

Raharjo et al., 2020

Volume 6 Issue 1, pp. 157-168

Date of Publication: 28th March 2020

DOI- <https://doi.org/10.20319/pijss.2020.61.157168>

This paper can be cited as: Raharjo, T. J., Sutarto, J., Shofwan, I., & Harianingsih., (2020). Senior High School Students' Perceptions in the Use of Electronic Media in Non-Formal Education

Classroom. *PEOPLE: International Journal of Social Sciences*, 6(1), 157-168.

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SENIOR HIGH SCHOOL STUDENTS' PERCEPTIONS IN THE USE OF ELECTRONIC MEDIA IN NON-FORMAL EDUCATION CLASSROOM

Tri Joko Raharjo

Universitas Negeri Semarang, Semarang, Indonesia
trijokoraharjo@mail.unnes.ac.id

Joko Sutarto

Universitas Negeri Semarang, Semarang, Indonesia
jokotarto@mail.unnes.ac.id

Imam Shofwan

Universitas Negeri Semarang, Semarang, Indonesia
sihofwan@mail.unnes.ac.id

Harianingsih

Universitas Negeri Semarang, Semarang, Indonesia
harianingsih@mail.unnes.ac.id

Abstract

Communication and information technology are currently developing so fast. This development certainly has an impact on non-formal education students. Non-formal education students usually use conventional learning models. However, with the development of technology, non-formal education students are also familiar with social media, students tend to use smart applications on their cellphones and laptops to surf the internet. Learning methods for students in non-formal education are part of the teaching and learning process, a strategy so that

students can understand the material delivered by the tutor. The use of learning methods supported by appropriate and appropriate media will facilitate students to achieve their competence. As the objective of this research is to quantitatively analyze the advantages and disadvantages of using e-learning which was chosen as an effective learning method for non-formal education students. The study was conducted with a survey of observation, identification, filling students' perceptions of the teaching method of tutors, learning variables, evaluation of learning outcomes, electronic media used. Students have the perception that learning to use e-learning is more beneficial because of freedom of choice of place, freedom of time, ease of access but the drawbacks are objective assessment and high quota costs.

Keywords

E-Learning, Effective Learning, Non-Formal Education

1. Introduction

The use of information and communication technology in education in the form of electronic-based learning models commonly known as e-learning, which means that in learning, students use media assistance in the form of electronic devices such as computers, laptops and cellular phones (Tagoe, 2012). Some other terms of e learning include: online learning, internet enabled learning, virtual learning, web based learning, online course learning (Yüksel & Türkses, 2015). One of the important types of non-formal education is associated with child development and learning, early childhood care and education (ECCE) is considered to be one of the kinds of non-formal education. Non-formal education with students of various characters and backgrounds is also expected to be able to make this e-learning model of learning to facilitate students' understanding and effectiveness of learning. In general, there are three kinds of functions of e learning, namely: 1) as a supplement for students, namely, to broaden students' insights. 2) as a complement because e learning is a reinforcement of material that has been delivered by tutors in conventional classes. 3) as a substitution because e learning is made an online-based class for students(Smedley, 2010).

The definition of e learning according is learning that uses electronic circuits (LAN, WAN, or internet) to deliver material and interact with students. The definition of e learning according Tagoe (2012) is learning activities through an electronic system in accordance with the needs of teaching materials. Alfahad and Almosa (2002) provides a definition that e learning is

the use of internet technology to increase knowledge and skills. (Demiray, 2012) stated the same thing, that e learning is a series of learning processes where the internet is the essence of learning. The use of e learning as a supporter of the learning process can increase the flexibility of non-formal education students (Gravoso, Pasa, Labra, & Mori, 2008). According to Johnson, Smith, Levine, and Haywood (2010) intersection of e learning that accessible resources wherever you are, strong capabilities, interactions, effective learning, independent of location and time. E learning applied to non-formal education students has a concept of focus on digital learning that allows interaction between tutors and students, the provision of teaching materials, discussion space, assignments and assessments. The e learning technology adopted should be pedagogical and up to date.

The technology chosen is also easily accessible and available with equitable distribution for students. According to the 2014-2016 Trends and Forecast e learning market (Clarey, 2008), e learning packages and services are becoming urgent needs for educational learning in several countries (Godoy & Gravoso, 2008). Because the paradigm and transformation of changes in conventional learning methods to be digital-based, the non-formal education system must also be adapted from two important elements, namely the ability to utilize information technology and communication of the current generation, facing competition in the e-marketing market by using e-learning providers carefully (Kwofie & Henten, 2011). This is so that the use of e learning is not only the hardware or software used but the ways and methods of using e learning. Three perspectives in the analysis of the use of e learning are distance learning, technology and making e learning a pedagogical method (Bobbitt, Inks, Kemp, & Mayo, 2000).

The non-formal education system must be able to maximize the advantages and disadvantages of e learning. Advantages of e learning: Provides support to students personally to provide flexible learning, because schedules can be agreed between tutors and students so interaction and collaboration can be carried out wherever and whenever (Alsalem, 2004), Provide passion and variety in learning (Abbad, Morris, & De Nahlik, 2009), Creating a paradigm that learning is fun, interesting, modern (Cashion & Palmieri, 2002), and easy (Yusuf & Al-Banawi, 2013), Supports literacy (Smedley, 2010), numeracy and language learning (Macharia & Nyakwende, 2010), Facilitates learning experiences both individually and in groups, Helps students to stay focused for a long time, Helps increase trust yourself in education (Demiray, 2012). Non-formal education characteristics are found when the adopted strategy does

not require student attendance, decreasing the contacts between teacher and student and most activities take place outside the institution - as for instance, home reading and paperwork (Geometry, 1998).

Weaknesses of e learning: the existence of e learning can reduce interactions between tutors and students (Cashion & Palmieri, 2002), students have difficulty in clarifying explanations interpreting the material differently because for some subjects and students will be better in interpreting if face to face (Corsaro et al., 2009), Does not provide opportunities for students to improve oral communication skills, reduce objectivity in assessing student competence (Clarey, 2008). For certain subjects that are technical in nature cannot be supported by e learning because special skills are needed from the tutor to be transferred to students directly (Godoy & Gravoso, 2008).

This research discusses Senior High School Students' Perceptions in the Use of Electronic Media in Non-Formal Education Classroom. This research was conducted to 200 senior high school non-formal education students from 10 classes in 10 learning activities centers in Central Java, Indonesia. Apart from that education nowadays, not only thinking about technology, but also thinking about the moral of students in the era of Industrial Revolution 4.0.

2. Methods

The factors that become the advantages and disadvantages of using e learning for non-formal education students are developed through a survey of qualitative identification results through questionnaires. The questionnaire was tested and given to 200 senior high school non-formal education students from 10 classes in 10 learning activities centers in Central Java, Indonesia. The advantages and disadvantages of using e learning are identified and measured on a scale of importance with a 5-point Likert scale. Statistical analysis of the advantages and disadvantages of e learning is calculated using SPSS. Survey compares and distinguishes the viewpoints of students' opinions with four different groups based on the background of the student working or not working, age, gender, competency score.

The questionnaire is organized as follows: The first part was arranged by the questionnaire to find out students' perceptions in terms of tutor teaching methods, among others: teaching speed, tutor communication with students face to face, tutor presence during face to face, learning and providing systematic information when face to face, learning with mixed

methods (face to face and online), the use of electronic media when teaching (laptops, mobile phones, LCD projectors), the ease of students accessing instructional materials provided by tutors. The second part is students' perceptions of the learning variables, among others: learning sequence, independent learning, group learning, group discussion. The third part is the students' perception of the evaluation of learning with variables including: daily assessment during learning, assessment at the end of learning, the presence of a tutor during the assessment and the time of the assessment carried out. The fourth part is the identification of students' perceptions of the use of electronic media with variables including: freedom in choosing where to access, freedom to choose access time, access fees, quality of internet network connections, device performance, menu complexity (teaching materials, assessments, assignments, questions open, quiz), duration required.

The fifth part is students' perceptions to identify weaknesses of e learning with the identified variables, among others: unsupportive academic environment, absence of tutors, lack of communication between tutors and students because they are not face-to-face, lack of effort to learn discipline and independence, more time needed from 30 minutes, students' interest to come to school is low, there is fraud during assessment, uncertainty about the correctness of information, lack of promotion of e learning in non-formal education, high costs for accessing certain resources (costs for downloading files), do not have access data all the time because it is limited by internet quota, sometimes have to move locations with free internet access.

3. Result and Discussion

In this research, e-learning with the name of the material is adjusted to the prevailing non-formal education curriculum. The e-learning product specifications developed can be seen in Figure 1

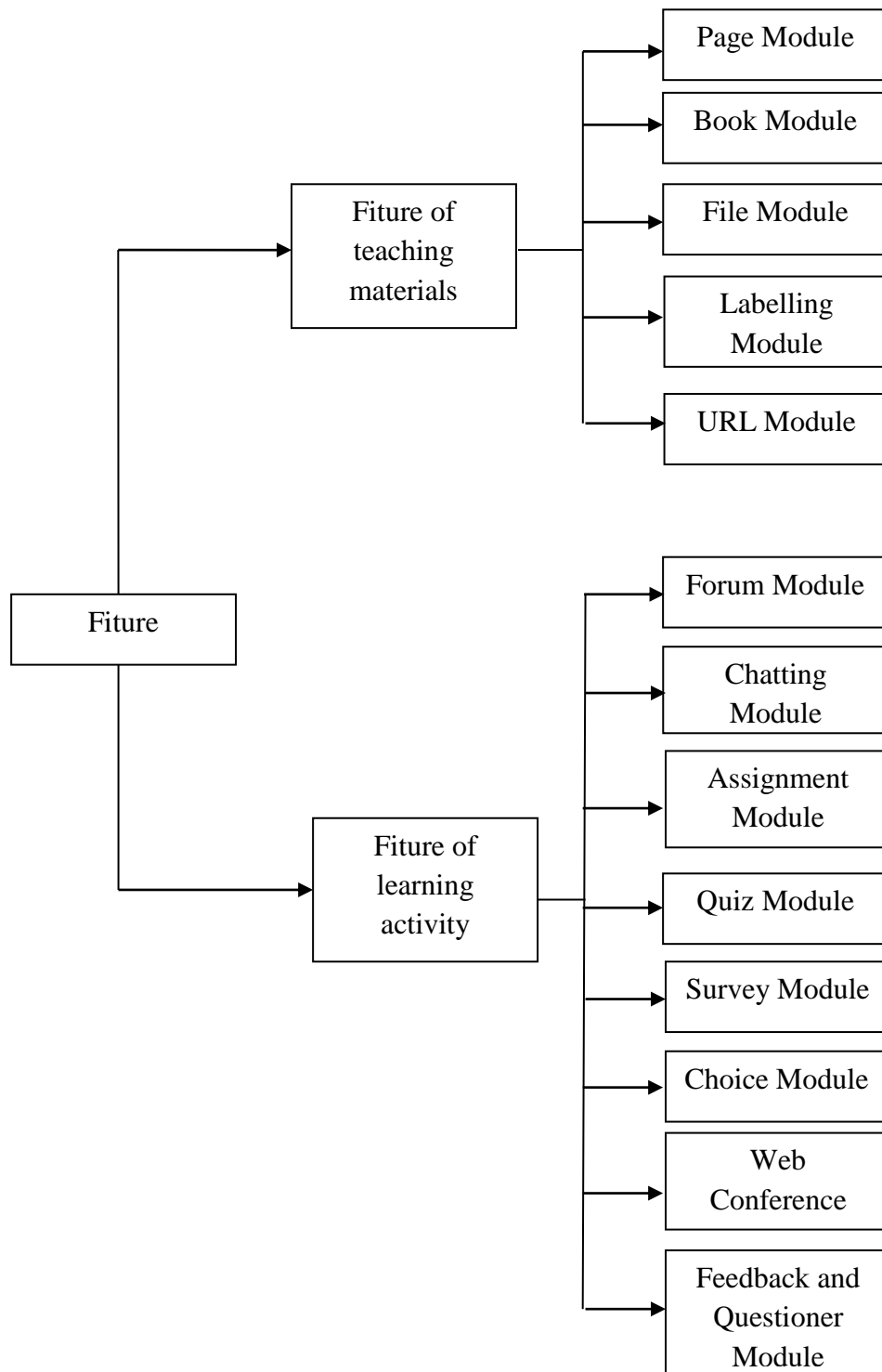


Figure 1: *E-Learning Specification Product*

In Figure 1 it is shown that the feature is divided into two parts, namely the teaching materials and activities. Teaching material features include page modules, book modules, file

modules, label modules and URL modules. The page module is a teaching material in the form of a page on the internet that will be used to enter teaching materials consisting of text, URLs, and videos. The book module is a teaching material that is accompanied by a table of contents that can be used as student navigation. The difference with the page module is that the book module is accompanied by a table of contents and consists of many pages. Module files are teaching materials that can be downloaded by students with documents that can be in the form of text documents (doc, pdf, excel, ppt), audio, video, animation, images, folders and so on. The label module is a short note that is displayed on the home page of teaching materials. The URL module is a teaching material from a particular website that is sufficient to write the web address on the teaching material page. The activity feature consists of a forum, chat, assignment, quiz, survey, choice, web conference, question and feedback module. The forum module is used for two-way discussions between tutors and students on web pages. Students can ask questions, reply to messages, respond, refute a topic by typing in the column provided. Chat module is used to send messages in realtime. The assignment module is used to collect assignments and assess assignments online which consists of online submissions and file submissions. Quiz module to present various forms of questions, question banks, with time management and random problem presentation. The survey module contains verified instruments for assessing the online learning process. The Choice Module is a media for students' opinion polls to collect perception answers quickly. Web conference module is the implementation of face-to-face learning using website pages and laptop cameras. Feedback and questionnaire modules are used to get feedback from students. This study will describe how students' perceptions of the teaching method given by the tutor can be seen in table 1.

Table 1: *Students' Perceptions of the Tutoring Method*

No	Rating Indicator	Point of rating	Rating Value (mean)		Percentage (%)
			Conventional Learning	E-learning	
1	Teaching Speed	1,2,3,4	3.1	4.1	95
2	Presence of Tutor	5,6,7,8	3.3	4.2	95
3	Systemic Information	9,10	3.2	2.4	90
4	Electronic Media	11,12	2.1	4.3	95
5	Ease of Access	13,14,15	2.3	4.4	90

In the teacher centered learning class the average student has the perception that the tutor teaches very quickly, the tutor is present but is often late so students only learn less than the predetermined meeting schedule. The information provided is less systematic, so students find it difficult to understand the material presented. Electronic media is rarely used, sometimes only using text or giving copies to students so students do not need to take notes and tutors do not need to use electronic media such as LCD projectors. Access to material is easy but limited to what is given by tutors. Unlike the case with classes that use e-learning, tutors provide direction only points so that students are given the opportunity to read more material presented in e-learning. Tutors at face-to-face meetings are always present, even when online chat tutors can bias anytime and anywhere serving student learning. The information provided to students is more systematic, because with e learning media there are features that support material that can be accessed systematically and in sequence. The electronic media used are almost all complete, there are laptops, LCD projectors and other electronic media. Ease of access by students can be seen here, because the learning center uses free internet access that students can use for e learning.

Table 2: Students' Perceptions of Learning Variables

No	Rating Indicator	Point of rating	Rating Value		Percentage (%)
			Conventional Learning	E-learning	
1	Individual	1,2,3,4	2.3	4.6	95
2	Class	5,6,7,8	4.4	2.1	95
3	Group Discussion	9,10	2.6	2.1	90

In table 2 learning can be carried out independently, in groups or in a group discussion forum. In this study the results obtained by students' perceptions for learning in conventional class independence of students is less compared to the group, because in the conventional classroom system collaboration between students is still very high, even at the time of the examination. Unlike the case with classes that use e-learning, students are more individualistic, because everything can be done on their own as long as they have the media and devices used to access. In contrast to the existence of group discussion forums, between conventional classes and e-learning classes the perception of low value students. In the conventional class more students are not confident to present and different opinions during discussions. In the e-learning class

forum discussion groups almost do not occur because of the individualistic nature that is formed and is not very familiar with each other.

Table 3: *Students' Perceptions of Learning Evaluation Results*

No	Rating Indicator	Point of rating	Rating Value		Percentage (%)
			Conventional Learning	E-learning	
1	Daily Assessment	1,2,3,4	4.6	3.2	95
2	Final Assessment	5,6,7,8	4.5	3.1	95
3	Tutor Attendance	9,10	4.6	2.1	90

In the evaluation of learning that results in assessments by tutors, students provide a perception that assessment of conventional learning is more objective than learning using e-learning. Tutors are present during the evaluation of learning so they can see the process that is happening. Assessment is also fairer, because it is different with e-learning learning, assessment is more subjective, and the assessment indicators have not been clearly explained by the tutor.

Table 4: *Students' Perceptions of the Use of Electronic Media*

No	Rating Indicator	Point of rating	Rating Value		Percentage (%)
			Conventional Learning	E-learning	
1	Freedom of place	1,2,3,4	2.1	4.5	95
2	Freedom of time	5,6,7,8	2.3	4.6	95
3	Access Fees	9,10	2.2	4.6	90
4	Network quality	11,12	2.0	4.6	95
5	Menu complexity	13,14,15	2.0	4.2	90

In table 4 presented students' perceptions of the use of electronic media, of course in e-learning learning the use of electronic media is very necessary, because with the use of this media students get easy access to learning material. The advantage again is that students are free to determine where to study, the right time to study, the cost is only for access fees because students do not need to pay for transportation to get to the learning center. However, the e-learning learning model requires good network quality so that smooth learning to the end is not hampered by a break in the internet network connection. The menu is also complex because there are various features available. In this study an analysis was also obtained although many of the benefits obtained by using e-learning, overall the percentage of identification of students' perceptions for the weaknesses of e-learning is presented in Figure 2.

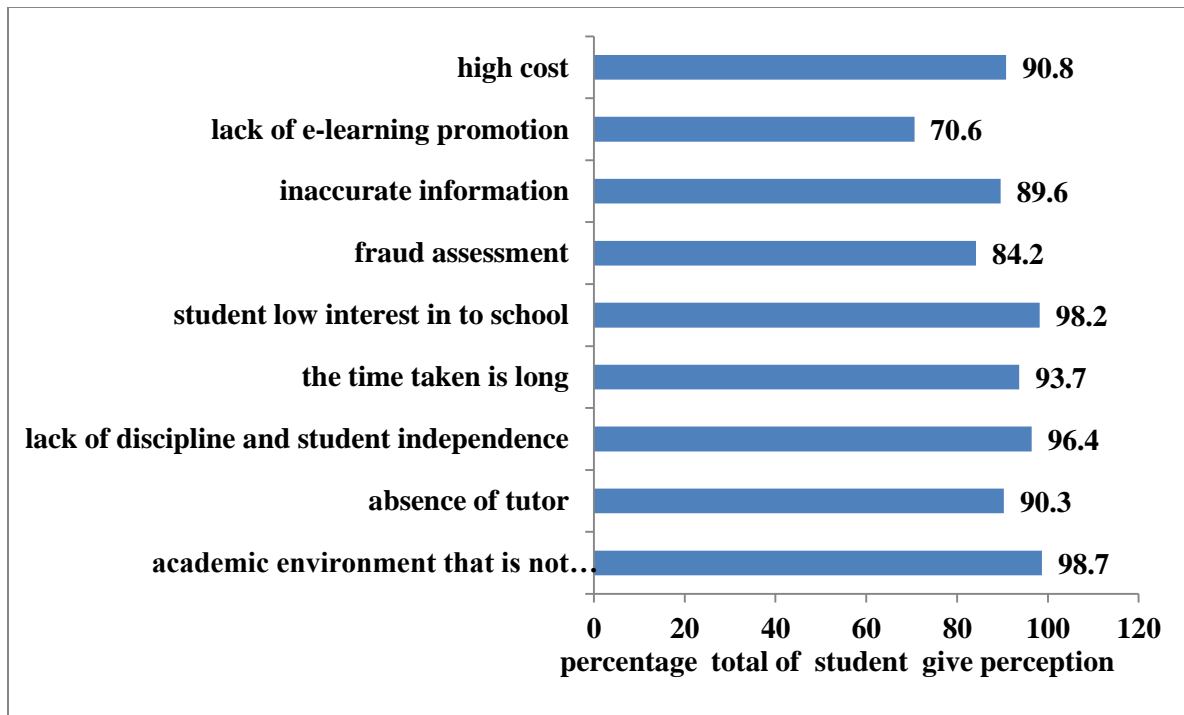


Figure 2: Identification of Students' Perception for the Weakness of E Learning

This proves the concept of the perception of the elearning model really needs to be used in the era of the industrial revolution 4.0. and provide benefits for students in learning that is flexible, fun and not boring. In addition, related to the costs are also cheaper, because they do not have to come to school. The most important thing in the online learning model is the adequate network facilities.

4. Conclusion

The conclusion is in this study include that e learning provides solutions for non-formal education. Non-formal education which is usually attended by students with different backgrounds and conventional learning can produce graduates who excel and compete in the world of work. E learning becomes a beneficial learning method because it provides a lot of convenience, freedom to choose a place, time, although on the other hand there are weaknesses with the existence of e learning, among others, an objective assessment. But the weaknesses that exist in e learning can be minimized as long as the tutor can provide effective and systematic and objective learning.

References

- Abbad, M. M., Morris, D., & De Nahlik, C. (2009). Looking under the bonnet: Factors affecting student adoption of e-learning systems in Jordan. *The International Review of Research in Open and Distributed Learning*, 10(2). <https://doi.org/10.19173/irrodl.v10i2.596>
- Alfahad, F., & Almosa, A. (2002). The role of communication services in the internet in the development of education systems in higher education institutions. Research Centre, Saudi Arabia, Riyadh: King Saud University.
- Alsalem, A. (2004). Educational Technology and E-learning. Riyadh: Alroshd publication.
- Bobbitt, L. M., Inks, S. A., Kemp, K. J., & Mayo, D. T. (2000). Integrating marketing courses to enhance team-based experiential learning. *Journal of Marketing Education*, 22(1), 15-24. <https://doi.org/10.1177/0273475300221003>
- Cashion, J., & Palmieri, P. (2002). The secret is the teacher: The learner's view of online learning: National Centre for Vocational Education Research.
- Clarey, J. (2008). E-learning 101: An introduction to e-learning, learning tools, and technologies: Consultado a (05, 02, 2009) em www.brandon-hall.com.
- Corsaro, S., De Angelis, P., Guarracino, M., Marino, Z., Monetti, V., Perla, F., & Zanetti, P. (2009). KREMM: an e-learning system for mathematical models applied to Economics and Finance. *Journal of e-Learning and Knowledge Society*, 5(1), 221-230.
- Demiray, U. (2012). E-Learning in Ugur Demiray's opinion. Anadolu University, Eskisehir.
- Godoy, J. V., & Gravoso, R. S. (2008). Design and Implementation of an Instructional Innovation for At-Risk Learners: A Classroom Study. *Asia-Pacific Education Researcher (De La Salle University Manila)*, 17(2). <https://doi.org/10.3860/taper.v17i2.730>
- Gravoso, R., Pasa, A., Labra, J., & Mori, T. (2008). Design and use of instructional materials for student-centered learning: a case in learning ecological concepts. *The Asia-Pacific Education Researcher*, 17(1), 109-120. <https://doi.org/10.3860/taper.v17i1.353>
- Johnson, L., Smith, R., Levine, A., & Haywood, K. (2010). horizon report: K. In: Austin, Texas: The New Media Consortium. Cover photograph: "Child Looking Out
- Kwofie, B., & Henten, A. (2011). The advantages and challenges of e-learning implementation: The story of a developing nation. Paper presented at the WCES-2011 3rd World Conference on Education Sciences, Bahcesehir University, Istambul, Turkey.

- Macharia, J., & Nyakwende, E. (2010). Influence of university factors on the students' acceptance of internet based learning tools in higher education.
- R. Geometry et al., (1988)“Formal, Non-Formal and Informal Education: Concepts/Applicability Claudio,” *Agric. Ecosyst. Environ.*, vol. 24, no. 1–3, pp. 325–335.
- Smedley, J. (2010). Modelling the impact of knowledge management using technology. *OR insight*, 23(4), 233-250. <https://doi.org/10.1057/ori.2010.11>
- Tagoe, M. (2012). Students' perceptions on incorporating e-learning into teaching and learning at the University of Ghana. *International Journal of Education and Development using ICT*, 8(1), 91-103.
- Yüksel, İ., & Türkses, E. (2015). Cross-Sectional Evaluation of Distance Education Students' Learning Styles and Critical Thinking Dispositions in Turkey. *International Journal of Distance Education Technologies (IJDET)*, 13(1), 70-86. <https://doi.org/10.4018/ijdet.2015010104>
- Yusuf, N., & Al-Banawi, N. (2013). The Impact of Changing Technology: The Case of E-Learning. *Contemporary Issues in Education Research*, 6(2), 173-180. <https://doi.org/10.19030/cier.v6i2.7726>