



Effectiveness of Implementing Synchronous and Asynchronous Blended E-Learning in Stunting Prevention and Treatment Training Programs

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Abstract

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The Covid 19 pandemic has had such a big impact on the education system, especially the National education system. In the conditions of the Covid 19 pandemic, national learning is carried out online, both formal and non-formal education (training). Related to this, the authors conducted a study on the application of asynchronous and synchronous blended learning in Stunting Prevention and Handling Training held at the Ministry of Social education and training institutions. The purpose of this study is to find out the effectiveness and constraints of implementing asynchronous blended learning and synchronous training. The method used in this study is a literature study. The results of the study show that the implementation of asynchronous and synchronous blended online learning Training on Stunting Prevention and Handling is not yet effective. This is due to the asynchronous setting being carried out only with independent asynchronous (AM) without the presence of a facilitator. The existence of a facilitator can play an important role in maintaining and maintaining the level of student learning motivation and facilitating relationships between training participants and with the facilitator. Then in the implementation of synchronous online learning Training on Stunting Prevention and Handling is also considered less effective. The main obstacle is the internet network which is not accessible to participants, especially from remote areas. So that it is very difficult for participants to follow synchronous learning as a whole.

Keywords:

mathematical ability, flipped classroom, meta-analysis

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INTRODUCTION

The Covid 19 pandemic has had a profound impact on education systems around the world. According to UNESCO's Teachers Task Force data, the Covid 19 pandemic has caused more than 1.6 people to have caused more than 1.6 billion students or from 190 countries to stop studying. To deal with this problem, UNESCO and the governments of member countries call for the importance of ensuring that children and students, both students and the community, receive educational services through distance learning (digital learning platform). Indonesia, as a UNESCO member country, has adopted a policy related to education services during the Covid 19 pandemic, namely by issuing a Circular of the Minister of National Education Number 4 of 2020 concerning Implementation



of Education Policies in the Emergency Period of the Spread of Coronavirus Disease (Covid-19). Based on this policy, simultaneously educational services in all corners of the country adopt information and communication technology (ICT). Non-formal education is no exception, including education and training (training), both training organized by government and private education and training institutions.

As a consequence of this policy, education providers at all levels and types of education develop and implement online learning. Theoretically and practically, online learning is relevant to the conditions of the Covid 19 pandemic, because it can overcome learning constraints in terms of space and time, so students can get the opportunity to study anywhere and anytime. Another thing, the benefits of online learning are that it can optimize and improve the quality of education services, and can increase the interaction of students with teachers, students with other students by integrating technological sophistication.

Based on the preliminary study, the authors have identified training institutions that developed and implemented online learning during the Covid 19 pandemic, namely training institutions within the Ministry of Social Affairs. The online learning developed and implemented is in the Stunting Treatment and Training Program. The online learning developed and implemented is blended learning with asynchronous and synchronous models.

Related to this, the authors conducted a study on the effectiveness of the application of blended learning, in which the focus of this study were: (1) blended learning design with asynchronous and synchronous models and (2) the effectiveness and constraints of its application. Then, this study aims to: identify descriptions of blended learning designs with asynchronous and synchronous models; identify the readiness of teachers/facilitators in asynchronous and synchronous learning; as well as identifying the effectiveness of implementing asynchronous and synchronous blended learning in the Stunting Training and Handling program. It is hoped that this study will be useful in efforts to improve the quality of online learning in training programs within the Ministry of Social Affairs.

METHODS

Research Design

In this study, the meta-analysis method was used to review the results of research examining the effect of the flipped classroom model on students' mathematical abilities. In general, the stages in the meta-analysis are; determining inclusion criteria, study search, data collection and variable coding, statistical analysis (Borenstein et al., 2009; Retnawati et al., 2018; Juandi & Tamur., 2020).

Setting and Implementing Asynchronous Learning

Asynchronous type of online learning is learning that is usually facilitated by various media such as e-mail, certain e-learning programs, or even WhatsApp, supporting the teaching and learning process between students and teachers, even when students cannot be online for the same time. Flexibility is the key word for asynchronous learning.

Asynchronous online learning The Stunting Prevention and Handling Training Program is designed and implemented with Asynchronous Independent (AM) through Digital Learning Materials (Learning Objects) in the form of modules and animation/simulation videos. The module material consists of 8 modules, namely:

Module 1: Stunting Prevention and Handling Policy for Social Welfare Human Resources.

Module 2 : Stunting Problems

Module 3: Prevention & Handling of Stunting through Fulfilling the Welfare of Pregnant Women.

Module 4 : Prevention & Handling of Stunting through Fulfilling the Welfare of Newborns and Breastfeeding Mothers.

Module 5: Prevention & Handling of Stunting through Providing Simulations to Children.

Module 6: Utilization of Social Assistance in Fulfillment of Nutrition for Children and Pregnant Women

Module 7 : Prevention & Handling of Stunting Through Personal and Environmental Hygiene

Module 8: Mapping Family Potential and Supporting Joint Action in Stunting Prevention and Management.

RESULTS & DISCUSSION

Results

Based on the results of data collection through literature study, the Stunting Prevention and Handling Training Program was carried out with a "fully online" learning system, blended asynchronous and synchronous online. This is in accordance with the conception by Piskurich, bland aspects of synchronous and asynchronous e-learning to create a hybrid delivery system that uses both components for maximum effectiveness. The online learning platform used in this

training is the Learning Management System (LMS). Login: <https://elearning.kemosos.go.id>. Meanwhile, the schematic of the asynchronous and synchronous online blended learning process for the Stunting Prevention and Handling Training Program is shown in the figure below.

According to Littlejohn & Pegler (2007) Synchronous learning is a learning process that occurs simultaneously at the same time between students and tutors/teachers/lecturers, although it does not have to occur in the same place. The roots of synchronus come from three main influences, namely: class, media, and conference (Clark et al., 2007). Teachers and students who carry out synchronous learning can conduct live question and answer and discussion. Teachers and students who carry out synchronous online learning can conduct direct question and answer and discussion, which makes participants feel fully involved instead of isolated (Hrastinski, 2008). Haythornthwaite and Kazmer (2002) state that synchronous can make a person more aware of his existence as a member of a community, compared to someone who is only connected to a computer. Even so, synchronous learning relies heavily on technical aspects. For example, if the internet network is unstable, even when information technology devices have problems, learning will be disrupted.

However, the application of synchronous online learning in Stunting Prevention and Handling Training is still not effective. This was due to various technical constraints, such as an unstable internet network due to the large number of participants not being reached by the internet network. For example, participants from remote areas of West Kalimantan, to be able to take part in synchronous online learning, have to travel kilometers. Thus, the main obstacle to the effectiveness of implementing synchronous online learning is more technical, namely the internet network as the main mode of online learning which is not evenly distributed. So that participants who are not reached by the internet network, it is very difficult to take part in synchronous learning as a whole.

Discussion

Despite the advantages of asynchronous online learning in the Stunting Prevention and Handling Training Program and Stunting Prevention and Handling Training, it is less effective, because the design only uses Independent Asikronus (AM):

1. In AM learning in the Stunting Prevention and Handling Training Program without the presence of a facilitator. The presence of the facilitator is very important if participants have difficulty understanding the training material. Then the presence of the facilitator can play an important role in maintaining and maintaining the level of student learning motivation and facilitating relationships between training participants and with the facilitator.
2. In AM lessons there are no discussion forums, either between training participants or with the facilitator. The existence of this discussion forum is very important. The types of forums presented in async are:

a. Socio-emotional forums, with the aim of maintaining a strong sense of togetherness in learning. It is very useful to have separate discussion forums available where trainees can meet virtually and discuss topics of mutual interest so that personal relationships can be developed. In online learning, where trainees have the opportunity to socialize in socio-emotional forums.

b. Task-oriented discussion forums – provide opportunities for students to interact authentically with contextual discussion topics, and reflect in the forums. For large classes, use group forums rather than whole class forums. The recommended group is no more than ten students; otherwise, discussion forums can become unwieldy and difficult to judge.

The weakness of independent asynchronous (AM) is the tendency to eliminate the touch of social interaction, such as discussions and debates between students. One thing that this song might be very important in AM is that it can cause apathy from students, because there is no direct feedback from the teacher. For this reason, Bill Pelz stated that to maintain effectiveness there are three principles of effective online learning (AM):

Principle 1: Let students do (most of) the work. The more time students spend engaging with content, the more they will learn.

Principle 2: Interactivity is at the heart of effective asynchronous learning.

Principle 3: Strive for presence, both social, cognitive, and teaching.

CONCLUSION

Practically, the application of asynchronous and synchronous blended learning in Stunting Prevention and Handling Training is considered to be less effective. In the implementation of asynchronous online learning, the settings used are only the Independent Asynchronous (AM) settings without the presence of a facilitator. Even though the existence of a facilitator is very important in providing solutions to training participants who are constrained to understand the training material. In addition, the existence of a facilitator can play an important role in maintaining and maintaining the level of student learning motivation and facilitating relationships between training participants and with the facilitator.

Then in the implementation of synchronous online learning Training on Stunting Prevention and Handling is also considered less effective. The main obstacle is the internet network which is not accessible to participants, especially from remote areas. So that it is very difficult for participants to follow synchronous learning as a whole.

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