ICT-based e-learning implementation

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Abstract. Information and Communication Technology (ICT) - based learning aims to promote lifelong learning. This study tries to implement ICT-based learning in collaboration with electronic heutagogy. Both web-based and non-web-based devices were analyzed. It was found that e-contents, massive open online course (MOOC), digital media, social media, web 2.0, and Moodles promote both fun and accessibility to their users. Some are even accessible through their smart phones so that they can use them anywhere they go. It is implied that electronic heutagogy - based e-learning using ICT is an effective choice amid the industrial revolution era.

1. Introduction

Heutagogy is learning that defined itself [1-3]. Heutagogy applies a holistic approach in developing student abilities, with learning as an active and proactive process [4]. Heutagogy initially conceptualized as an extension of a natural for pedagogy and andragogy to take into upgrading. The complexity of learning and implications correspond to the role of students [5]. By learning heutagogy ensure students have the opportunity to develop a variety of creative, skill intellectual, visual and technical and to use the technology of conventional and digital, and education that fosters creativity and innovation [6].

Lifelong learning provides the skills that are very valuable for the development of the students [7-9]. The role of learning for the rest of life in empowering farmers small companies poultry in Kenya and argues that learning throughout life need to be placed in proper context of social and economic to produce results and impact as it as empowerment [10]. In conclusion, a program of education for the rest of life that is offered has many advantages than weakness. In overcoming weaknesses one must apply other approaches such as heutagogy [6,11]. With online learning students can learn anywhere and anytime [12-14].

The purpose of this paper is to determine the application of Electronic Heutagogy in technology based learning. When these means and technologies IT had no power to customize education for every student and we can talk about the generation of new student from kindergarten to university [12,15]. For this generation new concepts and tools must be developed to renew education. Consider that heutagogy meet the needs of the participant students but participant’s students are mostly large living them without a teacher they are and most substantial of them actually are e-learning, approaches heutagogy for e-learning desirable [16,17]. The new concept of e- heutagogy fills this gap [18].
2. Methods
Review of the literature is done by using a Systematic Literature Review (SLR). Scientific studies that focus on specific questions and use explicit scientific methods that have been determined to identify, select, assess, and summarize the findings of several journals. Criteria for inclusion of articles that are used are *E- Heutagogy for Lifelong E-Learning*, while the criteria for exclusion are articles with abstracts, articles that do not use the language English and the articles that appear are not full text. Search articles is limited only to articles with Language English which is accessible from the search Internet databases, such as: Google scholar, Scientdired, Academia with the key *E- Heutagogy, Lifelong Learning, E-Learning*. Articles that meet the inclusion criteria are systematically collected and inspected. Search literature published from the year 2010 up to 2019. The process of search to get 25 articles that meet the requirements of inclusion and exclusion.

3. Results and discussion
Based on the results of the search obtained as many as 25 articles were deemed appropriate with purpose of research. Then made in the form of a table of media used, the role of *E- Heutagogy*, along with the type of research that is used.

| No | Media Technology Being | E-Heutagogy function | Research type |
|----|------------------------|----------------------|--------------|
| 1  | E-Content              | Approach *heutagogy* help learn science at the level that is more rapid. In the eyes of subjects science simulation process and experiment allows students to explore the concept of the way the new, allowing students to become learners independent | Experimental Methods, pretest and posttest |
| 2  | Massive Open Online Course (MOOC) | With the MOOCs as OT 12, which is mainly based task, assumes a more lots determination of the fate of his own and the level of participation that is higher than in the focus based content. | Pre-course survey methods and post-course surveys |
| 3  | Digital Media (Google Docs and Brainstorming) Mind Maps (mindmeister.com, bubble.us) | With the rapid development of technology allows the ability of students to be more actively involved in learning and creating knowledge. Digital media new is characterized by the cost of lodging that is able to support, promote, and develop institutions learner and the learning that determined its own | Literature review |
| 4  | Social Media (Google Docs, Mind Mapping, and E-Portfolios) | *Heutagogy* emphasize centered on learning and development capabilities of students, who need to be developed as a set of attributes are mutually complementary to competencies in order to create a culture of learning for the rest of life. | Literature Review |
| 5  | Web 2.0 | Projects are generated that utilize education *heutagogy* new is the focus on learning for the period ahead Web 2.0 or social media | Research method |
| 6  | Moodle's | Designed to provide instructional guidance that is easily accessible to academic staff about online course design and online teaching | Survey method |

Table 1 describes about the form of digital media are used in *E- Heutagogy* form of media E-content push the mind open, reflective, critical, and enterprising learning. E-content is more effective and can improve students' knowledge and understanding as developed with a combination of text, audio, animation, images, video and pedagogical applications that are mixed to visualize teaching materials [1,19]. Media Massive Open Online Course (MOOC) participant students need to be equipped to play, or need to be given information about what that is necessary to play with success and in where and how
they can acquire the skills are required. In network -based MOOCs, success depends on creativity, reasoning and collaboration [20,21].

Digital media in particular provide an opportunity for agent’s student and exploration of active, construction, and distribution of information, and there are many ways in which the media can used to support the approach to learning heutagogy or determined itself [22]. Technology media social to give the educators the opportunity to engage the participant students in the class online, as well as to support the development of student skills and competencies [15,23]. Exploration and use of which is generated by students, Web 2.0 enables e- portfolio in the environmental study. This will include using LinkedIn as a ‘hub’ to integrate various portfolio elements including CVs, project documents (PDF files), photos (Flickr, Picasa), videos (YouTube), and blogs [24]. Moodle's media application is designed to provide instructional guidance that is easily accessible to academic staff about online course design and online teaching. Strategy that consists of design research that focuses on the use of landing methodological the right to ensure the needs and feedback from the source of power be included in the design, development, and evaluation of the ongoing [25].

From the 6 digital media inventions used in E- Heutagogy, media technology is often used in the form of Social Media. Approach to learning that determined their own along with social media is to engage participant’s learners to perform, as well as supporting and extending over next process of learning by giving students independence in deciding how they will learn and enable them to make the connection of new and developing networks of learning. Social media as an application that can be accessible to students where only and when alone, by using a smartphone or notebook that makes the students more independent in learning 4.

4. Conclusion

Literature Review is expressed on research previously were done on approach Heutagogy for Lifelong E-Learning. In terms of this, some databases have to take articles published in the period 2010 to 2019. In order to determine the application of E- Heutagogy on learning -based technologies such as application of e-content, MOOC, social media, digital media, Web 2.0, Moodle's. The findings were most evident in the research History proves that with e-heutagogy for e-learning for the rest of life provide the impact that very well in the process of learning. Where students can choose how to learn them in accordance with the capabilities of each, supported by the advancement of technology and the students not only to learn in the classroom.

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