teaching aids. Computer ought to be treated as a tool which generates a technical shift with regard to traditional educational tools. The enormous growth of the concept of CALL has led to creating the environment which is a networked one. As a result computer as well as the Internet have become a medium of communication. It is the Internet which creates a similar environment to one in which students' knowledge will be applied. Using computer and its applications both during lessons and outside school becomes a necessity as students are likely to become critical of traditional materials which do not allow them to adopt learning strategies which are the most suitable for them. Nonetheless, the most important aspect in incorporating this teaching tool into the curriculum is connected with the fact that computer has altered the way people read, write and communicate. Those modifications cannot be neglected by English teachers. It is the genuine communication which the computer promotes. The availability to a wide range of communication channels can be attributable to the Internet, as a consequence students can communicate both in written and spoken form. What emerges from that fact is that computer has created a new set of skills with regard to the English language competences which should be developed while language learning and language teaching.

It is the literacy skill that has undergone considerable modifications. Writing is no longer about writing as such, it combines word-processing and authoring abilities. The Internet allows not only to search for background information on a given topic but also to involve students in collaborative working projects. Working with other learners of English on the accomplishment of a given task can be

motivating to students. Owing to computer applications students can have the opportunity to cooperate with others both in the class and outside it. The Internet provides a real audience to the works written by learners, nonetheless, this audience is divergent; hence acquiring social skills in writing to work across differences and distances is essential within this competence. Besides, the notion of reading has also been modified by the advent of computer. It is the World Wide Web that can be used to research and find relevant information. As a result topics of high interest are at student's disposal. Yet, the vast amount of data available on the Internet generates a shift within the reading competence. It is the evaluation of information that becomes of paramount importance. Students have to develop and use higher order information processing skills in order to explore and critically evaluate a given text (Warschauer 2000).

Furthermore, it is the computer that provides the chance to experience the real meaning of learning English. The most important aspect of using computers while teaching English is the 'real world' character of such lessons and on-line experience which is visible especially in the case of lessons based on corpus data. In order to reinforce lessons objectives teachers strive to provide their students with authentic materials; still, the appropriateness of these texts is not always achieved, thus, corpus-based lesson can be a solution to this problem. The abundance of examples of actual usage of English and the ease of access to the corpora by means of the World Wide Web should not be neglected by teachers. It is the corpus that has altered foreign language teaching. On account of improvements in the studies of language such as corpus linguistics the lexical approach has gained prominence. The proficiency in lexis and word units has become significant in comparison with learning separate word items. Presumably, the development of corpus tools has reinforced the value of Computer Assisted Language Learning as lessons based on corpus data are likely to raise students' awareness of language learning. Owing to computer, students will notice that the knowledge and skills they learn at school are useful in the real world. Furthermore, it is the global understanding that should be promoted in language learning and language teaching. This issue has been raised by Lee (2000). According to Lee, the English language should be taught in a cultural context. Extrapolating from this viewpoint, teachers are responsible for creating a global society. As Riel (1994: 452) implies *schools will need to help students develop broad, deep, and creative understanding of community, culture*. What is more, using computers by students both at schools and at home promotes self-directed learning. Computer applications help teacher provide students with individual attention during lessons. Students can also develop at their own pace adjusting strategies to their needs. The Internet gives students possibility of practising what they have learnt outside the classroom.

Apart from aforementioned arguments for implementing the computer into the language classroom, there is a number of other ways to utilize technology in

the study of language. For more on incorporating computers into language lessons see Lewandowska-Tomaszczyk *et al.* (2001).

As it has been discussed, great hopes are placed in integrating technology into language learning environment. Obviously, teachers proceed with caution as they are the ones who will face these challenges. The most important aspect in incorporating computers into the curriculum appears to be correlated with applying a new view to language learning. There are several aspects of language learning which have been modified by computer and it is a teacher's role to facilitate their acquisition.

Conclusion

Computer technology emerges continuously in our world, as a result the development of it has certain influence on education. Walter Ong (1982: 82) purported: *'technologies are not mere exterior aids, but also internal transformations of consciousness'*, the implication being that technology may create new possibilities for education. Such a possibility in the field of foreign language teaching has been the teaching aid which technology provided – the computer. The results of the research conducted in 16 schools and among 24 foreign language teachers were to help to provide a general view of the use of computers in teaching foreign languages, English in particular. The results indicate that these days CALL fails to achieve this goal since it still exists as a separate concept. Thus the emphasis should shift to the use of the tool. Technology must become more ubiquitous and which correlates to it – less visible (Bax 2003: 13-28). The achievement of such a view on computer in language learning and language teaching seems challenging, nonetheless, the theory of diffusion of innovations shows that certain changes in technology, position of the computer in the classroom as well as changes in attitude towards the device are required in order to make the technology an embedded part of language learning and language teaching. If teachers are introduced with teacher training programme in this field, the diffusion of CALL is likely to proceed and reach the next stage of Rogers' theory – the decision stage.

Nevertheless, certain constraints of this research have to be taken into account while examining the results. The subjects of the analysis were 16 schools and 24 teachers, the number may be regarded as relatively low, yet if the schools which have been diagnosed resembled the situation in every Polish school, it could be inferred that there are no technical boundaries of the use of computers during foreign language lessons. The only obstacles to overcome are organizational ones. Still, in order to provide more accurate status of using computer in foreign language learning and foreign language teaching research ought to be carried out on a larger scale including more schools and more foreign language teachers. Nonetheless, this paper provides a sample of the situation of Computer Assisted Language Learning in Poland.

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ABSTRACT

Computer has become omnipresent these days and teachers start to notice several implications it has on language learning and language teaching. The development of Computer Assisted Language Learning started in the 1950s, yet it can be purported that little research has been conducted in order to diagnose the incorporation of this concept in Polish schools.

This article firstly focuses on the implementation of the equipment into schools by providing descriptions of several ways of funding it. In the next part it focuses on teacher's viewpoint towards it combining it with the theory of diffusion of innovations. Although some challenges remain as far as the implementation of computers into teaching English is concerned, the article provides some explanations of teachers' opinions and possible ways of evoking positive attitude towards this teaching tool. It is also accompanied by the discussion of modifications generated by the computer.