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ICT AS EXPERIENTIAL TEACHING/LEARNING OPPORTUNITIES IN A PRIMARY SCHOOL: TEACHERS' APPROACH

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Abstract. *The article reveals opportunities of information communication means in creating experiential teaching environments and provides insights for the development of experiential teaching/learning opportunities in a primary school. Experiential learning, which treats a person as a whole and emphasizes one's unlimited potential opportunities, covers all three dimensions of teaching/learning: cognitive (i.e. perceptual), effective (emotional) and social (behavioural), and accordingly is a condition for the teaching/learning success. A qualitative research that involved teachers of primary schools (teachers of 1-2 and 3-4 grades) has been carried out. Content analysis of the results of the research revealed the essential conditions for using ICT means in creating experiential teaching/learning environments in a primary school and preconditions for creating experiential learning environments: sufficient special competences of primary school teachers to use ICT means, insufficient competences to create an experiential teaching/learning environment in a school (lack of knowledge and skills), lack of ICT means in classrooms, lack of cooperation between primary education teachers and of their motivation.*
Keywords: *primary school teachers, experiential learning, information and communication technologies (ICT), primary education, teachers' professional competence.*

Introduction

Nowadays, information communication technologies, the Internet, social networks are a swiftly developing part of both social communication and educational environment. Educational environments in today's news and information society are rapidly changing, developing and expanding its limits. Contemporary educational environments reach a person not only in teaching /learning or working places, but also during leisure time, at home and without any age limitations. Information communication means (ICT) and the Internet become the earliest and often the most important educational and experiential

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learning environment for children and young people, which attracts them and forms the learners' attitude towards the process of teaching, learning, relationship with the knowledge of the environment, one's learning abilities, etc.

Most educational institutions in Lithuania already have computers, interactive boards and projectors (Adijatu, 2015). However, the fact that computers appear in every classroom does not mean that teachers effectively apply them in the education of children. It is important that teachers are adequately trained to use ICT and apply them in the process of education; are able to note the advantages of ICT as of modern didactic means and relate them with relevant contemporary school teaching and learning strategies (Adijatu, 2015; Cencič et al., 2012; Jordan et al., 2015). According to Stoican & Stefanescu (2016) in order to facilitate the process of education it is necessary to integrate ICT means (personal computers and training computer programs, educational computer games, tablet computers, education gadgets developed for it; smartphones; cameras and video cameras; voice recorders and music centres; interactive boards) into a variety of activities in a school. Scientific research revealed that the acquisition of knowledge by pupils in the training of whom an interactive board was used is better and their learning motivation is significantly higher compared to those in the education of whom such interactive means were not used (Bajtoš & Kašaiova, 2016).

By emphasizing the links in scientific research between ensuring the teaching and learning quality in primary education, applying modern educational strategies and teachers' approach to educational innovations (experiential learning strategies, ICT, etc.), some questions remain unanswered: what ICT opportunities in the experiential teaching and learning in primary education do the primary school teachers see and what preconditions for creating environments of experiential learning do the teachers identify? The aim of the article is to reveal the primary school teachers' approach to ICT as opportunities for experiential teaching and learning.

Experiential teaching/learning opportunities in a primary school

During childhood the ideas of education and learning alter together with the changing public approach to the social being, person and society. Previous education and learning ideas were formed and based on theories of individual children's education and cultural and social learning (Anning et al., 2004). Modern approach attests to the dominance of social and cultural processes in educational processes. Accordingly, individual and diverse processes of children's learning and development are inextricably interrelated and integrated into the context of social relationships. A child does not develop independently, but through the relationship in one's family, neighbourhood, peer community

and society. New conceptions of child understanding emerge from the concept of the sociology of childhood. In recent decades, scientists (Moon, 2005; French, 2007; Yardley, 2012 et al.), who have analysed educational and teaching practices, emphasize the constructively comprehensible learning, which refers to activities that highlight the active role of an individual in the processing of information and constructing of knowledge. Constructivists emphasize the importance of children's prior knowledge structure. Not only does one learn to listen, observe, feel or imagine, but thinking structures formed on the basis of the development and experience of an individual are also taken into account. The child constructs concepts of events and phenomenon based on one's own experience and previously formed models. Hence, everything the child learns depends on one's learning environment, nature of information and one's prior knowledge. Learning environment is one of the factors of learning. Another important factors is the individual experience of the learner. Due to the fact that experience of each pupil is individual, no one can study and learn in equal measure, despite of being equally taught. Therefore, the most important role of a teacher is to organize the educational environment in such a way that while learning a pupil could deepen one's prior knowledge and experience, actively process knowledge and associate new information with an authentic and meaningful context (Gail Jones & Brader-Araje, 2002).

Experiential teaching/learning is a strategy of teaching/learning when the essential resource is experience. The following is teaching/learning by acting, when learners create their knowledge, acquire skills, develop abilities and values from their own and others' direct experience. Experiential teaching/learning responds to all essential provisions of the modern teaching/learning organization and is closely related to other relevant teaching/learning strategies, including collaborative teaching/learning, reflective, constructive, evidence-based, problem-based teaching/learning (Sharlanova, 2004). Founders of experiential theory learning (ELT) A. Kolb and D. Kolb (Kolb & Kolb, 2005) claim that learning involves four stages: specific experience, reflexive observation, abstract conceptualization and active experimentation.

The importance and features of experiential education are analysed by many scholars (Moon, 2005; Preeti, 2014; Bubnys, 2012; Targamadze, 2014 et al.), who point out that experiential teaching/learning is useful in many aspects for all participants of the teaching/learning process. Moreover, since in today's information society, when there is a high availability of information by means of information communication technologies (hereinafter – ICT) and sufficiently high virtual and physical mobility, etc., learners of all ages have more or less knowledge and experience in every single issue. Having faced a situation, when learners' experience is not used or used at a minimum, they feel underestimated or even marginalized, and thus can develop negative approach to

learning in general (Veitch et al., 2006). On the other hand, experience of learners, i.e. knowledge, skills, abilities, etc. is not necessarily qualitative, suitable to be used in today's conditions, or corresponding to the newest achievements of the field; accordingly, reflection of the available experience, its analysis are very useful in terms of the quality of learning, as it enables to review, renew, systemize, develop, and, if necessary, change one's available experience (Yardley, 2012).

Experiential learning, which treats a person as a whole and emphasizes one's unlimited potential opportunities, covers all three dimensions of teaching/learning: cognitive (i.e. perceptual), effective (emotional) and social (behavioural), and accordingly is a condition for the teaching/learning success (Kolb et al., 2001). According to Veitch et al. (2006) experiential teaching/learning develops a teaching/learning competence to study. By helping to understand oneself as a learner, learning and encouraging to reflect and analyse one's process of learning, not only does experiential teaching/learning teach to see its strengths and weaknesses, but, based on evidence, foresees opportunities of its improvement. In other words, experiential teaching/learning develops skills necessary for a self-taught person, which are particularly important at an early school age.

In order to achieve the expected educational results of the group of children and each child separately, primary school teacher creates situations in a group for an experiential development of a child, coordinates the process of their development. The process of experiential child development is a process when a primary school teacher creates conditions for children to see, hear, go through, ponder, i.e. acquire various experience by being actively involved, participating, creating together with other children and adults. Foreign scholars call it communication meetings of a child and a teacher or a dialogue during an education process (Yardley et al., 2012), pedagogical facilitation (Indrašienė, 2009).

The concept of information technologies includes everything that is intended to record, transfer or express information. Various authors, who have examined the ICT define the concept of the following phenomena depending on the area in question and representing scientific disciplines (Freeman, 2010; Dagienė et al., 2006; Targamadze, 2014; Brazdeikis, 2009; Kamei, 2016). ICT are technologies that include computers, computer networks and (or) other digital devices, and can be used, applied or integrated in educational, learning or other activities (Labutė et al., 2015). Labutė and others note that the following aspects of information and communication technologies are most often analysed in educational contexts: computer (hardware and software), computer networks and the Internet, as well as other digital devices (Labutė et al., 2015; Rasikienė, 2013). ICT means increase operational efficiency and allow to achieve new

results of activity achievements in the field of education (Gulbinas & Arkušauskaitė, 2015). ICT helps to develop a new learning environment with a diversity of information sources and communication means, in which it is easy to train up skills of critical thinking, integrate topics of various fields, apply active methods of teaching, highlight and develop individual abilities of a child, teach to work independently and in a group (Dudzinskienė et al., 2010; Brazdeikis, 2009; Neighbors, 2014; Raut &Patil, 2016 et al.).

Research Methodology

The aim is to examine the primary school teachers' approach to modem primary education and training, its parameters of quality, role of ICT. This research is continued qualitative research. The method of research is semi-structured interview. According to Creswell (2009) the qualitative research helps to better understand the analysed phenomena, its features, reveal peculiarities of approaches. By means of the following research it is sought to reveal various aspects, environments and opportunities of using ICT means. The research has been carried out in 2016-2018. In the following stage of the problem investigation (2017), it was decided to deepen into the experience of teachers of 1-4 grades, opportunities of ICT means by creating experiential environments of teaching and learning.

A semi-structured interview with 12 teachers from 5 Klaipėda city schools, i.e. by 6 working in various primary educational concentric circles (1-2 grades, 3-4 grades), has been chosen for the research. Later, informants were asked to clarify, add some aspects of the examined problem in writing. A criteria selection has been applied to the choice of informants. All informants, who participated in the research – women.

Participants of the research were primary school teachers, who have systematically used various ICT means for teaching and learning for more than 6 years and who have indicated during the previous stage of the research that they have been systematically using ICT in their work seeking to integrate educational content and motivate pupils to learn. It was important to examine and discover what primary school teachers thought of the creation of the experiential teaching and learning environments, their experience and the opportunities of ICT they see in such environments.

The *content* analysis of the interview results was carried out in order to distinguish statements which, according to the informants, highlight/reveal essential strengths and (or) causes (for example: *the best, most often, the easiest, most important, essential, basis, first of all,* etc.) and those that received approval, overlaps of the majority of informants. Informants' statements during the content analysis were classified into several categories and subcategories

(Creswell, 2009). The discussion concerning the primary school teachers' approach towards the ICT as opportunities for experiential teaching and learning, first of all, sought to identify the aspects of experiential teaching and learning distinguished by teachers, kinds of experiential teaching/learning opportunities they see when implementing primary education programs, and how ICT means help to implement experiential teaching/learning in a primary school. Informants' opinions in the category *Experiential Teaching/Learning Opportunities* in primary education were grouped according to the frequency of provided arguments (mentioned by most informants). Three essential subcategories have been distinguished in the category *ICT as Opportunities for Experiential Teaching/Learning in a Primary School:* self-control of learning (time, duration, results), individualisation of learning, collaborative learning (table 1). In the following category informants' opinions have been grouped by taking into account their importance (most significant as distinguished by informants) and frequency (mentioned by most informants).

The research instrument. Questions, submitted to all informants, were grouped into two blocks: *Experiential Teaching and Learning in Primary Education, ICT as Opportunities for Experiential Teaching/Learning in Primary Education.*

Research Results and Their Discussion

All informants emphasized the importance of experiential learning in primary education. When submitting their answers and reasoning them, primary education teachers most often mentioned: *"important", "necessary and useful", "now, one will not be able to interest in any other way", "significant",* etc. Unambiguously acknowledging the importance of experiential teaching/ learning, informants provided two arguments (statements):

- pupils become more quickly/more actively involved in academic activities,
- pupils' learning outcomes are improving.

By distinguishing pupils' experiential learning as an important aspect of their academic engagement, teachers stated that: *"pupils get more interested by the topic", "when they try they best, they have enough patience to complete (the task* – author) *until the end", "if one did not understand the explanation, tries everything until succeeds", "when they decide how to act, they also work after the lesson",* etc. All teachers of the research noted that every pupil, who has actively participated in such activities learned new study materials, actively participated in teaching activities, i.e.: *"repeats until learns", "become very pleased and show others how successful they are", "shine as they see the result*

of their work", "even if help of others was needed, but managed to complete the task, one begins to repeat it to show me (teacher – author*) and others what they can"*, etc.

On the other hand, teachers of the research noted that the educational content of not all subjects could be conveyed through experiential teaching, not all topics are suitable for that; thus, according to informants, it is not enough to apply only experiential teaching and learning. Primary school teachers, reflecting on their experience of organizing experiential teaching, have highlighted three important aspects of experiential teaching/learning in a primary school (subcategories): *independence while learning, group activity, knowledge of pupils' experience.*

When discussing independence of learning, primary school teachers emphasized active participation of pupils, their independence: *"one decides how much time one needs", "it is important to choose tasks that would allow to interact as little as possible", "carry out tasks by themselves"*. Teachers pointed out the individual opportunities of each pupil's experience and the necessity to take them into account while choosing tasks. It may be noticed in the informants' statements that when reflecting upon the experiential learning of pupils, teachers emphasize the individual aspect of pupils' engagement, meaning of the individual experience. Informants underestimate the potential synergy of the pupils', as of a learning group with various experience, available experience and its exchange. Researchers, who have examined various aspects of experiential learning (Slavin, 2014; French, 2007 et al.) claim that in experiential learning one is encouraged to rely on the experience of all participants of the teaching/learning process; it expands learning opportunities as one learns not only from one or two learning sources (for example, teacher and/or textbook). Each learner becomes a learning source, as each one's experience is individual and therefore, unique and authentic. Such learning encourages pupils to actively communicate and participate in the process of teaching/learning, i.e. analyse one's experience, share it, compare it to the experience of others, etc.

When discussing the importance of group work while organizing experiential learning, teachers noted: *"when working in a group, they control each other", "by carrying out tasks together, they also learn to communicate", "when act in a group, somebody knows something or has ideas", "it is more interesting for them to work together", "even when they receive individual tasks, they often try to do it together"*, etc. Teachers pointed out that primary school pupils, who carried out tasks in small groups, are faster and easier engaged into learning, as pupils have an opportunity to debate and discuss. The following is particularly important in experiential learning, where reflection, ability to reflect upon experience, is distinguished as one of the essential stages

of experiential learning. Primary school teachers, who participated in the research, spoke about pupils' reflections and abilities to reflect only in the context of experiential learning in a group. It should be noted that Kolb (and others) when analysing the process of experiential learning, distinguished essential features, conditions of the following teaching and learning. In the following works, reflection of the learner is identified as one of the essential condition and stage of experiential teaching/learning.

Informants, discussing the nature of pupils' participation in the experiential learning, unanimously stated that "*experiences of contemporary pupils are quite different*" and the following becomes a challenge for teachers. Teachers highlighted problems of managing the primary education content, which is associated with various experiences, knowledge and skills of pupils: *"a common problem is that it is not clear how to present a topic so that everyone would get involved", "if I do not know how much one knows, I can not see how much one will learn", "they now get so much information from youtube", "knowledge of some pupils is quite good", "so, some get really bored during lessons of world cognition", "there are pupils in the class who find math lessons too easy"*, etc. When discussing the importance of the knowledge of pupils' experience for the organization of teaching and learning in primary school, informants emphasized the help of ICT means to quickly and accurately assess pupils' knowledge and skills: *"prepare a short kahoot test and see each child", "it is very difficult to talk to each pupil separately during a class, and with this tool (ICT –* author*) it becomes faster", "not only is it convenient to see what everybody knows during a class, but also for them to remember", "I can always check pupils' answers after a class or some time later"*. Not only is individuality of pupils' experience a very important part of qualitative learning and teaching, but also one of limitations of experiential teaching/learning. According to Monkevičienė (2008) the following is related to: insufficient experience of learners on a particular issue; unresolved, not systematized, and sometimes incorrect experience; negative experience; experience that does not correspond to a learning situation, etc. The following, in turn, can become a disturbance to the learning outcomes. On the other hand, learning by acting reveals how the child is purposefully and independently able to choose activities, and education importance is being emphasized, but not the result (Monkevičienė, 2008).

Informants' answers in the category *ICT as Opportunities for Experiential Teaching/Learning in a Primary School* are divided into three subcategories: self-control or learning, individualization of teaching and learning, and collaborative learning (table 1).

In the subcategory *self-control of learning* primary school teachers indicated that various ICT tools are especially helpful for pupils to feel the process of learning itself. Pupils feel and understand more that they are learning,

that they can choose their own pace for carrying out tasks, sometimes the way of carrying them, but most important is that pupils see the results of their efforts and can change those results by repeating the tasks. Teachers stated that it is exactly ICT means that during classes make it possible for pupils *"to feel, experience learning"*, experience *"learning success"*. When discussing benefits of various ICT means for the self-control of learning, teachers distinguished two important aspects: self-assessment of the learning time management and personal learning outcomes. Raut & Patil (2016) points out that ICT means create an attractive, completely new, interactive learning environment, where learners can share ideas, information, pictures, animation, audio and video records, receive a quick feedback, which is especially important at an early school age.

In the subcategory *individualization of teaching and learning*, informants noted both opportunities of ICT means in planning the process of learning (opportunity to take into account the various experience of pupils, their learning opportunities) and aspects of pupils' engagement in learning (individual concentration and support of pupils' attention, quick receipt of individual learning outcomes, individual content of learning tasks and time of their performance). Teachers stated that ICT means enable teaching and learning individualization: *"ICT means allow to choose another or repeat the same level"*, *"every pupil finds what is interesting for one"*, *"become very pleased and show others how successful they are"*, *"it is possible to create tasks of different complexity"*, etc. Learning visualization, appropriate creation of an educational environment are being emphasized in the research of Yardley et al. (2012). Research reveals that all environments, where the pupil acquires different experience are significant for learning, since, based on such experience, the pupil constructs the content of one's knowledge, which allows for the active cognition of social and natural environments. On the other hand, experiential teaching/learning by encouraging to reflect and analyse one's experience and learn from it, additionally encourages to better get to know oneself as a person, as a learner. In other words, experiential teaching/learning provides great opportunities to get to know not only the surrounding world, but also oneself. Accordingly, learning can be adapted to the individual opportunities and needs of a learner (Moon, 2005).

Table 1 **Categories of ICT as opportunities for experiential teaching/learning in a primary school**

Subcategories	Statements
Self-control of learning (time, results)	*"when they know that they will be able to try again, it's more fun to get involved", "some are quick at working with a computer, others are slower", "everyone chooses one's pace", "repeats the exercise as many times as one wants", "if one did not understand the explanation, tries everything until succeeds", "when they decide how to act, they also work after the lesson", "one decides how much time one needs"*
Individualization of teaching and learning	*"ICT means allow to choose another or repeat the same level", "every pupil finds what is interesting for one", "repeats until learns", "become very pleased and show others how successful they are", "it is possible to create tasks of different complexity", "shine as they see the result of their work", "this is a tool for pupils who have difficulties of learning"*
Collaborative learning	*"when working in a group, they control each other", "by carrying out tasks, they also learn to communicate", "they learn by playing, competing", "when act in a group, somebody knows something or has ideas", "even if help of others was needed, but managed to complete the task, one begins to repeat it to show me (teacher –* author*) and others what they can", "by trying to tell others how they got everything done, they repeat everything for themselves", "if one does not succeed, asks other pupils or monitors the work of others", "while carrying out tasks together, they see learning as a game"*

For the subcategory *collaborative learning*, teachers noted that when organizing experiential learning it is exactly ICT means that help to properly organize group activities, collaborative learning: *"when working in a group, they control each other", "they learn by playing, competing", "when act in a group, somebody knows something or has ideas", "by trying to tell others how they got everything done, they repeat everything for themselves", "if one does not succeed, asks other pupils or monitors the work of others", "while carrying out tasks together, they see learning as a game"* (table 1). When reflecting upon the experience of collaborative learning, primary school teachers emphasized varies benefits of ICT means in effectively organizing training, teaching and learning "facility for the pupil", i.e. opportunities of pedagogical facilitation. According to Indrašienė (2009) pedagogical facilitation is an essential condition, process for encouraging learning motivation, the success of which depends on the pedagogical competence and motivation to create a proper educational environment for learning, as well as choose effective learning strategies and technologies. When organizing learning in a primary school, it is important to take into account the attractiveness of the educational/teaching environment for the learner. Informants note that ICT means are important for creating a fun,

playable educational environment, where pupils can relax and concentrate at the same time: *"while carrying out tasks together, they see learning as a game"*, etc. When learning in a group, pupils learn to take responsibility for the learning outcomes. Moon (2005) points out that a pupil creates his own subjective reality and one's own theories while interacting in a group. By interacting in a group, communicating, for example, when a pupil compares one's own concepts with the experiences of others, subjective experiences become objective knowledge, i.e. one learns. By talking, interpreting, debating, pondering and asking questions in the atmosphere of collaboration, pupils form their cognitive structures and skills. The majority of learning specialists highlight the benefit of talking to others and interpretation, especially if the learning material is difficult. Virtual and real environments of pupils' collaboration created by means of ICT tools greatly encourage confidence of younger school-age children in their learning experience, learning activities.

Informants, while pondering over the obstacles that block the implementation of experiential learning in a primary school, have often mentioned: lack of ICT means, opportunity to more coherently collaborate by exchanging occupational experience with colleagues, as well as the occurrence of lack of motivation. Teacher's motivation to apply one or another educational strategy is important when creating proper educational environments. When creating experiential teaching and learning environments, where pedagogical facilitation is important, teacher's motivation becomes an important condition for the organization of such learning. Indrašienė (2009) notes that explicit pedagogical facilitation occurs by applying specific didactic instruments and depends on the teacher's motivation, competence, skills to plan, organize, assess and reflect upon the process of education. Shortage of opportunities in a school to share information about the organization of experiential learning, selection of ICT means, motivation of pupils and other issues were identified by informants as the most common obstacles to properly organize the experiential learning environment in a classroom. In their statements informants revealed that the removal of the following obstacles would allow them to systematically and consistently create experiential teaching and learning environments in a primary school. Comparative analysis of the experience of the ICT implementation in education in Lithuania and foreign countries showed that in order to organize contemporary primary education it is necessary to encourage and motivate primary school teachers to create experiential learning environments, use various educational means, ICT tools, develop integral educational competences of teachers (Dagienė & Kirilovas, 2009).

Conclusions

The sumamry of the experience of the primary school teachers in organization of experiential teaching and learning allows to claim that even though teachers acknowledge relevance of the following teaching, they are not fully aware of the meaning of the experiential teaching and learning, lack competence in the organization of comprehensive experiential teaching, its stages. Participants of the research pointed out: lack of ICT means, lack of opportunities to coherently collaborate by exchanging occupational experience with colleagues, motivation. All of the above-mentioned has been identified as most common obstacles one faces when organizing experiential learning in a primary school. Primary school teachers, who participated in the research have sufficient knowledge and skills to use various ICT means in primary learning, see benefits of ICT means in the organization of experiential teaching and learning in a school.

References

Adijatu, F. O. (2015). ICT Use in Preschool Science Education: A Case Study of Some Private Nursery Schools in Ekiti State. *Journal of Education and Practice, Vol. 6 No. 31*, 75-79.

Anning, A., Cullen, J., & Fleer, M. (eds.) (2004). *Early childhood education: society and culture.* Delhi, New York and London: Sage Publications.

Bajtoš, J., & Kašaiova, M. (2016). Use of Interactive Whiteboards in The Work of Teachers of Vocational Subjects With an Emphasis on The Effectiveness of Teaching. *The new educational review,* 119-129, DOI: 10.15804/tner.2016.46.4.10

Brazdeikis, V. (2009). Informacinėmis ir komunikacinėmis technologijomis papildytų edukacinių aplinkų kaita. *Informacijos mokslai, 50,* 57-63.

Bubnys, R. (2012). *Reflektyvaus mokymo(si) metodų diegimo aukštojoje mokykloje metodika: refleksija kaip besimokančiųjų asmeninės ir profesinės raidos didaktinis metodas.* Šiauliai, Šiaulių v valstybinė kolegija.

Cencič, M., Starčič, A. I., & Borota, B. (2012). Teacher Competencies for Incorporating ICT into Classroom Practice: A Survey from Slovenia. *Pedagogika, Vol. 3. No. 4,* 232-246.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* 3rd edition. Los Angeles: Sage Publications.

Dagienė, V., & Kirilovas, E. (2009). *Informacinės technologijos švietime: patirtis ir analizė*. Monografija. Vilnius: Mokslo aidai.

Dudzinskienė, R., Kalesnikienė, D., & Paurienė, L. (2010). *Inovatyvių mokymo(si) metodų ir IKT taikymas: metodinė priemonė pradinių klasių mokytojams ir specialiesiems pedagogams. II knyga*. Vilnius: Ugdymo plėtotės centras

French, G. (2007). *Children's early learning and development: A research paper*. NCCA. http://www.curriculumonline.ie/getmedia/88b84797-73d5-4249-aa3b-0f861796c448/ECSEC05_Exec2_Eng.pdf

Gail Jones, M., & Brader-Araje, L. (2002). The Impact of Constructivism on Education: Language, Discourse, and Meaning. *American Communication Journal, Volume 5, Issue 3,* Spring. Retrieved from http://ac-journal.org/journal/vol5/iss3/special/jones.pdf

Gulbinas, R., & Arkušauskaitė, I. (2015). *Children's Inclusion to the Educational Process Possibilities Using ICT Tools: Students' Approach.* Retrieved from https://www.researchgate.net/publication/306273924_Children%27s_Inclusion_to_theEducational_Process_Possibilities_using_ICT_tools_Students%27_Approach

Indrašienė, V. (2009). *Pedagoginė facilitacija ugdymo procese*. Vilnius, Lietuvos edukologijos universitetas.

Jordan, H., Hunter, E., Douglas, M., & Wighting, M. (2015). *Tablet Technology in Teacher Preparation: A Case Study – The Nook Initiative* [interaktyvus]: Retrieved from http://files.eric.ed.gov/fulltext/EJ1085775.pdf.

Kamei, M. (2016). *Translation of ICT for Education towards a Knowlage* Society. Hamburg: Anchor Academic Publishing.

Kolb, A. Y., & Kolb, D. A. (2005). T*he Kolb Learning Style Inventory – Version 3.1.2005 Technical Specific cations*. Boston, MA: Hay Group.

Labutė, Ž., & Žemaitaitytė, I. (2015). Informacinių komunikacinių technologijų pritaikymo galimybės socialinio ugdymo pamokose. *Socialinių mokslų studijos*. *7* (2), 292–304. Downloaded from: http://www.mruni.eu/en/mokslo_darbai/SMS/

Monkevičienė, O. (2008). Ikimokyklinio ir priešmokyklinio ugdymo(si) turinio kaitos tendencijos. *Pedagogika, 91*, 66-72.

Moon, J. A. (2005). *A Handbook of Reflective and Experiental Learning. Theory and Practice*. Taylor & Francis e-Library. Retrieved from http://perpustakaandeajulia.weebly.com/uploads/1/8/2/6/18261275/a_handbook_of_reflective_and_experiential_learning_-_theory_and_practice.pdf

Neighbors, J. M. (2014). *Using Technology to Address Barriers to Learning*. Retrieved from http://smhp.psych.ucla.edu/pdfdocs/sampler/technology/techno.pdf

Preeti (2014). Education and Role of Media in Education System. *International Journal of Scientific Engineering and Research (IJSER). Volume 2 Issue 3*, 174-177. Retrieved from www.ijser.in

Rasikienė, R. (2013). *Informacinių komunikacinių technologijų taikymas ugdymo procese. Sėkminga pamoka*. Kauno pedagogų kvalifikacijos centras.

Raut, V., & Patil, P. (2016). Use of Social Media in Education: Positive and Negative impact on the students. *International Journal on Recent and Innovation Trends in Computing and Communication*. *Volume: 4 Issue: 1*, 281 – 285.

Sharlanova, V. (2004). Experiential learning. *Trakia Journal of Sciences, Vol. 2, No. 4*, 36-39. Retrieved from http://tru.uni-sz.bg/tsj/Volume2_4/EXPERIENTIAL%20LEARNING.pdf

Slavin, R. E. (2014). *Educational Psychology. Theory and Practice*. 10th edition. Pearson Education Limited. Retrieved from https://files.pearsoned.de/ps/ext/9781292033983

Stoican, O., & Ștefănescu, C. (2016). ICT - key resource in developing educational activities in kindergarten. *The 12th International Scientific Conference eLearning and Software for Education Bucharest* 239-244.

Survey of Schools: ICT in Education. Final Study Report (2013). European Commission, Luxembourg: Publications Office of European Union. Downloaded from: Retrieved from https://ec.europa.eu/digital-single-market/sites/digital-agenda/files/KK-31-13-401-EN-N.pdf

Targamadzė, V. (2014). Z karta: charakteristika ir ugdymo metodologinės linkmės įžvalga. *Tiltai, 4,* 95-104. Klaipedos universiteto leidykla.

Veitch, J., Bagley, S., Ball, K., & Salmon, J. (2006). Where do children usually play? A qualitative study of parents' perceptions of influences on children's active free play. *Health and Place, 12,* 383-393. Retrieved from http://dro.deakin.edu.au/eserv/DU%3A30003674/ball-wheredochildrenusuallyplay-2006.pdf

Yardley, S. et al. (2012). Experiential learning: *AMEE guide No. 63. Medical Teacher,* 102–115. Retrieved from http://repository.keele.ac.uk:8080/intralibrary/open_virtual_file_path/i84n178522t/experiential%20learning.pdf