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The Learning Syntax Through Edmodo in the Beginners Class

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Article Info	ABSTRACT
	Integrating ICT (Information and Communications Technology) in the learning process is a necessity for a teacher in welcoming the 21st century. Knowledge and modern technology require teachers to learn how to use the technology in their teaching. Edmodo application is a very useful technology product in the learning process. Successful use of Edmodo applications in learning is influenced by: (1) teacher factors that include education, length of teaching, age, gender, frequent training, openness of teachers in accessing information, teaching places (city or village), and participation in the organization teachers and pedagogic competencies of educators in delivering materials, (2) facilities and infrastructure factors: building, room, hardware, software, internet connection, infrastructure to school, and instruction on using Edmodo application (3) learner factors that include motivation, courage to explore using Edmodo, and frequency of use of Edmodo app.

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1.   INTRODUCTION

Integrating ICT (Information and Communications Technology) in the learning process is a challenge and a necessity for a teacher in welcoming the 21st century. Knowledge is growing rapidly and modern technology requires teachers to learn how to use the technology in their teaching [1]. ICT has a great role for the students that can grow knowledge, promote intellectual quality through higher order thinking, improve problem-solving skills, improve communication skills and increase the exploration of knowledge through internet media [2]. Learning using ICT is also more interesting and fun which can train the collaboration skill with friends [3], easy access to information and speed up work completion [4], supporting planning and implementation process of learning, completion of administration [5], renewing traditional education towards learning that emphasize the engagement of active student in learning process [6].

Teachers are not sufficient to master ICT only but must be able to integrate the ICT in the learning process so that it is effective and efficient [7]. A teacher should master pedagogic knowledge in using ICT as a learning tool and develop his ICT skills to help students adapt to their changing environment and overcome the problems that arise in their environment [3]. The development of technology in learning process needs to pay attention to the teacher characteristic, facilities, and infrastructure, pedagogical knowledge, student characteristics, school policy in using technology and the carrying capacity of the community and government [5].

The rapid growth of information technology through electronic media (internet) is very difficult to harness. From children to parents, users engage on in some sort of communication or social media every time they access their phone from commenting, ordering something, chatting, reading news, viewing pictures and much more. Although the use of communication tools as learning aids still requires research and improvement, they provide great instructional affordances when properly implemented. Many learning

applications are offered over the internet. One of them is discussed below which is learning by using Edmodo application.

Based on the observation of the researcher as a teacher, there are still many students who are confused in using ICT especially Edmodo application in the learning process. Therefore, this paper will discuss more deeply about the pedagogical characteristics of a teacher/ trainer in integrating ICT application Edmodo in the learning process for beginners.

2. LITERATUR REVIEW

Characteristics of a teacher include formal education, teaching tenure, age, gender, training experience, accessibility for working as a teacher (city or village), participation in professional organizations of teachers [5],[8]. Based on the literature review on characteristics of a teacher related to ICT, gender does not affect teachers 'attitudes toward ICT [9] but is strongly associated with teachers' beliefs and perceptions [10], collaboration with friends, seeking information and data processing, men are better than women [11]. Age significantly influences ICT skills [11]. The teaching experience is correlated positively with the use of ICT [12]. ICT facilities (hardware, software, and infrastructure) are positively correlated with the success of learning [13]. The ownership length of the home computer and the experience of using computer severely affected the use of ICT [14].

Demographics factors that influence abilities to use ICT for example income level, level of education, age, and gender [15]-[17]. Factor the young teachers are better than the old teachers in using ICT resources [18]. Factor demographic those male teachers more receptive than the female teachers to ICT use [19]-[21]. Factor demographic level of education people influences on the use of ICT. A person that uses ICT is mainly educated people [15], because they have more skills and chances to go online [22]. According to [23] said that the use of ICT by teachers is also influenced by academic discipline (that is, mathematic, sciences, social, arts, and humanities).

There are teachers who master ICT, but who are less successful at integrating it in learning process [12]. The important thing for a teacher to learn is how to convey the material with ICT, not only the ability of students to master ICT. Some student's easilily grasp the material and quickly master the ICT, some students master ICT only, and some students need technical assistance for both. Therefore, a teacher must have a sound learning plan to overcome the problems of students, especially the beginners.

Effective teaching implementing ICT requires an understanding of how technology relates to pedagogy and learning content; then the knowledge of technology cannot be handled independently of the material. An interdisciplinary approach is necessary to integrate ICT in learning process [3],[7],[24],[25].

Teachers must understand how technology, pedagogy, learning content, and knowledge are an interconnected unity in the learning process. Teaching with technology requires a flexible framework that can be integrated with various pedagogical approaches and for various learning content/materials. The first step teachers should undertake is to formulate the learning objectives, then to choose the appropriate type of activity for that purpose, and then to choose the right technology [26]. Teachers should be careful in choosing the right strategies and technologies in learning process [25].

Instructional practices with ICT are able to enhance and support teaching and learning effectively [27]. The technologies can mediate interaction, but it is how these technologies pedagogies are used to support collaborative practices optimally so that these make the difference in teaching and learning [28]. The teacher requires preparing deeper plan to teach with ICT, starting planning, implementation, and finally evaluation. Using technology can effectively improve pedagogical abilities in learning [29]. ICT as a tool for improving the presentation of material, for making lessons more fun for the learners and for making administration more efficient [30]. The use of ICTs in pedagogy could promote 'deep' learning [31]. Use technology in schools enables shifts in pedagogical practices, thus enable benefiting students' learning [32]. ICT supported learning environments can enhance to meaningful constructivist teaching and to make of learning environments to be the ideal [33]. This is shown that the use of ICT for teaching and learning very necessary. Therefore, pedagogy is required using ICT in learning [34]. The educators may need extensive knowledge of ICT to be able to understand how to integrate the ICT into their pedagogy teaching [34]. The use of ICT and integration of technology is dependent on number teachers' readiness, confidence, knowledge, and ability to evaluate the role of ICT in teaching and learning.

Matters relating to ICT include a computer, the Internet, hardware, and software. One free learning tool, available in a variety of applications, on the Internet includes social networking media [35],[36]. Social networking sites that can be used include Facebook, Twitter, Blog, Edmodo, and Google docs [12]. An online tool that offers users a free cost to join and allows users to communicate and interact with each other is Edmodo. Edmodo's social media is a tool to enhance learning experiences on science subjects [36].

Edmodo is a social media platform, similar to Facebook, but with more applicable education functions [37]-[39]. Edmodo provides a safe and easy way for teachers and student to connect, collaborate, share learning content, and access tasks, grades, school announcements, also provide effective feedback and motivate student [40],[41].

The advantages of Edmodo compared with other social media are (1) the class participants selected by teachers so it is limited, (2) for login needs passwords made by teachers, (3) only registered ones can share learning resources, (4) the Edmodo sites can be accessed from school and outside the school free of charge, (5) closed for those who are not registered as participants / students, (6) Edmodo does not allow delivery of messages between students, (7) Edmodo designed for learning with a neat and better system [42].

Edmodo is no different from other learning media, which is a media that encourages teachers and participants to engage actively and creatively in collaborative learning and knowledge and can guide the student to be responsible for their learning activities. Besides that, Edmodo is also easy to learn for beginner teachers, especially those who new to technology. Edmodo was developed based on the principles of group-based class management and social media. Its main feature is the active support for online media communication model, teaching materials, and evaluation. The features used can match the learning needs.

The successful use of the application during Edmodo training is also determined by (1) motivation, (2) individual attitudes and occupational factors (3) open-minded about trainers and trainees (4) psychological stage of trainees (5) type of training implementation, its content and skills (6) self-efficacy, perceived control and basic capabilities [43]. The following are the lesson steps in using Edmodo application for the beginners:

2.1. Based on the Edmodo Application's User Manual

Although instructions for using the application actually available in the help Edmodo center, beginners may find the application a bit difficult. Beginners are more interested in using directions from the direct guide (teacher). This is because the user can ask directly when having difficulty, so quickly and easily to get answers from the difficulties experienced. In addition, it requires a module or book that leads in sequence and coherence, accompanied by its procedural sentence and which image should be clicked. Thus if the guide does not exist the user will be able to practice the application by itself.

The use of simple language is also required in the guide. Language will be an obstacle for the user if they cannot understand the meaning of the sentence written in the guide, although the instructions on the use of the guides are clearly detailed. Therefore the systematics writing instructions is necessary for beginners starting from the most simple, basic and easy application to complex, advanced and difficult applications. The use of easy-to-understand writing styles and avoids excessive use of language that will ultimately make it difficult for users to use them.

The guide for beginners may be more beneficial to users in the form of a printout. The commands/instructions are also presented along with the step-by-step procedure informing what the functions of the menu are, and the functions of each section, not just how to use them. Teachers should also think for students with special needs (weak vision, color blindness, other physical defects) how to use the app. The use of attractive paper and color can impress motivation and courage to use the app.

The use of fonts and images will help clarify the purpose. Information should be presented in hierarchy manner and the important parts should be also distinguished (bold, slash, color). It is necessary to provide contact numbers that can be contacted when having difficulty. The function of the feature (in basic practical terms) is explained in detail as well as in the instructions on how to use it and this function should describe the symbols, icons, and initial codes. Instructions should avoid the impression of patronizing the user. Do not assume that the user has prior experience or product knowledge. Write it in the present tense and the active form. Arrange interesting and consistent layouts. Such a guide is expected to make it easier for novice students. Furthermore, product testing is required to test the success of the guide to work optimally.

2.2. Guided by Teachers Who are Competent in Teaching Edmodo Applications

There is a fundamental difference between knowing the learning content and knowing the pedagogy in teaching appropriate learning materials [25]. Someone who possesses above average intelligence may more quickly acquire an understanding of the contents being learned than others who have normal intelligence. However, not everyone who has intelligence above the average is able to deliver learning content that is easily accepted by the student. Ideally, a clever person will also be easy in delivering any material for the student. Therefore it takes certain skills in delivering the learning materials, in order to get maximum results when delivering the materials.

As a teacher in teaching Edmodo applications must have mastered the contents of the application start from login to logout or in other words must have a hard skill about Edmodo. But teachers should also have a good soft skill to get optimum output. The personality of a teacher will have an enormous impact on

the success of a lesson. Teachers' personalities are visible from the outside, including appearance. Appearance in a neat, polite, elegant dress can create an interesting impression for the student. A friendly greeting, shaking hands, always asking "what can be helped?", "What else cannot be understood?", "Who else wants to ask?", Will provide a sense of comfort for the student to brainstorm. Another behavior that can provide a sense of nurturing, guiding and motivating for the success of the student is the use of good language which is also closely related to the success in the learning process [44]. The personality which is not visible from the outside is sincerity, empathy, sincere intention, tolerance, responsibility, and others that will bring success to the work.

Teachers should patiently begin to guide beginners from turning on a computer or laptop device, log on to the Edmodo website and log in. There are three types of users: login as a student, teacher or parent. In this case, the participants are directed to log in to pupils/students. Students are directed to see the step by step and the sequence as written in the manual. If there are students who are really still confused, teachers should remind or only show steps they have not passed, try not to point directly to the solution. Thus students will feel appreciated, discover something new, easy, brave and motivated. In this course, the teacher must have thought about the sequence of materials from the easy to the complex that must be done by students.

In addition, teachers are also required to anticipate the heterogeneity of participants from age, gender, socio-economic background and education, learning objectives, infrastructure facilities and the number of participants and time for delivery/ learning to take place. In normal times (especially in the morning at school hours) the delivery goes well, but if in the afternoon of course not as maximal in the morning. If the learning is done in the afternoon with less eager students, teachers should use different strategies and methods. The tireless spirit of teachers will be able to generate motivation for student [45]. Teacher's attitude factor towards the use of technology, pedagogical competence, encouragement to teachers to use technology in their teaching, upgrading teacher's ICT skills, confidence in using ICT, teacher's academic qualifications, have specialist ICT teacher's be able to influence success using ICT in teaching and learning [46]. Therefore good steps to teach Edmodo are as follows: mastering the material content, having an interesting personality, having good pedagogic skills, having passion in motivating, applying the right strategy and method, sorting material from easy to the complex, and has a clear and complete guide book.

2.3. Increase the Usage Frequency of the Edmodo App

ICTs play an important role in supporting students' interest to learn and also help them to develop cognitive, physical and social-emotional development both in school and outside the school. Therefore, in order to increase ICT empowerment for teachers, it is often necessary to educate and train teachers to facilitate the development of students holistically [47]. Educated teachers should set an example both at school and out of school and disseminated to their peers or student.

A student who has received Edmodo application training materials through learning should proceed with practicing the application at home for other problems. The frequency of using this technology will affect the skill of using it. The more frequently used technology applications, the more skilled it will be to master the technology [8]. The Edmodo app material that is acquired must be continuously used in other contexts. A skill will be increased when it is often used. Otherwise, the skill will be lost or cannot be used again. But training students too often use those skills is not an easy matter, it takes a strong commitment to keeping doing it. Although only a short time and a little practice that can be practiced it is advisable to stay scheduled every day. The more time using ICT, so the more skillful is using it [46].

Motivation is a factor that exists in a person who moves his or her behavior to meet certain goals. The strong internal motivation of student to master the skills of using Edmodo app will encourage her to practice it in every opportunity. In addition, external stimuli can also affect a person's work. Therefore teachers should be able to provide opportunities and stimuli to their students to always practice Edmodo applications. The more often, the more common, the more able to use Edmodo applications.

2.4. Bring Yourself to Explore using the Edmodo App

Learning using Edmodo encourages learners to actively seek information and train learners to create a responsible learning environment through online activities carried out [48], emerge the courage to comment on the tasks assigned by the teacher [49], and when register on Edmodo, the courage of learners could be increasing [50]. The influence of young children's use of technology on their learning influences is technology evaluation, adults' roles, and teaching approaches. These studies showed that technologies enhanced courage collaboration children, interaction with others and explore to use technology [51]. Another hand an essential courage to doing something is motivation [52].

Based on the previous statements and observation of the writer as a trainer, there are many trainees who have the fear of doing something wrong in using ICT in the learning process. This distrust may arise for a variety of reasons such as (1) they are afraid of wrongdoing, they feel embarrassed, ignorant, left behind,

stutter of technology, etc. if they make mistakes in trying to use the application (2) they are afraid that the laptop or computer is damaged and get angry, and (3) removed from the training. Such feelings always haunt and hinder the success of the training program. Trainers are encouraged to foster courage to trainees in exploring using Edmodo apps. There are several things that can foster the courage of trainees:

a. Give participants complete confidence and motivation that they are capable of using Edmodo applications. Trainers emphasize in giving students opportunities to try to use the features without fear, be proud when they succeed.

b. Do not provide too much stimulation. The ability to respond to something new is gradual and storied. For that, need stimuli that are adjusted to the heterogeneity of all participants. Too much stimulation is given will lead to confusion and eventually will lose the courage of students to use Edmodo applications;

c. Provide appropriate and non-compelling targets. The target is a goal that must be achieved, set at the beginning by considering many factors. Therefore, targeting should not be over-enforced. A high target and with coercion will eliminate the courage to explore.

Trainers and teachers are not much different, so the description can also be applied to the students.

3. CONCLUSION

Integrating ICT (Information and Communications Technology) in the learning process is a necessity for a teacher in welcoming the 21st century. Knowledge and modern technology require teachers to learn how to use the technology in their teaching. Edmodo application is a very useful technology product in the learning process. Successful use of Edmodo applications in learning is influenced by: (1) teacher factors that include education, length of teaching, age, gender, frequent training, openness of teachers in accessing information, teaching places (city or village), and participation in the organization teachers and pedagogic competencies of educators in delivering materials, (2) facilities and infrastructure factors: building, room, hardware, software, internet connection, infrastructure to school, and instruction on using Edmodo application (3) learner factors that include motivation, courage to explore using Edmodo, and frequency of use of Edmodo app.

REFERENCES

[1] I. Jung, "ICT-pedagogy integration in teacher training: Application cases worldwide," *Educ Technol Soc*, vol/issue: 8(2), pp. 94–101, 2005.

[2] H. Abdullahi, "The role of ICT in teaching science education in schools," *Int Lett Soc Humanist Sci*, vol/issue: 19(3), pp. 217–223, 2014.

[3] C. G. Arroyo, "On-Line Social Networks : Innovative Ways towards the Boost of Collaborative Language Learning," International Conference ICT for Language Learning, 4th Edition, 2011.

[4] R. Mahmud and M. A.,"Impact of Training and Experience in Using ICT on In-Service Teachers' Basic ICT Literacy," *Malaysian Journal of Educational Technology*, vol/issue: 10(2), pp. 5-10, 2010.

[5] D. Bebell, M. Russell, dan L. O. Dwyer, "Measuring Teachers' Technology Uses: Why Multiple-Measures Are More Revealing," *International Society for Technology in Educationvol*, vol/issue: 37(1), pp. 45–63, 2004.

[6] A. Chigona and W. Chigona, "Capability approach on pedagogical use of ICT in schools," *TD The Journal for Transdisciplinary Research in Southern Africa*, vol/issue: 6(1), pp. 209–224, 2010.

[7] J. Hughes, "The role of teacher knowledge and learning experiences in forming technology- integrated pedagogy," *J Technol Teach Educ*, vol/issue: 13(2), pp. 277–302, 2005.

[8] A. D. Ritzhaupt, *et al.*, "Explaining technology integration in K-12 classrooms: a multilevel path analysis model," *J Educ Comput Res*, vol. 46, pp. 229–254, 2012.

[9] J. D. Shapka and M. Ferrari, "Computer-related attitudes and actions of teacher candidates," *Computers in Human*, vol/issue: 19(3), pp. 319-334, 2003.

[10] A. Jimoyiannis, "Developing a Technological Pedagogical Content Knowledge Framework for Science Education: Implications of a Teacher Trainers' Preparation Program The Notion of Technological Pedagogical Content Knowledge," *Proceedings of Informing Science & IT Education Conference*, pp. 597-607, 2010.

[11] L. Deniz, "İlköğretim Okullarında Görev Yapan Sınıf ve Alan Öğretmenlerinin Bilgisayar Tutumları," *Comput Human Behav*, vol/issue: 4(4), pp. 30, 2005.

[12] P. Garcia and S. Rose, "The Influence of Technocentric Collaboration on Preservice Teachers' Attitudes About Technology's Role in Powerful Learning and TeachingNo Title," *J Technol Teach Educ*, vol/issue: 15(2), pp. 247–266, 2007.

[13] S. Owusu-ansah, "Application Of Information And Communication Technology (Ict): A Comparative Analysis of Male and Female Academics in Africa," *Libr Philos Pract*, pp. 1-35, 2013.

[14] B. Cavas, *et al.*, "A study on science teachers' attitudes toward information and communications technologies in education," *Turkish Online J Educ Technol*, vol/issue: 8(2), pp. 20–32, 2009.

[15] W. M. Olatokun and O. C. Adeboyejo, "Information and communication technology use by reproductive health workers in nigeria: state of the art, issues, and challenges," *An Interdisciplinary Journal on Humans in ICT Environments*, vol/issue: 5(2), pp. 181–207, 2009.

[16] UNDP, "Promoting ICT for human development programme. A Pionnering Regional Human Development Report in Asia," 2011.

[17] A. Abu-Obaideh, *et al.*, " Effects of demographic characteristics, educational background, and supporting factors on ICT readiness of technical and vocational teachers in Malaysia," *International Education Studies*, vol/issue: 5(6), pp. 229-243, 2012.

[18] M. Sanni, *et al.*, "Harnessing the Potentials of Internet Technology for Research and Development among Undergraduates in Nigeria: A Case Study of Obafemi Awolowo University," *International Journal of Computing and ICT Research*, vol/issue: 3(1), 2009.

[19] E. Alampay, "Analyzing socio-demographic differences in the access and use of ICTs in the Philippines using the capability approach," *The Electronic Journal of Information Systems in Developing Countries*, vol/issue: 27(5), pp. 1-39, 2006.

[20] Z. A. Samak, "An Exploration of Jordanian English Language Teachers'attitudes,Skills, and Access As Indicator of Information and Communication Technology Integration in Jordan," 2006.

[21] A. Sadik, "Factors influencing teachers' attitudes toward personal use and school use of computers: New evidence from a developing nation," vol/issue: 30(1), pp. 86-113, 2006.

[22] R. Taylor and H. C. Lee, "Occupational therapists' perception of usage of information and communication technology in western Australia and the association of availability of ICT on recruitment and retention of therapists working in rural areas," *Australian Occupational Therapy Journal*, vol. 52, pp. 51–56, 2005.

[23] V. M. A. Mbarika, *et al.*, " The neglected continent of IS research: A research agenda for Sub-Saharan Africa," *Journal of the Association for Information Systems*, vol/issue: 6(5), pp. 130-170, 2005.

[24] M. L. Niess, "Preparing teachers to teach science and mathematics with technology: Developing a technology pedagogical content knowledge," *Teach Teach Educ*, vol/issue: 21(5), pp. 509–523, 2005.

[25] M. J. Koehler and J. M. Rosenberg, "The Technological Pedagogical Content Knowledge Framework for Teachers and Teacher Educators," pp. 1–8, 2013.

[26] P. Mishra and M. J. Koehler, "Technological pedagogical content knowledge: A framework for teacher knowledge," *Teach Coll Rec*, vol/issue: 108(6), pp. 1017–1054, 2006.

[27] U. Girgin, *et al.*, "Technology Integration Issues in a Special Education School in Turkey," *Cypriot Journal of Educational Sciences*, vol/issue: 6(1), 2011.

[28] C. Hoyles and J. B Lagrange, "Mathematics Education and Technology: Rethinking The Terrain," Springer, 2009.

[29] J. Louw, *et al.*, "Time-on-task, technology and mathematics achievement," *Evaluation and Program Planning,* vol. 31, pp. 41–50, 2008.

[30] BECTA, "What the research says about using ICT in Maths," 2003.

[31] B. T. Lau and C. H. Sim, "Exploring the extent of ICT adoption among secondary school teachers in Malaysia," *International Journal of Computing and IT Research*, vol/issue: 2(2), pp. 19-36, 2008.

[32] J. Hardman, "An exploratory case study of computer use in a primary school mathematics classroom: New technology, new pedagogy?" *Perspectives in Education*, vol/issue: 23(4), pp. 99-111, 2005.

[33] P. C. Newhouse, "The impact of ICT on learning and teaching," 2002.

[34] M. Cox, *et al.*, "ICT and pedagogy: A review of the research literature, ICT in Schools," *Research and Evaluation Series,* vol.18, 2003.

[35] M. B. Cruz and S. B. B. Cruz, "The Use of Internet-Based Social Media as a Tool in Enhancing Student's Learning Experiences in Biological Sciences," *High Learn Res Community*, vol/issue: 3(4), pp. 68–80, 2013.

[36] F. A. Mokhtar and H. Dzakiria, "Illuminating the Potential of Edmodo as an Interactive Virtual Learning Platform for English Language Learning and Teaching," *Malaysian J Distance Educ*, vol/issue: 17(1), pp. 83–98, 2015.

[37] M. Batsila, *et al.*, "Entering the Web-2 edmodo world to support learning: tracing teachers' opinion after using it in their classes," *IJET*, vol/issue: 9(1), pp. 53-60, 2014.

[38] M. Thongmak, "Social Network System in Classroom: Antecedents of Edmodo © Adoption," *J e-Learning High Educ*, pp. 1–15, 2013.

[39] K. M. Al-Said, "Students' perceptions of edmodo and mobile learning and their real barriers towards them," *The Turkish Online Journal of Educational Technology*, vol/issue: 14(2), pp. 167-180, 2015.

[40] E. Dobler, "Flattening classroom walls: Edmodo takes teaching and learning across the globe," *Reading Today*, vol/issue: 29(4), pp. 12-13, 2012.

[41] R. Warawudhi, "The Evaluation of Edmodo in Business Reading Class," vol/issue: 7(2), pp. 153-158, 2017.

[42] A. Wallace, "Social Learning Platforms and the Flipped Classroom," *International Journal of Information and Education Technology*, vol/issue: 4(4), pp. 293-296, 2014.

[43] B. Punia and S. Kant, "A Review of Factors Affecting Training Effectiveness Vis-À-Vis Managerial Implications and Future Research Directions," *Int J Adv Res Manag Soc Sci*, vol/issue: 2(1), pp. 151–164, 2013.

[44] X. Zhao, *et al.*, "ICT and an exploratory pedagogy for classroom-based Chinese language learning," *Turkish Online J Educ Technol*, vol/issue: 10(3), pp. 141–151, 2011.

[45] I. Maryani and S. T. Martaningsih, "Correlation between Teacher's PCK (Pedagogical Content Knowledge) and Student's Motivation in Primary School," *Int J Eval Res Educ*, vol/issue: 4(1), pp. 38–44, 2015.

[46] E. Goyal, *et al.*, "Factors that affect information and communication technology usage: a case study in management education," *Journal of Information Technology Management*, vol/issue: 21(4), pp. 38-57, 2010.

[47] O. P. Kayode, *et al.*, "Perceived Importance of ICT in Preparing Early Childhood Education Teachers for The New Generation Children," *Int J Eval Res Educ*, vol/issue: 3(2), pp. 119–124, 2014.

[48] K. Balasubramaniana, *et al.*, "A study on "Student preference towards the use of Edmodo as a learning platform to

create responsible learning environment," *Social and Behavioral Sciences*, vol. 144, pp, 416 – 422, 2014.

[49] S. Kara, "How and Why? Edmodo as a blended learning tool: a brief overview of usage and research," *Proceedings of ISERD International Conference*, 2016.

[50] P. Hourdequin, "Edmodo: A Simple Tool for Blended Learning", *The Language Teacher,* vol. 38, 2014.

[51] C. T. Hsin, *et al.*, "The Influence of Young Children's Use of Technology on Their Learning: A Review," *Educational Technology & Society*, vol/issue: 17(4), pp. 85–99, 2014.

[52] B. J. Zimmerman, " Self-Efficacy: An Essential Motive to Learn," *Contemporary Educational Psychology*, vol. 25, pp. 82–91, 2000.

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