ENHANCING THE UNDERSTANDING OF VOCATIONAL SCHOOL CURRICULUM MANAGEMENT IMPLEMENTATION THROUGH BLENDED LEARNING-BASED TRAINING SUPPORTED BY *IDAFI TOOL*

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***Abstract***

*The aim of this research is to investigate the improvement of the understanding of vocational school curriculum management implementation using blended learning-based training by comparing the result of pre-test and the post-test. The samples which taken purposively are numbered 103 participants, consisted of 26 head masters, 38 school curriculum manager, and 39 teachers from various vocational schools in Kabupaten Bekasi. The method used in this research was participatory action research. The researcher categorized the samples into three classes. The data in this research tested using paired T-Test and the result shows Tcalc > Ttable means that the pretest and posttest score is statistically different. It is concluded that the blended learning-based training give better effect in improving the understanding of vocational school curriculum management implementation and blended learning-based training were found to have the same effectiveness for teacher, curriculum manager and headmaster.*

**Key Words:** blended learning, curriculum management, *idafi tool.*

**1. Introduction**

The Ministry of Education and Culture of the Republic of Indonesia has a vision to form a Human and Ecosystem of Education and Culture with Character based on Mutual Cooperation and one of its missions are: (1) Realizing strong education and cultural actors; evenly (3), creating quality learning (4). Realizing cultural preservation and language development (5).

 Educators and education staff as professionals have an important and strategic role in the learning process to develop the potential of students. The task and obligation of the teacher is to manage learning well starting from planning, implementation, including conducting evaluations to be well organized. Management of this learning encourages the learning process to be carried out well so as to create quality education in achieving the learning objectives (Kemdikbud, 2018).

 But unfortunately Indonesia education visions have not been achieved optimally, it is showed from the high unemployment rate in Kabupaten bekasi that is dominated by vocational school students. This can be seen from the BPS West Java data which shows that the unemployment rate in Bekasi is ranked first which reached 10.97%.

 The issue of the development of education and culture according to the Bureau of Planning and Foreign Cooperation was picked out by several points: (1). The role of education development actors is not optimal (2). The role of cultural actors is still not large in preserving culture (3) Not all residents have access to quality ECD access services (4). The reasonable implementation of 12 years of quality education is not maximal (5). Improving the quality of learning is not maximal (6). Improvement of teacher management and teacher education / tendencies has not been maximized (7) Symptoms of waning student character and national identity (8) Improvement of family education has not been as expected.

 According to Olubu (2015) the poor performance of students attests to the fact that the teaching and learning process have not been effective enough, and the implementation of the curriculum considered as has not been optimal and correspond with the expectation. Means that the curriculum management implementation as the foundation for education needs to be investigated and needs remidy or improvement.

 Based on the problems described above, to find a solution, the researcher proposed research carried out in Training and mentoring in the application of the 2013 Curriculum in Kabupaten Bekasi by implementing training through "Blended Learning". The research will be implemented to educators and educators, through "Blended learning" through mixed learning between classical learning (collaborators and advanced / face-to-face learners) in a place combined with web-based online learning using internet social networks (collaborators with limited learners by distance and space, students learn independently or can discuss with collaborators or all friends. The blended learning in this research is also supported by the tools designed by the researchers which named IDAFI (*Instruction Design Aids for Implementation*) is learning development tools for making lesson plan that specifically designed according to the requirements of the Indonesia Curriculum of 2013.

 Previously, there are various researches have been conducted to test the effectiveness on Blended learning, such as the research conducted by David A Back, Nicole Haberstroh, Andrea Antolic, Kai Sostmann, Gerhard Schmidmaier and Eike Hoff detected the teaching effects of blended learning programs on students. Ahmad Al-Huneidi and Jeanne Schreurs in 2013, submitting a model that connects Constructivism Theory and Conversation in a Blended Learning environment, that research proposed model of various learning activities and scenarios, differentiated for working students and regular students whose application is supported by information technology, which facilitates the application of Constructivism theory and Conversations and increase the level of communication and interaction between students; as a result, quality learning, experience and results increase effectively.

 Jun Tong, Jun Han, Jing Liu, Fan Yang, and Shuo Chen in 2012 compared the characteristics of face-to-face learning, online learning, and blended learning. Carrying out comparative analysis of student learning influences factors from three types of learning modes, from the level of student independence, enthusiasm for learning, level of concentration of attention, learning communication, emotional communication, efficiency of problem solving, learning resources and evaluation of achievement. Explain that blended learning is the most effective way of learning, and describes its advantages in student learning. Elizabeth Stacey, Philippa Gerbic Stacey, E., Garbic, P, that teaching practice uses the concept of blended learning effectively.

 Such research could further suggest changes to educational standards and practices. If blended learning can improve students’ outcomes in several topics and for several participants, then similar strategies hopefully could work in other topics and for other age groups. So, different with those previous researchs this research was initiated to evaluate the effectiveness of using blended learning among the educators and education staffs in terms of vocational school curriculum management implementation.

**2. The Methods**

The research method used in this research is Participatory Action Research (PAR). Participatory Action Research is the research that conducted in social as real condition. This is because the researcher cannot artificially create groups for the experiment. This method is appropriate with the purpose of the research which is investigating the effect of blended learning-based training by comparing the result of pre-test and post-test in the topic of vocational school curriculum management implementation supported by learning development tools. The design that will be used in this research is pre-test and post-test design. The researcher assigns intact groups based on their categories, administers a pre-test to all groups, conducts treatment activities with the experimental, and then administers a post-test to assess and analyze the gained improvement (Creswell, 2012).

**Table 1.** Pre-test and post-test design

|  |  |  |
| --- | --- | --- |
| Pre-test | Blended Learning-based Training on Curriculum Management Implementation | Post-test |

This research conducted in Kabupaten Bekasi. The samples of this research is 103 participants who are education staffs from 40 vocational schools. Then the samples are categorized into three groups, which are groups of head masters, school curriculum managers and teachers. The participants ages ranged between 25 to 50 years old.

The sampling technique that will be used is Purposive Sampling. Purposive sampling is one of the non random sampling sampling techniques where the researcher determines the sampling by specifying specific characteristics that are suitable with the objectives of the study so that it is expected to answer the research problems (Fraenkel, Hyun and Wallen, 2007).

3. Result and Discussion

 To explore the relative effectiveness of blended learning-based training in this research, the score results of pretest and posttest based on the interval is shown below. The average of the score gained was determined for each class. Using the pretest and posttest as the unit of analysis, effect sizes were calculated statistically to describe the magnitude of the difference mean between pretest and posttest score.

**Table 1.** The score interval and average score of pre-test

|  |  |  |  |
| --- | --- | --- | --- |
| Score Interval | Teacher | Curriculum Manager | Head Master |
| **F** | **%** | **F** | **%** | **F** | **%** |
| 90-100 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| 75-89 | 1 | 2,50 | 1 | 2,56 | 0 | 0,00 |
| 60-74 | 6 | 15,00 | 12 | 30,77 | 3 | 11,54 |
| 45-59 | 11 | 27,50 | 12 | 30,77 | 8 | 30,77 |
| 0-44 | 22 | 55,00 | 14 | 35,90 | 15 | 57,69 |
| Total | 40 | 100 | 39 | 100 | 26 | 100 |
| Average Score | 46,47 | 50,93 |  40,79 |

 From the table above, it shown that before each class was given treatment, the curriculum manager class gained the highest score compared by the other classes and the head master class got the lowest one. It can be seen from the average score. More than half (55%) of the teacher participants got the lowest score, while the curriculum manager and head master class score was mostly distributed in three different intervals.

**Table 2.** The score interval and average score of post-test

|  |  |  |  |
| --- | --- | --- | --- |
| Score Interval | Teacher | Curriculum Manager | Head Master |
| **F** | **%** | **F** | **%** | **F** | **%** |
| 90-100 | 1 | 2,5 | 1 | 2,56 | 0 | 0,00 |
| 75-89 | 11 | 27,5 | 13 | 33,33 | 8 | 30,77 |
| 60-74 | 15 | 37,5 | 19 | 48,72 | 12 | 46,15 |
| 45-59 | 8 | 20,0 | 5 | 12,82 | 5 | 19,23 |
| 0-44 | 5 | 12,5 | 1 | 2,56 | 1 | 3,85 |
| Total | 40 | 100 | 39 | 100 | 26 | 100 |
| Average Score | 65,43 | 68,89 |  66,61 |

 In the posttest score, the curriculum manager class still shown the highest score rather than two other classes. But the scores of the three classes were seems not significantly different, and most of the participants from each classes got the posttest score around 60-74.

**Figure 1.** The graphic of pre-test and post-test score

 Then the normality and homogenity of the pretest and posttest data from three classes were checked as the consideration to choose the appropriate statistic method. The normality and homogenity results are shown in the Table 3. and Table 4.

|  |
| --- |
| **Table 3.** The result of normality test |
|

|  |  |  |  |
| --- | --- | --- | --- |
|  | Teacher | Curriculum manager | Head master |
| Pretest | Posttest | Pretest | Posttest | Pretest | Posttest |
| L0 | 0,101 | 0,114 | 0,109 | 0,052 | 0,112 | 0,129 |
| Lt | 0,886 | 0,886 | 0,886 | 0,886 | 0,173 | 0,173 |
| Conclusion | Normal | Normal | Normal | Normal | Normal | Normal |

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**Table 4.** The result of homogenity of variance test

|  |  |  |  |
| --- | --- | --- | --- |
|  | Teacher | Curriculum manager | Head master |
| F0 | 2,238 | 3,320 | 0,913 |
| Ft | 4,080 | 4,080 | 4,260 |
| Conclusion | Homogen | Homogen | Homogen |

 Table 3. shown the result of normality test using Liliefors method by comparing the L0 (L calculation of the data) with Lt (L table) or critical value of Liliefors. The score of teacher and curriculum manager have the Lt of 0,886 because it depends of the Liliefors table for the data more than 30 and α=0,05 (for education field), while the score of head master class has the Lt of 0,173. From all of the results, the L0 are smaller than Lt (L0<Lt), so it can concluded that the data from each class is normally distributed.

 For the homogenity test the researcher used Fisher Test and the three data also showed the result F0>Ft so that the data can be said as homogen. The F0 are gained by calculation while the Ft was from the Fisher Table based on α and df number. Because both tables above denoted that the data gained by the researcher is normal and homogen and the appropriate statistic test is parametric statistic.

**Table 5.** Paired Samples Test (Teacher)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Paired Differences** | **t** | **t table** | **df** | **Sig. (2-tailed)** |
| **Mean** | **Std. Deviation** | **Std. Error Mean** | **α=0,05** |
|  | **Lower** | **Upper** |
| Teacher | -19.618 | 15.264 | 2.444 | -24.566 | -14.670 | 8.026 | 2,024 | 38 | .000 |
| Curriculum manager | -16.349 | 11.712 | 1.900 | -20.199 | -12.499 | 8.605 | 2,026 | 37 | .000 |
| Headmaster | -25.802 | 19.861 | 3.895 | -33.824 | -17.780 | 6.624 | 2,060 | 25 | .000 |

 The normal and homogen data is appropiate to be processed using t-test, and because the data are paired so the paired sample t-test was used to check the significancy different of pretest and posttest result. The result of paired sample t-test are shown in Table 5 above. Based on the calculation, we can see that the t0 (t calculation) was bigger than t table (t>ttable) so the three classes perceived a statistically significantly effect using blended learning based training.

 During the learning process, researcher noted that the participants initially struggled more, especially to register the online learning. But, as the treatment period progressed, participants became more and more familiar with the overall process and required less prompting from the instructors.

**4. Conclusion**

 Based on the data analysis, it can be concluded that the blended learning-based training appears to have more benefited the participants in terms of the understanding of vocational school curriculum management implementation.

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