Implementation-Blended Learning in Indonesian Open Junior High School

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This study investigates the implementation of blended learning in the Open Junior High School in Indonesia. It uses the quantitative descriptive survey method. Primary data were obtained through questionnaires. The study sampled students and teachers from Cirebon regency. Research was conducted during June to December 2015. The results showed that: In planning self-study, 16.7% of teachers said always to plan, 50% said often, 33% said sometimes, and none of the respondents states rarely and never. In planning face-to-face, as much as 43.8% of teachers said always to plan, 50% said often, 6.3% said sometimes, and none said rarely and never. But in planning online learning, as many as 12.5% of teachers said always to plan, 37.5% said often, 50% said sometimes, and none stated rarely and never. Implementation of blended learning in the Open Junior High School in Indonesia started from good planning, implementation and evaluation.

Key words: Blended Learning, Open Junior High School.

Introduction

The demand for quality human resources, able to compete globally, always calls for improving quality and competitiveness. The enduring problem of education is to extend and expand educational opportunities, and improve its quality. Children aged 13-15 cannot get an education because of geographical, socio-economic and demographic constraints. Open Junior High School (Open Junior) is to overcome this problem.

Open learning systems operate on different premises to Junior High School. Independent learning is prioritised, with limited help (bantuan) from subject teachers with young graduate teachers (Bina). The main learning material adalam print modules are supported by other learning media such as audio cassette tapes, broadcast education TV, VCD and video. To solve
students' learning difficulties during independent study, learning is conducted face-to-face. Considering the age of junior secondary students. Its self-learning is often challenged, so learning outcomes for students are less satisfactory or not in accordance with expectations. Thus, people often say the quality of Open Junior high school graduates remains low.

To improve the quality of Open Junior, a wide variety of programs and efforts has been developed. Methods and learning strategies have been addressed at length, to improve learning outcomes and the learning process.

“Blended Learning” is now more synonymous with an integration of online self-study learning, independent learning with print modules, and learning face to face (face-to-face tutorials). Bonk and Graham (2006: 5) describe blended learning as "blended learning systems combine face-to-face instruction with computer-mediated instruction". According to Dabbagh and Bannan Ritland (2005: 15) "online learning is an open and distributed learning environment that uses pedagogical tools, enabled by the Internet and web-based technologies, to facilitate learning and knowledge building through meaningful action and interaction".

Bershin (2009) remarked that "Blended learning is the combination of different media training: technologies, activities, and types of events to create an optimal training program for a specific audience”. Blended learning programs use many different forms of e-learning, perhaps complemented with instructor-led training and other live formats. Driscool & Carliner (2005: 234) define as follows: “Blended learning integrates programs in different formats to achieve a common goal”. Seaman and Garrett (2007: 5) define an online course or blended program as similar to that used for courses; in an online program at least 80 percent of the course content is delivered online, whereas in a blended program between 30 and 79 percent of the course content is delivered online.

This is in line with Betrus as cited by Januszewski and Molenda (2008: 228-230). The computer is now a major tool in making learning materials. It combines the functions of many tools and previous devices, and delivers instructions in a safe and comfortable package for instructors and trainers. The Internet-based computer has generally replaced most of the tools and devices that preceded it. Instructional videos, reference materials, audio recordings, simulation learning and others are available for internet use. Many of these materials are available on CD or DVD. Yet the current trend is accessing digital content directly via the internet. The e-TQM College (2009) offers the following definition: Blended learning is the combination of multiple approaches to learning. Blended learning occurs through 'blending' virtual and physical resources. A typical combination would the collective use of technology-based materials and face-to-face sessions, to deliver instruction. Strictly speaking, blended learning is anytime an instructor combines two methods for delivering instruction.
Currently blended learning is divided threefold. Wedemeyer in Keegan (1996: 59) gives the definition: Independent learning is that learning, that changed behaviour, that results from activities carried on by learners in space and time, learners whose environment is different from that of the school, learners who may be guided by teachers but who are not dependent upon them, learners who accept degrees of freedom and responsibility in initiating and carrying out the activities that lead to learning. Blended learning occurs through a range of variations of the model. INACOL summarizes the continuum model used in schools across the United States, to give educators working drawings of the many ways in which online learning integrates with and supports traditional instruction (face-to-face). Clearly blended learning models of INACOL can be shown in Figure 2.1.

**Figure 1. Continuum of Blended Learning Model**

At first many schools may not start with a blended learning approach, doing most of the instructions or online learning as a Model 1 and Model 2. In the first model the curriculum is carried out fully online. Students may request instruction face-to-face. The second model is partly or completely conducted online, with a few hours of study time either in the classroom or computer lab.

Furthermore Staker and Horn (2012: 8-15) group four models of blended learning. A majority category, designated Blended Learning program appears in the K-12 sector today. The models are as follows: (1) rotation models, divided into four models, namely station-rotation models, lab-rotation models, flipped-classroom model, and individual-rotation models; (2) flex models;
(3) self-blend models; and (4) enriched-virtual models. Clearly blended learning models of the Innosight Institute can be shown in Figure 2.2. below this.

Figure 2. Models of Blended Learning

Rossett and Frazee (10-12), in a special report, considered AMA blended learning models split into three, namely: (1) anchor blend- this model starts with defining events and real classes, followed by a free experience that covers the interaction with online resources, structured learning activities in the workplace, reference and online learning, recognition and assessment; (2) booked blend- a model characterized by a three-part experience: an introduction, a learning experience that contains more real and important material than intrusions online or face-to-face, and then something that expands and makes the learning into work practices. In other words, the booked blend model consists of planning and preparation online, actively training and face-to-face interaction, as well as online applications; and (3) field blend- most models are different from the usual training. This model is employee-centred, with each individual being surrounded by various types of assets and sustainable choices about when and where and whether to grab assets and that selection. Although classroom experiences are often part of a mixed field, it was just one of many methods, with a focus on continuous learning and reference and firm and free choice in employment. This model requires employees who are committed to continue the business and growth, relying on well-defined expectations, managers involved and assessments that point to resources. Key business according to this model is a treasure
trove of resources and a few ways to find "what is" and "what is right" for you and those around you.

Seaman, and Garrett (2007: 5) Illustration Course Table of the prototypical classifications.

Table 1. Illustration Course Table of the prototypical classifications

<table>
<thead>
<tr>
<th>Proportion of Content Delivered Online</th>
<th>Type of Course</th>
<th>Typical Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Traditional</td>
<td>Course with no online technology used —content is delivered in writing or orally.</td>
</tr>
<tr>
<td>1 to 29%</td>
<td>Web Facilitated</td>
<td>Course which uses web-based technology to facilitate what is essentially a face-to-face course. Uses a course management system (CMS) or web pages to post the syllabus and assignments, for example.</td>
</tr>
<tr>
<td>30 to 79%</td>
<td>Blended/Hybrid</td>
<td>Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has some face-to-face meetings.</td>
</tr>
<tr>
<td>80 to 100%</td>
<td>Online</td>
<td>A course where most or all of the content is delivered online. Typically have no face-to-face meetings.</td>
</tr>
</tbody>
</table>

Based on some of the above description, it can be concluded that blended learning is a combination of face-based learning and online learning, with an online learning composition as much as 30-79%.

**Literature Review**

**Online Learning**

Online Learning, otherwise known as electronic learning, or e-learning, is learning delivered by using electronics such as computers. Generally, one can access online learning material through networks, websites, the internet, intranets, CDs and DVDs (Smaldino, Lowther & Russwll, 2012). Dabbagh and Ritland (2005) define online learning as an open learning environment that uses pedagogical, internet and-based technologies on the Web as an effort to facilitate learning and knowledge building through meaningful interactions and activities.
(Dabbagh & Ritland, 2005). The use of networks, Web and the internet in defining online learning is also concluded upon by Richey, Klein, and Tracey (2011), who state that: Online learning is instruction delivered using the Web, the Internet and other distance technologies (Richey, Klein & Tracey, 2011). Online learning is learning delivered using the Web, internet and distance education technology.

Jolliffe, Ritter and Steven (2001), use another term for online learning, namely web-based learning because the Web is a very rich learning environment for building and delivering material online. Features such as email, discussion forums, video conferences, and lectures online can be done with the Web as well as some components of the facilitator of learning can be done with web-based learning (Jolliffe, Ritter & Stevents, 2001).

Referring to previous development research learning online, it can be concluded: There are several advantages to using online in learning, namely:

1. Learning online changes the learning experience in the classroom, provides additional assistance in learning for students and enables the formation of a stable and integrated learning community (Vine, 2016).
2. Learning online helps students to develop several generic skills in finding and evaluating information for their learning. In addition, through learning online, students can familiarize themselves with a number of technological tools including discussion boards, screencasts, and podcasts, all through a learning management system (Johnston, 2010).

**Blended Learning**

There is no single definition of blended learning. Horn and Staker stated it to be a formal education program where students study online and face-to-face directly, in the classroom. In online learning, students have control of their own time, place, and / or speed (Horn & Staker, 2015). A similar definition was given by Garrison and Vaughan who stated blended learning "is a coherent design approach that openly assesses and integrates the strengths of face-to-face learning and online learning" (Garrison & Vaughan., 2008) which means blended learning as an approach integrates the power of face-to-face meetings and online learning to achieve learning goals. Garrison and Vaughan in Semingson also stated that blended learning is active learning, as the opposite form of the general lecture class (Semingson, 2015) which is not much different from Macdonald's later describing blended learning as "the principled adoption of strategies and media to support course objectives and enhance responsiveness to student needs" (Macdonald, 2008). That means blended learning is the adoption of the principles of purposeful strategies and media to support learning goals and improve responses to student needs. Whereas, Klocke and Hedegard stated that blended learning is a paradigm shift that is intended to empower students and develop creative projects based on knowledge from related
disciplines, methods, and ways of thinking about these disciplines and the values in them (Klocke & Hedegard, 2015).

Blended learning, according to Thorne (2003), integrates innovative advances and technologies offered by online learning with interactions and participation offered in traditional learning (Thorne, 2003).

According to Hew and Cheung (2014), blended learning should be seen as a pedagogical approach that combines face-to-face with online learning that is able to enhance interaction, not just a mere means of delivering learning. The intended interaction is the interaction between students and the interaction between students and lecturers (Khe, & Cheung, 2014). Blended learning is about integrating Information and Communication Technology (ICT) into the design of courses, or subjects to enhance the teaching and learning experience for students and lecturers. In many cases, blended learning provides good experience and impact for students, and makes learning and management of subjects or subjects more effective (Bath & Bourke, 2010).

In addition to blended learning, the terminology often used is hybrid learning. Researchers often exchange the terms blended and hybrid. Lin, for example, stated that hybrid learning is a combination of online and face-to-face learning (Lin, 2009). Babb, Stewart, and Johnson use both terms in their article. They call hybrid or blended learning a combination of online and face-to-face learning (Babb, Stewart & Johnson, 2010). Similar things were expressed by Mossavar-Rahmani and Larson-Daugherty who stated that hybrid learning occurs when learning materials are delivered online and onsite (face to face) (Mossavar & Daugherty, 2007). It can be concluded that blended and hybrid terms can be exchanged with each other.

On the other hand, at the University of Washington, Bothell defines blended learning as learning that 25% - 50% of face-to-face time in class is replaced by online learning or out-of-class work. This is different from the Sloan Consortium which states blended learning occurs when 30% - 70% of learning is done online (Šimonová, Poulová & Kostolányová, 2016). However, Lynch from the University of Tennessee said that there was no agreement on the percentage of online learning, so that learning could be stated as blended learning and each institution had its own definition of online learning, distance education and blended learning (Lynch, 2014). It can be concluded that blended learning is a combination of face-to-face learning in the classroom with online learning outside the classroom using the Internet. This study combines face-to-face learning in the classroom with online learning outside the classroom; the proportion of material online being between 30% -70%. Determination of the proportion of the material can be measured by the student learning time used to study the material.
Some previous studies relating to the development and application of blended learning include:

Fidiatun, Sulistyaningrum and Ninghardjanti (2018). The results of the study showed that the application of the blended learning model based on “schoology” applications can improve student learning outcomes. Before the application of the schoology-based blended learning model, the value of the class average in the cognitive domain was 85.29, the percentage of completeness was 100%, the affective domain was at 100% completeness, the average B, the psychomotor domain was 85.03% with 100% completeness (Fidiatun, Sulistyaningrum & Ninghardjanti, 2018).

Marchalot, et al., (2017). The results revealed that blended learning was defined as a teaching method involving the internet and the presence of teachers in the classroom. Multimedia applications for learning developed with pedagogic platforms used Moodle software. Internet-based learning and teaching can improve learning outcomes (Marchalot, at all., 2017).

Barokati and Annas (2013). The blended-based learning contributed to the development of learning in the FKIP Unisda Lamongan, and was positively responded to by students as users (The assessment of students was 88.29%) (Barokati & Annas, 2013).

Simarmata, et al., (2016). The study showed the implementation of blended learning, to see differences in student learning outcomes between the experimental class and the control class using face-to-face and online traditional learning. The results showed that the analysis of the implementation of the blended learning model can be applied properly, because it can improve student learning outcomes (Simarmata, et al., 2016).

Alwan (2017). The results of the research on the development of blended learning in the XI IPS class of SMA Assalaam are: a) the development of blended learning using the Edmodo application; b) The blended learning model was declared feasible, based on the material expert validation with a score of 3.65 and model experts scoring it at 3.64 (good); and c) The effectiveness of the blended learning model was proven through increasing student learning outcomes from 55.29 to 88.65. Students generally respond positively (Alwan, 2017).

Rizkiyah (2015). This research was aimed at improving student learning outcomes, teacher teaching activities, student learning activities, and student responses in the implementation of Blended Learning strategies in class X TGB of SMK Negeri 7, Surabaya. The results of this study are as follows. (1) Student learning outcomes after the application of blended learning have increased, the percentage of mastery learning before the action was 30.30%, after the action it is 87.88%; (2) The results of teacher taught activities have increased from an average value of 55 in sufficient categories, to an average value of 68.33 in the good category; (3) The results of student learning activities from an average value of 26.33 in the less category, became
an average value of 35 (good category); (4) The results of student responses average at 36.67 (good category), and cycle 2 to 31 students get an average score of 40.06 (very good category) (Rizkiyah, 2015).

Olelewe and Agomuo (2016). The results revealed the effects of the model b-learning and the f2f method on student achievement in the programming language QBASIC at the College of Education in Enugu State, Nigeria. The tool used to collect data is the QBASIC Programming Achievement Test (QBPAT). The implication of this finding is that b-learning is more effective than the f2f method in increasing student achievement in QB programming (Olelewe & Agomuo, 2016).

The same study related to the motivation to use the internet and activities online of children and adolescents conducted by UNICEF and KOMINFO mentioned that most of the motivation and online activities carried out by them were related to school assignments, seeking information and socializing with friends through social media (Triastuti, Prabowo & Napis, 2018). This is supported by research by Kwan (2011) which states that learning online supports interaction between individuals and groups. Whereas interactivity is described as the ability of technology to build connections from one sub topic to another sub-topic of learning (Kwan, 2011).

Methods

The method used is descriptive research, wherein "a method in researching the status of human groups, an object, a condition, a system of thought or a class of events in the present which aims to create a description, picture or painting in a systematic, factual and accurate about the facts, characteristics and relationships between phenomena investigated "(Nazir, 2005: 63). In this study a survey technique was used to collect data. According Singarimbun and Efendi (2008: 5), survey research is research taking a sample from a population and using questionnaires as a data collection tool.

The sampling technique used in this study was selected on the basis of samples aiming (purposive sample) the sampling technique with consideration of specific purpose Arikunto, 2006: 130). The criteria for this sampling is an experimental class using the ICT curriculum in the learning process, young science teachers, senior teachers, responsible officials and the managers of class VIII Open Junior Scool Kandanghaur-Indramayu, West Java. Therefore, the sample in this research is class VIII A with the overall number of 34 students, two seniors teachers and two young teachers, officials as well as a principal of school / vice principal open junior high school Kandanghaur-Indramayu, West Java. It was a basis for the necessary research methods and techniques, as well as a means of collecting the relevant data. In this
study the techniques used for data collection were done through: Spreading the questionnaire, doing observations, and doing interviews.

**Results and Discussion**

**Lesson Planning**

Planning blended learning in the Junior Open setting includes planning self-learning, face-to-face and online learning.

**Figure 3. Diagram Results Blended Learning Teacher Resource Planning**

From Figure 3 it appears that the blended learning plan for the average teacher is already in accordance with a predetermined setting. In planning independent study, 16.7% of teachers said always to plan, 50% said often, 33% said sometimes, and none said rarely and never. In planning face-to-face, as many as 43.8% of teachers said to always plan, 50% said often, 6.3% said sometimes, and no-one said rarely and never. But in planning online learning, as many as 12.5% of teachers said always to plan, 37.5% said often, 50% said sometimes, and no-one said rarely and never.

In addition to the teachers, the students also do research in planning the learning process. Results as to student planning is shown in diagram 4.2 below:
The results of planning research show that in students’ blended learning, and in almost every self-learning, face-to-face and online learning, they do not do the planning of primarily face-to-face activities, the majority of 52.9% of students said never. Thus, virtually no questions of learning difficulties have been recorded and submitted, prior to face-to-face activities. In the independent study almost half the students claimed 47.1 occasionally plan at the time of self-learning, as well as online planning; 29.4% of students stated that they sometimes do the planning online.

**Learning Implementation**

Implementation of blended learning, namely the implementation of self-learning, face-to-face and online learning, can now be addressed. The data was obtained from questionnaires distributed to students, teachers and teachers' community development officials. This is its entirety:
Figure 5. Diagram Implementation of Blended Learning By Students

Figure 5 shows that the implementation of the blended learning by students reveals that most students still occasionally carry out online learning, and independent study; and that they rarely implement the face-to-face learning. Based on the diagram depicting the implementation of the independent study, 8.5% of students stated always doing independent study, 10.6% stated often, 37.1% said sometimes, 26.2% said rarely, and 17.6% said never. Then in the implementation of the face-to-face learning, carrying no student who declare always do face-to-face, 2.9% stated often, 25.5% said sometimes, 51% said rarely, and 20.6% said never. Online learning implementation recorded 3.8% of students stating always doing online learning, 12.4% stated often, 38.8% said sometimes, 27.4% said rarely, and 17.6% said never.

The results of the percentage of teachers in implementing the learning blended learning are as follows:

Figure 6. Diagram implementation of blended learning that comes from teachers.
Figure 6 shows that the implementation of the overall blended learning are often conducted by teachers. Based on the diagram, the implementation of the independent study showed that as many as 27% of teachers said always do independent study, 45% said often, 23% said sometimes, 5% said rarely, and none of the teachers who said never. On the implementation of face-to-face teaching, 25% of teachers said they always do face-to-face teaching, 41.7% stated often, 33.3% said sometimes, and no-one stated rarely or never. On the implementation of online learning, 27.3% of teachers stated always doing online learning, 36.4% stated often, 13.6% said sometimes, 13.6% said rarely, and 9.1% said never.

**Evaluation of Learning**

Here is the result of the overall data on the evaluation of student learning outcomes of the student, the teacher and the student teacher (Tutor).

**Figure 7. Data evaluation of learning outcomes of the student and teacher**

Figure 7 indicates that in the frequency of students carrying out the evaluation of learning outcomes, 19.2% of students stated that they always do the evaluation study, 15.5% stated often, 25.9% said sometimes, 17.6% said rarely, and 21.8% said never.

For the teacher (tutors), the results of the study noted that a majority sometimes do evaluations, and no teacher can always make the evaluation study. The diagram is based on a fraction of teachers: 37.5% said often, and most of the 62.5% of teachers said sometimes, and none stated “rarely” or “never”.

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As to teacher coaching, the evaluation study noted that 25% of teachers state that they always do a learning evaluation, and the remaining 75% said “often”, and no-one stated sometimes, rarely or never.

**Conclusion**

Planning is often the majority of independent studies conducted by teacher/tutors such as determining subject matter topics and determining student learning methods. The process helps students, so the focus and direction in learning the subject matter requires planning so that the independent learning process is more effective. But unlike tutors / teachers, students do not do lesson planning and do not determine the material to be studied in accordance with the learning objectives. Regarding media learning, teachers generally only determine which media to use once the media is used for learning, most likely because the media used, other than the existing modules in the learning activities site, are not in accordance with the applicable curriculum and the media are not suitable for use.

Lessons about students' independent learning activities use media / learning resources in addition to modules such as textbooks, worksheets and the Internet. When studying science, students sometimes use the media apart from the module. An evaluation study determined the success of the learning process. The final test module was executed when the students completed study materials / specific chapters. Based on the results, the final test module is rarely carried out. But the final unit exam and final semester student exam is always carried out.
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