Design of Countenance Evaluation Model Based on ANEKA-Tri Hita Karana in Computer Learning for Vocational Students of Information Technology in Bali

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Abstract. This study was intended to provide an overview of the countenance evaluation model design based on ANEKA values integrated with Tri Hita Karana concept in computer learning, generally for vocational students of information technology and specifically for vocational students of information technology in Bali. The approach that was used in the design of this evaluation model was a research and development (RnD) of Borg and Gall model, which focuses on the stage of developing the preliminary form of a product. Parties who were involved in model testing were two educational experts and two informatics experts. The tools that were used in model testing were questionnaires. The analysis technique used in this study was quantitative descriptive manner to describe the data. The result showed that the initial form was ready to be used with a good level of effectiveness.

1. Introduction

Recent implication of industrial revolution 4.0 is now inevitable. This revolution occurs because the support of information technology development which rapidly grows up. The positive impact of the present industry revolution 4.0 is that all things can be done quickly and accurately with the help of information technology. Currently, information technology has been able to facilitate all needs in the areas of health, economy, political condition, education, and so forth. However, aside from various positive impacts, it cannot be denied the emergence of negative impacts including a lot of hoax news, sexual abuse, and violence. The negative impacts would then lead to decrease student characters. The decrease in the student characters, especially in senior high school or vocational high school now begins to appear. It can be seen from some examples such as many students not coming to school, students do violence, and students disobeying the rules.

The decrease in student character has also happened in several regencies in Bali province, such as Tabanan, Denpasar, and Badung. These problems occur because the rupture of understanding about Pancasila values and the concept of state defense [1]. In addition, character decrease is also found in students of the vocational high school and especially in ICT field. It occurs because students of ICT in vocational high school have been accustomed to operating information technology, so they tend to be more quickly affected by the advances in information technology and very risky to be affected by
negative things. Based on the attention to that situation, it will greatly affect the learning process in school. Learning is an activity to change the mind, attitude and mental learners from unpleasant to pleasant condition.

The quality of learning can be said to be good if learners can improve insight/knowledge, and can show/maintain good manners and character. The quality of good learning can be obtained through a good learning process. However, in reality, today there are still many learning processes in schools do not run optimally, for example, the use of information technology in helping the learning process is not used in accordance with the allocation, the values of character has been decreased indicated by promiscuity, participants students have dared to oppose school rules, and others. The decrease in the student characters is caused by the low implementation and actualization of ANEKA values (Accountability, Nationalism, Public Ethics, Quality Commitment, and Anti-Corruption) in the learning process.

The decrease in accountability values, such as not having a sense of being responsible to finish the task/homework provided by the teacher and cheating the culture. The decrease in nationalism values, such as mutual mockery and disrespect the opinion of friends during group discussion, often noisy while the teacher is explaining the teaching materials. The decrease in public ethics values, such as: dare to violate school rules, dare against the teacher, and not discipline, disfigure the name of a school. The decrease in quality commitment values, such as: not creative, make the task careless and lack of focus in following the learning process. The decrease in anti-corruption values, such as: littering and being afraid of expressing opinion and action.

In anticipating the increasingly widespread problem in the learning process, it is necessary to evaluate the learning process that occurred in the vocational school (especially in ICT field) in Bali Province. Through the evaluation, then it can be found a recommendation to solve the problems encountered in the learning process. In general, evaluation is the activity of collecting and analyzing data to obtain recommendations that will be used in taking a decision.

Those statement according with the definition of evaluation expressed by Mahayukti, et al [2], Divayana, Adiarta and Abadi [3], Pratama, Setiawan and Ruslan [4]; Jampel, et al [5]; Divayana, et al [6],[7]; Arnyana, et al [8]; Mak [9]; Chu, Liu and Liu [10]; Kamaludin, et al [11]; Pauline, et al [12]; Sern, et al [13]. One suitable evaluation model used to evaluate the learning process in vocational high school (especially ICT field) in Bali Province is a model capable of performing evaluation ranging from components that measure the ability level of learners to ethical values and character of learners based on consideration of ANEKA value integrated with the Tri Hita Karana concept. Therefore, it is necessary to develop a countenance evaluation model based on ANEKA values (Accountability, Nationalism, Public Ethics, Quality Commitment and Anti-Corruption) integrated with Tri Hita Karana (Parahyangan, Palemahan, and Pavongan) concepts.

The research results about character education through school culture, that conducted by Furkan [14] have similarities with research conducted by researcher in terms of their research purpose was about improving the education quality or learning quality, and the research approach used in qualitative. The research difference lies in the model was used to achieve of expected objectives, where Furkan used the model of character values development of learners, while the researcher used countenance evaluation model based on ANEKA value integrated with Tri Hita Karana concept.

Research about the teachers’ views on values education, conducted by Thornberg and Oğuz [15], has similarities with research conducted by the researcher in terms of his research purpose, that is, improving the education quality or learning quality, and also research approach used in qualitative. The difference lies in the use of appropriate strategies to achieve expected objectives, where Thornberg and Oğuz only used the internalization of values education in learning process, while researcher used the internalization of ANEKA values integrated with the Tri Hita Karana concept in the learning process.

Research about the implementation of school culture values in realizing quality school, that conducted by Yuniarsih, Sutarman, and Riyanto [16] has similarities with research conducted by the researcher regarding his research purpose was about improving the education quality or learning quality, and research approach used in qualitative. The difference lies in the efforts made to achieve the expected goal, where Yuniarsih, Sutarman, and Riyanto seeks to implement the values of school culture in
realizing quality learning process, while researcher implements the of ANEKA values integrated with Tri Hita Karana concept in a learning process.

Based on the problems which was found and the study of several studies that have been done by some previous researchers, the researchers are interested in research the development of countenance evaluation model based on ANEKA values integrated with Tri Hita Karana concept to improve the character and quality of computer learning, especially at ICT vocational school in Bali Province. The primary objective of this paper is to introduce the design of countenance evaluation model based on ANEKA values integrated with Tri Hita Karana concept in computer learning for vocational students of information technology in Bali.

2. Method

This research was RnD based on Borg and Gall model, with ten stages, such as 1) research and information collecting, 2) planning, 3) developing preliminary form of product, 4) preliminary field testing, 5) main product revising, 6) main field testing, 7) operational product revising, 8) operational field testing, 9) final product revising, and 10) disseminating and implementing [17].

This paper study only focuses on the development stage design (develop the preliminary form of product). The participants involved in the design testing process are two education experts and two informatics experts. The tool was used in testing the evaluation model design that had been formed was a questionnaire. The number of instruments item to measure evaluation model design as much as ten items.

The analysis technique was used in this research was quantitative descriptive by using descriptive percentage calculation. The percentage descriptive calculation yields assessment percentage that subsequently was used to provide an interpretation or assessment of the test results of evaluation model that was developed. The formula that was used for descriptive percentage calculation was as follows [18].

\[
\text{Percentage} = \frac{\sum \text{(Answer} \times \text{Weight of Each Answer Choice})}{n \times \text{Highest Weight}} \times 100\% \quad (1)
\]

Notes: \(\sum = \text{total}\)
\(n = \text{The total number of questionnaires item}\)

3. Results and Discussion

The results obtained in this research are design of countenance evaluation model based on ANEKA values integrated with Tri Hita Karana concept in computer learning, so later can be used as an overview of the stages that can be done by the education evaluator in evaluating the character and quality of learning computer on students in generally, and specifically for students in Bali Province. The design view of countenance evaluation model based on ANEKA-Tri Hita Karana in computer learning can be shown in Figure 1.
Figure 1 shows that the countenance evaluation model based on ANEKA-Tri Hita Karana in Computer Learning consists of two main parts, namely: description and judgment matrix. Rational facts that were inputted into the description matrix section are measured intensively with a review of three important things, such as 1) expected context (often called Antecedents), 2) expected processes (often called transactions), and 3) expected results and effects (often called outcomes). Those three important things based on the ANEKA concept, which consists of 5 components, such as 1) Accountability, 2) Nationalism, 3) Public Ethics, 4) quality commitment and 5) Anti-Corruption. In principle, ANEKA is the internalization concept in five positive values of person when performing a particular job, to manifest a professional person. The term of ANEKA was taken based on the initial letters of the five positive values that must be internalized, such as 1) Akuntabilitas (in Indonesian) or Accountability (in English), 2) Nasionalisme (in Indonesian) or Nationalism (in English), 3) Etika Publik (in Indonesian) or Public Ethics, 4) Komitmen Mutu (in Indonesian) or Quality Commitment (in English), and 5) Anti-Korupsi (in Indonesian) or Anti-Corruption (in English).

The facts that are measured by using three important things in the description matrix (antecedents, transactions, and outcomes) are examined and compared against the standard (antecedent standard, transaction standard, and outcomes standard) in the judgment matrix section. All those standards must be integrated with the Tri Hita Karana concept, which consists of 3 components: 1) Parahyangan, 2) Palemahan, and 3) Pawongan. In general, Tri Hita Karana is the three causes of happiness in human life. The happiness occurs because of the good relationship between peoples and God (usually called Parahyangan), the good relationship between peoples (usually called Palemahan), and the good relationship between peoples and their natural environment (usually called Pawongan). The observation results and comparative analysis between facts that was input and the existing standard were used as the base on the judgment section to give the right recommendations, so it easier in making a decision.

An evaluation model design can be said to be ready for use if it has been through a trial process and obtain results with a minimum value is a good category. The test results conducted by four experts on the design of countenance evaluation model based on ANEKA integrated with Tri Hita Karana concept can be seen in Table 1.
Table 1. Test Result of Design of Countenance Evaluation Model Based on ANEKA-Tri Hita Karana

| Item- | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | ∑   | Effectiveness Percentage |
|-------|---|---|---|---|---|---|---|---|---|----|-----|-------------------------|
| Education Expert-1 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 5  | 45  | 90%                     |
| Education Expert-2 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5  | 5  | 46  | 92%                     |
| Informatics Expert-1 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4  | 43  | 86%                     |
| Informatics Expert-2 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 4  | 42  | 84%                     |
| **Average**       |   |   |   |   |   |   |   |   |   |    | **88%**      |                         |

Determination of 10 items of instruments used to measure the effectiveness of Design of Countenance Evaluation Model Based on ANEKA-Tri Hita Karana refers to several criteria determining the effectiveness of a program, such as productivity, efficiency, stability, adaptation, quality, and satisfaction. Some of those criteria for determining program effectiveness have accordance with several effectiveness criteria expressed by Goodman and Pennings in 1977 [19], such as: quality, productivity, alertness, efficiency, stability, motivation, satisfaction, and forth.

Categorization of percentage effectiveness level of five scale, consist of the excellent category with percentage range 90-100%, the good category with percentage range 80-89%, the moderate category with percentage range 65-79%, the less category with percentage range 55-64%, and the poor category with percentage range of 0-54% [18]. Based on the average results of effectiveness percentage is shown in Table 1, so the design of countenance evaluation model based on ANEKA-Tri Hita Karana belongs to a good category in the categorization of percentage effectiveness level of five scale. Therefore, that evaluation model design not revised again and ready to be used by the evaluator to evaluate the quality and character of vocational students of ICT in computer learning. In addition to the advantages in the form of new evaluation model obtained from the results of this study, there are several weaknesses that are still found in this study, including 1) difficulty determining minimum standards in measuring the student characters viewed from Parahyangan aspects, and 2) there aren’t applications can automatically perform the percentage calculation of effectiveness level each evaluation aspects in views from ANEKA components and Tri Hita Karana components.

4. Conclusions
This research has been able to make positive contribution in educational evaluation field with the invention of new breakthrough in the form of countenance evaluation model design based on ANEKA integrated with Tri Hita Karana concept that has been tested and categorized as good, and ready to use to evaluate the character and quality of computer learning on vocational students of ICT in Bali province.

The solutions that can be done to solve the obstacle found in this research, are: 1) to set the minimum standard in Parahyangan aspect based on the validity test against standard on judgment matrix involving education experts, informatics experts, and also at least two Hinduism experts, so being able to know the depth of student character values in following the computer learning process, 2) create a desktop-based application that can automatically perform the percentage calculation of effectiveness level each evaluation aspect.

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