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**ICTS FOR SELF-DIRECTED LEARNING COMPETENCY IN
TEACHING FOREIGN LANGUAGES**

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Abstract

The purpose of this paper was to examine the connection between the key constructs of self-directed learning competency and computer technology use. The researchers were trying to consider some related personal factors of language learners such as gender, age, language learning anxiety and learning style in self-directed learning. A total of 43 students participated in this research. The mixed model case study design was implemented for measurement of students' self-management, desire for learning, and self-control through the self-report questionnaire and a structured interview as pretest and posttest. This paper highlights that using ICT in English language classes brings benefits to self-directed learners in improving their self-management, self-control and desire for learning. The strongest points of introducing ICT in educational process are regarded as following: ICT makes learning interesting and available everywhere, it helps to study faster and makes learning convenient, it allows learners to control the learning process and to reach the objectives in educational process. The study revealed that while setting the learning goals and identifying appropriate learning resources the students have an opportunity to monitor their achievement of learning outcomes and the effectiveness of their study habits, which is the way to continuing professional development. Moreover, the obtained results emphasize the obvious link between the personal factors and the students' academic performance.

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1. Introduction

Self-directed learning has proved to become a major area of research in the modern scientific context. However, it is during the last three decades that it has become increasingly important in the information society. It is especially significant for students studying foreign languages in the light of the life-long learning concept.

Self-directed learning as an object of scientific study has a long history of investigation. It took its roots in classical antiquity. As it turns out, it was Socrates who first thought about self-directed learning and self-educational activities as scientific concepts. He linked the concept of "self" with the process of self-cognition, ethos of self-formation, personal self-development. Self-study played one of the central roles in the lives of Greek Philosophers, such as, Socrates, Aristotle and Plato.

Modern theories of self-directed learning come from a progressive educational movement, from the ideas of John Dewey, who considered experience as the cornerstone of education. In the article Petro (2017) argues that by integrating both past and new experiences, based on personal interpretations and knowledge of the subject, students will be able to learn most effectively. The role of the teacher, in this case, is to be a guide, supporting students in studying the world around them, formulating research questions and testing hypotheses.

In the past several years, the approach of self-directed learning in education has changed the position of individuals in the process of gaining knowledge, the learner can become more self-directed with additional support and motivation to be more autonomous. There are several specific examples of researchers' understanding of self-directed learning. Tykibaeva and Medvedev analyse (2012) self-directed learning competency as a complex system, and highlight such components as motivation, orientation, operation, emotional-volition, evaluation, and psycho-motor component. This approach allows to investigate into the theory and practice of self-directed learning competency, to reveal it as a structure by levels.

Knowles (1975) describes self-directed learning as a mechanism in which individuals take the initiative, with or without the aid of others, to assess their learning needs, to formulate learning goals, to locate learning tools, to select and incorporate effective learning strategies and to evaluate learning outcomes. The following findings are therefore relevant for our research: first, to interpret and organize new information students will focus on prior knowledge; the relation between the new learning background and real life circumstances should be taken into consideration when designing their own learning path; in addition, the instructor must bear in mind that self-directed learning consists not only in the exploration of new knowledge and its meaningful reflection, but also in productive engagement and, thus, in the teaching of your peers, in the collection of tools and ideas.

It is now recognised that educating oneself to be a professional must be a lifelong process. Furthermore, the process of learning a foreign language and being a proficient speaker requires a continuous professional education. It is also not only a matter of keeping up-to-date, but also a matter of focusing on practice in order to integrate new circumstances, to compare current situation with previous experiences and to re-organize recent experiences based on this method.

Research on self-directed learning competency allows to identify the factors that shape it: independence, organization, purposefulness, systematicity, self-teaching, individualization, connection with continuous education, subjectivity.

The structure of self-directed learning competency as an integrative concept which includes cognitive, reflexive, motivational, emotional-volitional, operational-activity components. On their basis, modern researchers identify criteria that allow to evaluate the level of self-directed learning competency of students.

According to Garrison (1997), self-directed learning is achieved through the scope of self-management, self-monitoring and motivation. Self-management in educational settings requires the use of learning tools by the learners within the learning context. Garrison's model focuses on resource use, the use of learning methods and learning motivation. Garrison clarified that self-management required learners being in charge of the learning environment in order to accomplish their academic goals. He also clarified that self-management includes collaboration with others around the topic. Through this view, we can see that the Garrison's model has a certain emphasis on the learning resource self-management. Moreover, the model places emphasis on context and self-determination has been reported as a chief factor for maintaining control over learning process.

2. Problem Statement

Continuous technological development observed nowadays is enhancing the use of technology ubiquitously, particularly in education. Globalization processes together with tendency of English to become lingua franca make learning and teaching this language a self-evident fact. And the modern trend of self-directed learning unites all mentioned ideas into a big issue of technology as the means of foreign language self-directed learning.

Much of the research in this area displays the vastness of the term ICT or Information and communication technology. Kogalovsky (2009) defines it as “a set of methods, production processes, software, hardware and linguistic tools” (p.61) aimed at various ways of information treatment. The Russian Federal Law considers ICT equal to IT and defines it similarly. According to Healey (2018) TESOL Technology Standards giving the definition of “technology” focus mainly on computer-based systems and networks.

Technology integration consists majorly of the ways teachers implement technology into familiar activities and the way this usage re-shapes these activities. Dockstader (1999) defines technology enhancement as the usage of technology to enhance the learning environment.

The XXI century declared the rise of worldwide web technology, that was immediately embraced by the majority of teachers. It is now common to distinguish three types of technology. Web 1.0 is presented generally by personal or business websites. It is characterized as one-to-one, static, read-only technology where users are content consumers. Web 2.0 technology features are one-to-many, bi-directional, dynamic, read-and-write. In this technology users are content-creators. Examples of Web 2.0 are numerous (blogs, podcasts, Wikipedia, Flickr, YouTube, Vimeo). Web 3.0 is yet rather predicted, but its features are already shaping. This technology is personal and portable, having an individual focus. It can be described as the ‘semantic’ web, consolidating content, an augmented reality. Google Earth and London Tube app are good

examples of Web 3.0. Both old-fashioned and future technologies analysis form the underlying rationale for their particular use in teaching English (Chan & Holosko, 2017).

3. Research Questions

As Brockett and Hiemstra (1991) point out in their study, the current developments in education are attempts to better grasp the role of technology in self-directed learning as well as how to assess the reliability of self-directed learning tools (p. 18). The researchers aim to answer the following two research questions through an interpretation of different sets of data: 1. What kind of benefits do self-directed learners find using ICTs during English language classes? 2. What are the personal factors that influence the constructs of self-directed learning.

4. Purpose of the Study

The purpose of this paper is to explore the relationship between the core structures of self-directed learning (self-management, motivation for learning and self-control), the use of digital technology and related personal factors (age, gender, language learning anxiety and language learning style) in English language learning to university students.

5. Research Methods

Case study Case study is addressed as the leading research method of this paper. The target group for data consideration consisted of undergraduates and master's degree students of linguistic faculty in Chelyabinsk State University, studying English as a foreign language. A total of 43 individuals participated in the research.

The mixed model case study design was implemented for measurements of students' self-management, desire for learning, and self-control through the self-report questionnaire and a structured interview as pretest and posttest. The study was attempting to show the relation between the implementation of ICTs in learning English as a foreign language and the level of self-directed learning competency.

Though the case study is subjective in nature, it is objective in its particular educational context and research area. Thus, we may have acquired a broader understanding of the impact ICTs might have on students use of self-directed learning strategies.

Structured Interview. This quantitative measuring method was used to aggregate the answers reliably and make a confident comparison between sample subgroups. Each interview did not differ in the number and order of the questions. The interview contained 11 questions and was aimed at understanding what personal factors are affecting the constructs of self-directed learning competency while learning a foreign language. The factors viewed were gender, age, language learning anxiety and learning style.

Self-report Questionnaire. Academic self-efficacy relates to self-management and self-control, that gives students a chance to plan, control and analyze their academic performance. The aim of this instrument implementation was to measure the capability of the group members of self-management, desire for learning, and self-control. In the present study, the self-management component of students' self-directed learning is conceptualized through self-efficacy. To estimate academic self-efficacy a

questionnaire was distributed to meet the demands of this study. Academic performance self-efficacy scale was adapted from Zajacova, Lynch, and Espenshade (2005). The scale, which is a 5-point Likert type scaling system in the form of “strongly agree”, “agree”, “neutral”, “disagree” and “strongly disagree”, was used. All questions were grouped according to the constructs of self-directed learning competency.

6. Findings

6.1. Benefits of using ICT

The beneficiary points of using ICT in teaching and learning languages are obvious, thus many scholars agree on the idea that pros outweigh the cons. Ammanni and Aparanjani (2016) in their theoretical work discuss various benefits of implementing ICT into the foreign language teaching. Considering various advantages it is possible to prove that all of them affect the improvement of self-directed learning competency.

ICT makes information accessible (Ammanni & Aparanjani, 2016, p. 5). The chalk-and-talk methods of teaching are in their greatest decline making the whole educational process focus on implementation of ICT. Nowadays stable internet connection and CALL enable any student to search and find abundant time- and space-free information, while teachers just direct learners in their research. Chan and Holosko (2017) exemplify the explicit availability of different information sources with blogs which are part of Web 2.0. In self-directed learning students may choose to read or even write a blog of their interest. Having unlimited access to information any student is able to find individualised materials.

In our study we managed to organise a learning process “wherever, whenever” by implementing ICTs in learning languages. The equality of learners in terms of the accessibility of information can increase competition between them and thus improve their motivation for self-learning.

ICT extends purpose for learning. If the teacher provides students with up-to-date ICT methods and resources and guides their practical implementation, students become more involved not only into the lesson activities, but also into self-education trying their best to fit into the modern competitive world. Shyamlee and Phil (2012) note that ICT may bring the sense of reality into the learning process.

As the research found out ICT really enables students to investigate and find their own best way for learning so even low-motivated language learners with the help of wise tutoring on the abilities of different ICT may find previously hidden resources and upgrade their self-directed learning competency.

Students and teachers work with current and authentic sources. This point of view is shared by many researchers. As Kumar and Tammel (2008) state, ICT—and the Internet is an opportunity to use the learnt language in meaningful ways in authentic contexts which is motivating for the language learner. Shyamlee and Phil (2012) also mention multimedia courseware as a part of ICT offering students more plentiful information than textbooks and helping to get an understanding of a deep cultural background, rich content and true-to-life language materials, which are much closer to them. The idea is also supported by many studies. For example, the one carried out by Parvin and Salam (2015) proves that by using technology, learners improve their access to language in a meaningful context and build their own awareness. Learners taught with the help of ICT have opportunities for social interactions to practice real life skills through cooperation in various often online activities. ICT ameliorates the learner’s interaction, verbalization involvement in group collaborative learning. Perceiving language learning as a part of life

experience, students gain the ability and will to manage the content and even direction of their education, to search for materials inside the sphere of their interest.

Students can learn independently. ICT helps teachers to guide students individually and personally. For instance, via e-mail, social networks, messengers or learning management system (LMS). As Çakıcı (2016) states, ICT fosters learners' autonomy. With its help students take the responsibility of their learning which makes the development of self-education competence an obvious consequence.

McKnight et al. (2016) carried out the research in seven American schools. The aim of the study was to discover specific digital learning strategies which are used by teachers. The results revealed high potential of technology use into teaching. The differentiation of learning for students with special needs or the ones who missed the class was mentioned in particular. Those students become independent from the classroom time and are able to do simultaneously one and the same activity through technology in an individualized manner.

Shyamlee and Phil (2012) point out improved interaction between teacher and student. ICT creates a good platform for the exchange between teachers and students, while at the same time providing a language environment that improves on the traditional classroom teaching model. Meshkova, Sheremetieva, and Spynu (2017) also mention the importance of providing on-time feedback, receiving consultations and managing the classroom time more effectively via ICT as an educational tool. These help to create strong trustful relationship between teacher and student and provide student with constant emotional and authoritative support that widens the ability and will of a student to work on his own not being afraid of mistakes.

Gilakjani and Sabouri (2017) found out that using ICT in the language lessons impacts the student-teacher cooperation. The increase of student's confidence provided by the role of teacher's assistant is noted in particular. ICT grants students a chance to give current feedback and equally participate in the lesson. Moreover, learners may help teachers in technology integration. Technology changes the position of educator and student. And teachers shift to a new position from "content specialist" to "learning specialist."

6.2. The Results of the Structured Interview

Via descriptive analyses the results of the structured interview were composed in order to see the correlations between various personal factors, attitude to self-directed learning and ICTs use (Table 01).

Table 01. Difficulties of Learning EFL

Column Heading	Speaking	Listening	Reading	Writing	Pronunciation	Grammar	Vocabulary	Motivation
F	43%	43%	17%	28%	25%	32%	25%	25%
S	50%	-	-	25%	25%	25%	-	50%
M	62%	50%	-	12%	37%	12%	-	87%

The carried out study has shown the correlation between the age of the responder and the language learning anxiety which was viewed through the chosen by students issues they face learning English as the foreign language. Answering the question, the students had a choice of 8 suggested issues (more than one answer possible) or giving a short answer in “other”. It is worth mentioning that one sophomore gave an optional answer “I have no issue what so ever” which was not included in the Table 01. The results of this correlation were counted automatically. As it follows from the research freshmen tend to have much higher levels of language learning anxiety (all 8 issues are presented) than Master’s degree students and sophomores. A dramatic shift in the urgency of “staying motivated” can be viewed. The percentage logically increases with the age and the year they are in, depicting general burnout. In general, “speaking” is the most common and urgent issue.

Language learning styles were viewed from two perspectives. The first correlation studied was the age of the students and two different learning styles: individual and group. Answering the question, the participants of the survey had to choose the most effective way they can study (personally with a tutor, alone using all available tools, in a group)

The results showed the low trend of students for self-education among respondents under the age of 18 (none responded “alone”), which can be explained by low level of self-directed learning competency in schools. According to the collected data the older a student becomes the more they get involved into self-education and self-direction. The rise is presented in numbers with 0% in the youngest group, 15% for 18-25 and up to 25% for older than 25.

The second correlation was found between the gender and the place for studying. The choice was to be made between “from home” and “at university”. The data analysed has shown that female prefer studying at university (57% to 42% respectively), while 60% of male tend to choose “studying from home” as the most comfortable place for studying. Other correlations connected with the place for studying do not have any impressive results. In general, neither the age, nor the year the students are in influence the choice of place.

The bar chart (Figure 01) depicts a relation between a variety of ICTs used by students and whether they are male or female. Only 6% of students denied the use of ICTs in studying a foreign language. All of them were female. As the research shows female students tend to use computer programmes as well as internet platforms, while male students use messengers more.

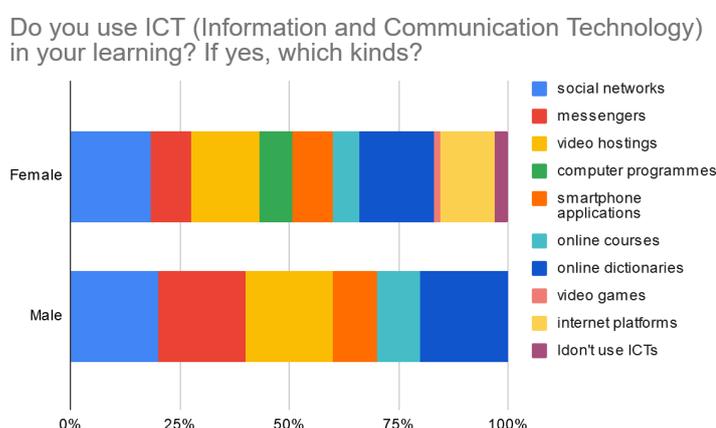


Figure 01. ICTs used in learning languages

It should be noted that in the following question “Are there any (ICTs) you discovered with the help of your teacher? If yes which?” 56% of students answered positively and named such ICTs as internet platforms “coursera” and “future learn”, various online dictionaries, Youtube channels and a software program “Rosetta Stone”. 91% of respondents agree that learning via ICT is productive.

The last question of the interview suggested the students a choice of three out of six mentioned most important benefits of using ICTs. Among the most popular ones the following were chosen: “ICT makes learning interesting” (84%); “ICT makes learning available everywhere” (73%); “ICT helps to study faster” (42%); “ICT makes learning convenient” (40%); “ICT boosts my motivation (36%); “ICT helps to communicate with teachers” (20%).

6.3. The results of the academic self-efficacy and efficacy for self-regulated learning questionnaire

The structure of the questionnaire is presented below (Table 02). The set of 11 questions were divided in two groups according to the main constructs of self-directed learning competency: 7 questions for self-management and 6 for desire for learning. Answering the questions students had to choose one of five answers to estimate their confidence in various aspects of studying.

Table 02. Academic self-efficacy and efficacy for self-regulated learning

Component	Question: students can...	1	2	3	4	5
Self Management	Finish Homework Assignments By Deadlines	4%	9%	19%	61%	4%
	Take Class Notes Of Class Instructions	-	4%	38%	43%	14%
	Plan Their Work	-	14%	19%	24%	43%
	Organize Their Work	4%	-	29%	47%	14%
	Remember Information Presented On The Lesson	-	14%	29%	53%	4%
	Arrange A Place To Study Without Distractions	-	-	33%	33%	33%
	Total Number Of Given Marks	2	9	35	55	24
Mean Score	3.72					
Desire For Learning	Study When There Are Distractors		9%	38%	38%	14%
	Concentrate On Curriculum	-	4%	29%	57%	9%
	Use The Library To Get Info For Assignments	9%	4%	43%	23%	14%
	Motivate Themselves To Work	4%	9%	19%	57%	9%
	Participate In Class Discussion	4%	9%	47%	29%	9%
	Total Number Of Given Marks	4	17	37	43	12
Mean Score	3.37					

The results of the self-report questionnaire present generally high levels of the studied group's capability for self-management and the desire for learning, although the mean score in "desire for learning" is lower than in "self-management". The majority of the freshmen (43%) is completely confident in their capability of planning their work and 47% is much confident in organizing it. The students also experience much confidence in motivating themselves to learn (57%).

The second part of the questionnaire was aimed at the level of self-control. In particular 8 questions concerning students self-estimation in terms of various aspects of learning were answered. The scale represents seven points starting from "Very untrue"(1) to "Very true"(7). In the list below the answers are presented as an average rating.

I know how to schedule my time (4,9). I know how to take notes (5,4). I know how to study to perform well on tests (4,4). I am good at research and writing papers (4,1). I am a very good student (4,5). I usually do very well at academic tasks (4,9). I find my academic work interesting and absorbing (5,1). I am very capable of succeeding at this university (4,7).

In general the studied group has quite high self-efficacy trend, they enjoy studying and know how to succeed. The majority of individuals never used marks lower than 4. However more attention should be paid to the development of group's practical skill in scientific work and research, since the mean rating in this question was the lowest.

7. Conclusion

On the basis of the findings, it is concluded that implementation of ICTs in educational process has a significant influence on the students' academic self-efficacy and self-regulated learning. Apart from helping learners to take control of the learning process and to reach their learning objectives, ICT makes learning interesting and available everywhere, it helps to study faster and makes learning convenient. In the findings, it is also revealed that there is a considerable impact of such personal factors as gender, age, language learning anxiety and learning style on the students' academic performance and the constructs of self-regulated learning competency.

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