

Hypothetical Model of ICT-Based Learning Media Management in Non-Formal Education

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Abstract. ICT-based learning media is the time to be introduced and mastered by teachers to be then used in the learning process in the class so that the material presented can be absorbed by students optimally. Learning activities that use teaching aids and good learning media have been proven in theory to improve learning outcomes. This condition applies to learning that occurs in formal education, such as at school and NFE. This study focuses on developing a hypothetical model of ICT-based learning media management in NFE by using a qualitative approach with a descriptive case study type at three centers of community learning activities and nonformal education in West Java, Indonesia. The results of this study are just a product that is expected to be a reference model in implementing ICT-based learning media management in NFE, especially in centers of community learning activities.

Keywords: ICT, learning, management, media, nonformal

1. Introduction

Along with the times where science and technology are developing so rapidly, the parties involved in education, especially teachers, must be able to adapt to today's technology. It is time for learning media based on ICT to be introduced and mastered by teachers and then used in online and on class so that the material presented can be absorbed by students to the maximum. Learning delivered with good and adequate teaching aids and media has been proven in theory to get better results. This condition does not only apply to learning that occurs in formal education such as in schools, but also in non-formal education (NFE) [1]. Indeed, when compared with formal education, the application of ICT in NFE is arguably minimal. By increasing the quality and quantity of ICT application in NFE, it is hoped that it will lead to the expansion of access, increasing student confidence, making the teaching and learning process more interesting, as well as various other positive impacts[2]. One of the crucial problems experienced by most NFE institutions today is the slowness of NFE institutions in adapting and responding to the rapid development of IT, even though NFE is very flexible but the organizers have not been able to optimize various opportunities that can be exploited, especially in its use in the learning process [3].

Republic of Indonesia's Law No. 20 of 2003 Article 26 states that: " NFE is provided for community members who need educational that function as substitutes, additions, and or complements to formal education in to support lifelong education". NFE aims to develop the potential of students who focus on mastering knowledge, functional skills, and developing professional personality attitudes. NFE known in Indonesia includes early childhood education, equality education, life skills education, youth education, women's empowerment education,

literacy education, skills education and job training, and other education aimed at developing students' abilities [4]. This study focuses on developing a hypothetical model of ICT-based learning media management in NFE in three community learning activity centers or in Indonesia known as the Community Activity Center (PKBM) which is then used in this paper the term PKBM as part of NFE in West Java, Indonesia.

There is a strong interest in and acceptance of innovation in adult training or NFE to support awareness-raising of the potential of ICTs to improve educational delivery, but this comes with both pedagogical and practical challenges. The basic motivation behind teaching and accompanied by an increasing level of difficulty PKBM must face if they are to effectively coordinate ICT into educational and learning exercises. The inevitable use of ICT for long-term learning such as strengthening local areas is a very big pattern in realizing learning effectiveness in this century[5].

There are so many types of information technology that can be used as learning media. In this research, the type of technology used is Learning Management System (LMS). Utilization of LMS provides convenience in the learning process, and can also support learning activities with hybrid methods. Adequate human resource support in PKBM makes it easy to achieve this activity. However, this activity still requires continued efforts to continue to support technology-based learning innovation, especially in PKBM which has learning residents from diverse backgrounds. PKBM parties can upgrade the LMS according to the updates provided by the application. In addition, support from relevant agencies is also needed to continue to support learning innovation in PKBM [6].

So that the problems in this study can be described as follows:

- a. The application of ICT in NFE is minimal.
- b. One of the crucial problems in most NFE institutions today is the slowness of NFE institutions in responding and adapting to the rapid flow of IT developments.

2. Methods

This research is using a qualitative approach with a descriptive case study type at three centers of community learning activities nonformal education in West Java, Indonesia that is PKBM Bina Mandiri Kota Cimahi, PKBM Mekarsari Kabupaten Bandung Barat and PKBM An-Nur Ibum Kabupaten. Qualitative method is a descriptive research method that uses analysis rather than numbers. The process and meaning are highlighted in this study using a theoretical basis as a guideline that makes the research focus in accordance with the reality in the field [7]. Several data collection techniques were carried out in this study, namely observation, visual analysis, literature study, and interviews either individually or in groups although the most widely used is interview and focus group discussion (FGD) method. Data analysis techniques in qualitative are not in the form of numbers, but using analytical techniques that are subjective [8]. Interviews were conducted with PKBM Heads, Tutor Teams, Staff and *Warga Belajar* (the term for students in PKBM) that provide an overview to the author regarding the implementation of learning that has been carried out so far where the use of information technology has actually been utilized in PKBM but has not been managed properly. This is the rationale for designing a hypothetical model.

3. Results and Discussion

In relation to the hypothetical model of ICT-based learning media management in NFE, especially PKBM, Albert Humphrey's SWOT analysis is used as a situational analysis

method that focuses on systematically identifying several factors to formulate the strategy of an organization, or institution. SWOT which is an acronym for Strengths, Weaknesses, Opportunities, and Threats (SWOT) refers to the logic of maximizing strengths and opportunities and minimizing Weaknesses and Threats simultaneously. Strategic decision-making process related to mission, objectives, strategic must analyze the strategic factors of the organization or institution in the conditions that exist at this time, this is called situation analysis. The results of the SWOT analysis used will provide a comprehensive picture of the PKBM situation itself, both in relation to the community, other educational institutions, and industrial fields that students will enter, even to the internal situation of the school itself.

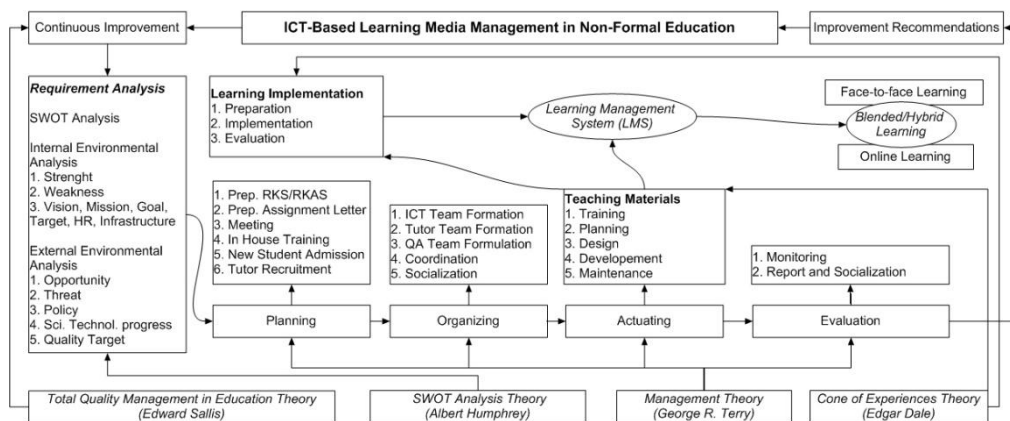


Fig. 3.1. Hypothetical Model ICT-Based Learning Media Management in NFE

Furthermore, the cone theory of experience from Edgar Dale will provide an illustration that the learning experience obtained by students can go through the process of experiencing or doing what they learn themselves. The process of listening and observing is carried out using ICT-based learning media while the listening process is carried out using language. The more concrete students learn teaching materials, the more experience they gain, for example through direct experience. Conversely, the more abstract students gain experience, the less experience they will get, for example by relying on verbal language. Experience can be direct experience and imitation experience. Direct experience is the experience that students gain as a result of their own activities. Learners experience and feel for themselves everything related to achieving goals. While imitation experience is experience gained through objects, events, and ICT-based learning media that are manipulated to approach the actual situation[9].

Indonesian Cyberlaw (Law No. 11 of 2008) concerning Information and Electronic Transactions is to regulate the use of IT widely and directed for the creation of an electronic society that always applies morals and ethics in all aspects of its life. In this case, among others, including the use of information technology in the field of education, especially in the use of ICT media in the learning process.

3.1. Planning

Planning as one of the management functions, is an activity carried out after needs analysis. A well-planned program will provide guidance in achieving goals. Planning refers to the findings in the needs analysis which in this case uses a SWOT analysis which in detail

explains what are the strengths, weaknesses, opportunities and threats. There are several activities carried out in the planning process in the hypothetical model of learning media management based on ICT in NFE at PKBM, including:

3.1.1. Preparation RKS and RKAS

Rencana Kerja Sekolah (RKS) and Rencana Kegiatan dan Anggaran Sekolah (RKAS) in Indonesian Education is a document that contains a school development plan program for the next 4 years by looking at and considering the resources owned by the school in order to go to a school that meets the National Education Standards (SNP). This document contains various series of plans for school efforts and other related parties to address various school problems and problems in order to fulfill the SNP. RKS and RKAS are plans that are relatively standard, unchanged, and in accordance with the philosophy, direction, and goals of national education as stated in the 1945 Constitution (amended) and in UUSPN NO. 20 OF 2003, PP Number 19 of 2005 and other relevant laws and regulations.

3.1.2. Preparation Assignment Letter

Assignment Letter or in Bahasa called Surat Keputusan Pembagian Tugas Mengajar Tutor PKBM is a document that must be made by PKBM at the beginning of the school year. This document contains the division of tasks and is evidence that teachers (in PKBM called Tutor) or education personnel (staff) are still actively carrying out their duties in PKBM. This decree contains the burden of teaching tutors in PKBM.

3.1.3. Meeting

Starting the new school year, of course, there are many things that must be prepared both administratively and physically, especially with regard to the service of learning activities. For this reason, it is necessary to have a meeting at the beginning of the school year which is also a coordination meeting to equalize perceptions as a step towards every detail of the decisions made. The Preparatory Office Meeting for the New Academic Year is also a forum for the presentation of the evaluation of the previous year's program.

3.1.4. In House Training

In House Training is an activity organized by a PKBM in order to improve the competence of tutors and staff. This IHT is very important to be carried out by schools as one of the Continuous Professional Development (CPD) that must always be carried out by teachers to improve their competence and maintain their quality. PKBM can carry out IHT according to their needs.

3.1.5. New Student Acceptance

New Student Admission is one of the annual agenda for student admissions at every school level. New Student Admission is one of the things considered in this model considering that prospective students who are accepted by PKBM will affect the treatment that must be done.

3.1.6. Tutor Recruitment

Tutor recruitment is carried out as a management activity that seeks to obtain one or more prospective employees who are truly potential to occupy certain positions in a school which is also the focus of this hypothetical model. Tutor (teacher) recruitment management is an effort and effort made by the principal in regulating the implementation of the recruitment of new tutors with the aim of getting qualified and competent tutors in their fields. With qualified tutors, it will have an impact on the PKBMs quality and quality of NFE.

3.2. Organizing

Organizing is the process of dividing work into small tasks, assigning those tasks to people according to their abilities, and allocating resources, and coordinating them in order to effectively achieve organizational goals. The purpose of organizing is so that the division of

labor can be carried out with full responsibility. The division of tasks is expected to improve the skills of each member of the organization (specialization) in managing the assigned tasks. One of the functions of management is to know that the organization is one of the most important management functions, because organizing means that all available resources in the organization are integrated in the form of human resources and other resources to achieve goals. Some of the activities carried out in the process of organizing in a hypothetical model of ICT-based learning media management in NFE include:

- 1) Establishment of an organizational structure along with the work program of the ICT Unit, Tutor Team, and Quality Assurance Team as a follow-up to the division of tasks that have been previously regulated in the Assignment Letter.
- 2) Coordination, namely the process of integrating goals and activities in separate units within an organization to achieve common goals efficiently.
- 3) Socialization, which is a process of introducing the system or program to all PKBM members and the general public.

3.3. Actuating

Actuating is an activity carried out in a planned, regular and directed manner in order to achieve the expected goals. Implementation is an operational process or policy becomes a reality in order to achieve the goals of the program that has been set. Some of the activities carried out in the implementation process in the hypothetical model of ICT-based learning media management in NFE in PKBM include:

- 1) Training, namely the training process delivered by the ICT Unit to every teacher, both old and new, to get the basic skills needed in carrying out tasks, especially in the manufacture and use of digital teaching materials and their applications in LMS.
- 2) Planning, namely the process of planning digital teaching materials which includes needs analysis, identifying the character of students and teaching materials.
- 3) Design, namely the process of compiling material into storyboards and developing flowcharts for digital teaching materials.
- 4) Developing is the process of developing digital teaching materials using supporting software (software developing tools) such as PowerPoint, Adobe Flash, Video/Photo Editor, etc.
- 5) Maintenance, namely the process of evaluating and maintaining digital teaching materials or ICT-based learning media to keep them up to date and minimize errors so that they are always ready to use.

3.4. Evaluation

Evaluation is a planned activity to measure, assess, and the success of a program. Evaluation is the best way to test effectiveness and productivity. In general, the evaluation of the hypothetical model of ICT-based learning media management in NFE is divided into three stages, namely:

- 1) Assessment at the initial stage of the program, which is carried out when the program has not been implemented. To determine the priority scale of various alternatives and possible ways to achieve the goals that have been formulated previously.
- 2) Assessment at the program implementation stage, which is carried out when the program has been implemented. To determine the level of progress of the implementation of the plan compared to the previous plan.
- 3) Assessment at the final stage of the program, which is carried out when the program has been completed. This is to review whether the achievements of the program are able to overcome the problems to be created to assess the efficiency and effectiveness of the program's achievements.

4. Conclusion

The success of a program will depend on leaders at every level of the organization, be it at the school level to the government level. In PKBM, for example, the head of PKBM must be able to provide understanding and affirmation to all staff in order to achieve the organizational goals that have been made. The chairman of PKBM as the spearhead of the government in implementing policies in the education unit he leads has an important role because it is directly related to students as recipients of educational services. Therefore, all forms of problems related to student learning will be found here to find solutions. Various government regulations, theories from various experts, quality of resources and characteristics of students will be alternative solutions to these problems. Solving this problem is none other than in the context of achieving an organized program. The results of this study are expected to be a recommendation model in the implementation of ICT-based learning media management in NFE specially in centers of community learning activities.

5. References

- [1] Mursid, R., and Erma Yulia. "Pengembangan pembelajaran dalam teknologi pendidikan di era ri 4.0." *Digital Library Universitas Negeri Medan* (2019). 511-522.
- [2] Rahmat, Abdul. "Manajemen Pemberdayaan "Pada Pendidikan Nonformal"." Gorontalo: Ideas Publishing (2018).
- [3] Bartin, Tasril. "Strengthening Non-formal Education Institutions in Indonesia through Accelerating the Implementation of Information Technology Literacy." *Digital Press Social Sciences and Humanities* 6 (2020): 00020.
- [4] Susanti, Sani. "Meningkatkan efektivitas pendidikan nonformal dalam pengembangan kualitas sumber daya manusia." *Jurnal Handayani Pgsd Fip Unimed* 1.2 (2014).
- [5] Tukur, Mohammed, Garba Umar Bebeji, and Muhammad Muhammad Suleiman. "The Impact Of Ict In Adult And Non Formal Education In Nigeria: A Review." *International Journal of Business, Law, and Education* 2.3 (2021): 105-113.
- [6] Kadafi, Asroful, et al. "Optimalisasi Learning Management System Di Pusat Kegiatan Belajar Masyarakat." *JMM (Jurnal Masyarakat Mandiri)* 6.4 (2022): 3237-3247.
- [7] Sutisna, A. *Metode Penelitian Kualitatif Bidang Pendidikan*. UNJ Press, 2021.
- [8] Sidiq, Umar, Miftachul Choiri, and Anwar Mujahidin. "Metode penelitian kualitatif di bidang pendidikan." *Journal of Chemical Information and Modeling* 53.9 (2019): 1-228.
- [9] Firmansyah, R., Wahab, Abdul A., Muchtar, Hendi S., Khoeriah, N. D. "ICT-Based Learning Media Management in Realizing The Quality of Student Learning" *International Conference on General Education (ICOGEN)* (2022).