Cybergogy: Towards a New Paradigm of Language Learning

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Abstract. Disruption and innovation of information and communication technology changes the order and focus of modern society's education into 21st century education and skills patterns. This study aims to analyze the needs of teachers and students towards the evaluation, implementation, and planning of educational models as an effort to adapt educational patterns to the needs of the times. This research is the initial part of development research which is limited to needs analysis. This research was conducted at SMA N 1 Kota Yogyakarta and SMA N 11 Kota Yogyakarta. The research sample consisted of 2 Indonesian language teachers and 48 students of class X in both research locations taken through purposive sampling technique. The data collection technique was carried out through direct observation in the form of interviews and questionnaires distributed via google form and the results were analyzed in depth and described. The results showed that both schools had implemented blended learning models. The availability and completeness of learning support facilities and infrastructure still needs to be improved. As a technical aspect, application development is needed to support the implementation of online learning. Meanwhile, teachers must also improve the quality and quantity of learning materials. Thus, the effectiveness of Indonesian online learning also needs to be improved both technically and by implication.

Keywords: cybergogy · language · blanded learning

1 Introduction

The development of information and communication technology in modern human life is marked by the development of digitization, information transformation and unlimited connectivity. This has a significant impact on the world of education that creates independence in learning towards the concept of 21st century education. The 21st century educational framework includes critical thinking and problem solving skills, communication and collaboration skills, the ability to create and renew, technological and communication literacy, the ability to contextual learning, and information and media literacy skills [1].

Technological disruption in the world of education is growing massively along with the emergence of the COVID-19 pandemic that hit the world. As a result, conventional

learning that has been applied at every level of formal education has turned into online learning as per the decision of the Minister of Education and Culture. Basically, online learning has started to be implemented in universities for a long time [2–4] but has not become a focus for elementary, junior high school, and senior high school.

Online learning has become the main choice without a combination of conventional learning in the classroom since the outbreak of covid 19 [5]. As the situation and conditions change, face-to-face learning is slowly starting to be applied again, even though at a limited level, giving rise to a new learning concept in the form of blended learning. This learning model has a great opportunity to be applied in the future.

The success of the implementation of blended learning depends on the skills of using information and communication technology by both teachers and students. Therefore, in addition to being oriented to 21st century education, the concept of learning in this era is also oriented to 21st century skills as a technical aspect of implementing technology-based learning. The pattern of 21st century skills in the form of life and career skills, learning and innovation skills, and information technology and media skills is known as the 21st century knowledge-skills rainbow [6].

The pattern of education and skills in 21st century learning must be supported by a new paradigm in technology-based learning known as cybergogy. Cybergogy is a continuum of the concepts of pedagogy and andragogy which have been used as the basis for implementing learning. Pedagogy is the heart of teaching which contains rules and principles that guide education to be effective and efficient [7] through interactions and activities in academic and social activities that take place in the classroom [8]. However, the goals and objectives in this learning concept are still general knowledge and students are led to reach maturity through the teaching authority [9] so that the learning process tends to be teacher-centered.

The next learning concept is andragogy which focuses on students [10] with the assumption that students are mature so that it places more emphasis on aspects of knowledge or skills that are relevant to the role of the teacher as a supporter of learning [11]. This means that apart from focusing on adults, the knowledge transformation process still depends on the teacher's participation in the learning process. Meanwhile, the demands of students' knowledge and skills in 21st century learning are more flexible and unlimited and independent. Therefore, a new paradigm in learning is needed, especially with regard to the independence of students in exploring knowledge through unlimited technology and information. In harmony and in line with this, students must also be given independence in learning as the new curriculum launched by the Minister of Education and Culture. The paradigm in question is the concept of technology-based learning known as cybergogy.

Based on the results of interviews with Indonesian language teachers and questionnaires in the form of google forms distributed to class X students of SMA N 1 Kota Yogyakarta and SMA N 11 of Kota Yogyakarta in Indonesian subject, several things were concluded, namely: (1) learning that was applied since the even semester 2021 is blended learning, reflecting on the full online learning that was done previously, then (2) the quality of the facilities and infrastructure to support online learning is considered quite good (50%) with the comfort level being in the quite comfortable category

(41.7%), (3) applications used to support online learning include WhatsApp (91.9%), Google Meet (85.4%), and Zoom (72.9%).

(4) The level of satisfaction with the use of the application is in the quite satisfied category (47.9%) with the availability or smoothness of the internet network is good (50%). (6) The level of student mastery of online learning materials is in the good enough category (50%) and the level of student satisfaction in receiving the material is quite satisfied (54.2%). (7) The level of teacher and student need for integrated learning models and applications reaches 57.4% and the devices used by teachers and students to carry out online learning are other gadgets (100%), laptops (70.8%), computers (14, 6%), and tablets (8.3%) with the level of effectiveness of using gadgets (62.5%) and laptops (50%).

As part of development research which has long stages and procedures, this paper focuses on analyzing the needs of teachers and students towards the development of a cybergogy-based learning model for Indonesian language subjects in senior high schools.

2   Research Method

As part of development research, this research is an early stage which is limited to needs analysis. The approach in this research is in the form of a survey to see the needs of teachers and students in SMA N 1 Kota Yogyakarta and SMA N 11 Kota Yogyakarta for cybergogy learning in Indonesian subjects. The sample of this study consisted of Indonesian language teachers and class X students with a total of 24 people at SMA N 1 Yogyakarta City and 24 people at SMAN 11 Yogyakarta City which were taken by purposive sampling technique. Data collection techniques were carried out through interviews, questionnaires, literature studies, and documentation. Data processing in this study was carried out qualitatively.

The observation sheet in the form of a questionnaire distributed in the form of a google form consists of 15 questions as follows.

1. What's learning models are currently applied in schools in accordance with government policies or regulations?
2. What do you think about the quality of online learning facilities and infrastructure?
3. How comfortable are you when doing online learning?
4. Which applications have been used to carry out online learning?
5. What is your level of satisfaction with the applications used so far in online learning?
6. How is the availability or smoothness of the internet network so far to support online learning?
7. What is your level of mastery of the material in online learning?
8. How satisfied are you when you receive material from the teacher in online learning?
9. What is your level of success in carrying out online exercises or exams?
10. How effective is Indonesian subject by online learning?
11. What is the level of discipline in the online learning process?
12. What is your need for integrated online learning applications through gadgets?
13. What tools have you used to carry out online learning so far?
14. Which tools are effective or easy to use to implement online learning?
15. If there is an application that can be installed on your device to carry out online learning, then what is the expected menu in the application?

3   Results and Discussion

Based on the results of interviews and questionnaires given to the sample in this study, several things were found and due to space limitations, a number of crucial findings were explained below.

3.1   Learning Model

The learning model refers to the learning approach to be used, teaching objectives, stages of learning activities, learning environment, and classroom management [12] from beginning to end in a learning frame [13]. As a teaching plan that shows a certain pattern, the activities of teachers and students in developing learning models through processes, conditions, and learning systems must be clear [14].

Based on the results of interviews and research questionnaires, the learning model applied in schools in accordance with government policy is blended learning. Blended learning is a learning process that combines face-to-face methods with online methods [15]. The combination of online and offline learning can be a learning strategy [16] because both have advantages and disadvantages.

The selection of learning models should be considered well and carefully by the teacher by considering several factors [17], including: the objectives to be achieved, learning materials and materials, students, and other non-technical considerations. Therefore, to be able to carry out mixed learning well, teachers must prepare themselves carefully both from learning tools, mastery of technological skills, and other aspects.

3.2   Online Learning Facilities and Infrastructure

The quality of facilities and infrastructure is something that needs to be considered in learning, especially online learning. Online learning requires facilities and infrastructure in the form of laptops, computers, smartphones, and internet networks [18]. Based on the results of the BPS (2019) survey, as many as 62.41% of the Indonesian population owned a cellular phone in 2018, and as many as 20.05% of households own a computer [19]. This of course is increasing every year because the needs and lifestyles of the community are increasing.

Based on a survey conducted through questionnaires distributed to the research sample, respondents who stated the quality of online learning facilities and infrastructure were not good as many as 3 people (6.3%), quite good as many as 24 people (50%), good as many as 20 people (41, 7%), and very good as many as 2 people (4.2%). This can be seen in the following graph.

Quality of Online Learning Facilities and Infrastructure
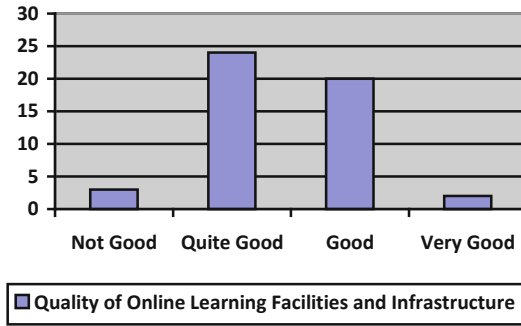
The graph above shows that the quality of facilities and infrastructure is sufficient for the implementation of online learning. Although 50% said it was quite good, 41.7% said it was good and 4.2% said it was very good. Thus, in general, the quality of facilities and infrastructure is sufficient to carry out online learning.

3.3 Online Learning Apps

Technology-based learning and social media are one of the characteristics of 21st century education in modern society. The rapid development of technology and social media can be seen with the invention of electronic devices such as smartphones that are supported by internet services and cannot be separated from everyday life [20]. Mobile device technology supported by the Android operating system is the thing that people are most interested in today [21]. Various learning applications or platforms can be downloaded via Google Play for free or paid, such as WhatsApp Group, Google Classroom, Edmondo, Zoom, Google Meet, Webex, Loom, Quizizz, Duolingo, and others [20].

Based on the results of a survey conducted, it was found that the most widely used applications in online learning at the research site were Google Classroom (97.9%), WhatsApp Group (91.7%), Google Meet (85.4%), Zoom (72 .9%), Geschool (6.3%), and home learning (2.1%). This can be seen in the following graph.

Online Larning Apps
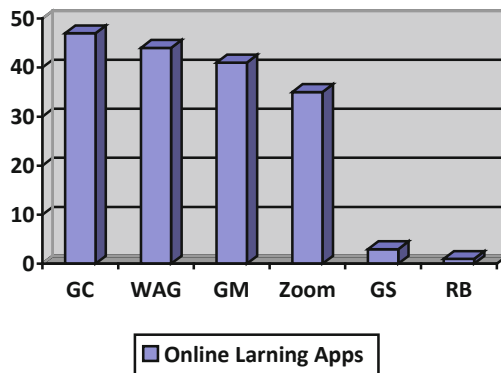
3.4   Materials in Online Learning

Learning materials are a set of learning substances to assist teachers in learning activities that are systematically arranged to achieve the specified competencies. The basic principles that must be considered in determining learning materials include: relevance, consistency, and adquency. In addition to these principles, other things that must be considered are the potential of students (intellectual, emotional, spiritual, social, etc.), regional characteristics, student needs and environmental demands, student development, usefulness, scientific structure, actuality, and allocation. Time.

In online learning, learning materials are not limited to what is prepared by the teacher, but students can explore unlimited material through various sources through the use of information and communication technology. This is one of the advantages and advantages of online learning. Based on the survey conducted, it was found that the level of student mastery of the material in online learning is not good as much as 16.7%, quite good 50%, good (33.3%) and very good (4.2%) as can be seen in the following graph.
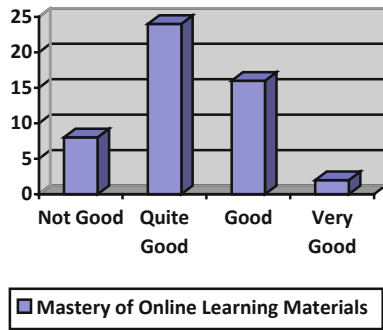
The findings above imply that the level of student mastery of the material in online learning is still in the medium category. Therefore, efforts are needed to increase the mastery of online learning materials by both teachers and students. Unlimited access to information should make the level of mastery of learning materials higher. Therefore, the preparation of learning materials is one of the additional tasks for teachers to achieve maximum learning objectives.

In addition to the level of mastery, the survey in this study also found the level of student satisfaction with online learning materials sourced from teachers. The percentage of the student satisfaction index can be seen in the following figure (Fig. 1).

3.5   Effectiveness of Online Learning

Online and offline learning both have their own advantages and disadvantages. This can be caused by various factors, both technical and non-technical. Several studies have stated that online learning is effective for improving student learning outcomes [22, 23]. This is also not much different from the results of a survey conducted that the effectiveness of learning Indonesian online is considered less effective (45.8%), effective (50%), and very effective (4.2%) as shown in the following graph.
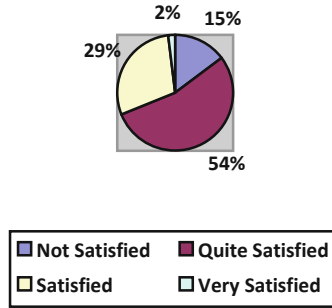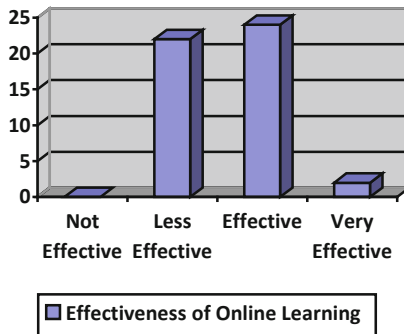
2% 15%

29%

54%

Not Satisfied   **Quite Satisfied**
Satisfied   **Very Satisfied**

Fig. 1. Percentage of Student Satisfaction with Online Learning Materials from Teachers

Effectiveness of Online Learning

The graph above shows that although more than 50% of students stated that learning Indonesian has been effective, almost half of them stated that it was less effective. Thus, this needs to be addressed in order to increase the effectiveness of online language learning.

4   Conclusion

Based on the results of the research and discussion above, it can be concluded that technology-based Indonesian language learning still requires many obstacles and problems. These problems are related to (1) the selection of blended learning learning models that need to consider various aspects in their application, (2) online learning facilities and infrastructure that still need to be improved, (3) application development for online learning needs to be carried out, (4) quality improvement and quantity of online learning materials, and (5) increasing the effectiveness of online Indonesian language learning needs to be done. As part of development research, the results of this early stage of research are the basis for implementation or follow-up for further research in the form of product development.

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