Application design of countenance evaluation based on Tri Hita Karana-Aneka for evaluating the students’ computer capability and students’ character

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Abstract: The deterioration of attitudes and knowledge quality of IT Vocational students can occur due to low self-control and carelessness in information technology utilization for supporting the learning process. Therefore, an evaluation is needed to get a solution to that problem. The existence of an effective evaluation model at this time is highly demanded to provide appropriate recommendations as a solution. This study aimed to provide an overview of the application form of the Countenance evaluation model that adopts the concept of Tri Hita Karana and ANEKA. This application can be used to measure the abilities quality and character of IT Vocational students while following the computer learning process. The method that was used in this research was R & D, which focuses on the design stage. Subjects were involved in the testing of application design were four-person, including two education experts and two informatics experts. The instruments were used to obtain assessment data from experts about application design were questionnaires. The assessment results from experts showed good design quality when viewed from the standard reference score with the evidence of percentage was 87.50%.

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PUBLIC INTEREST STATEMENT

Application design of the Countenance evaluation model based on Tri Hita Karana-ANEKA is an application that is formed from a combination of three things, including: the Countenance evaluation model, Tri Hita Karana concept, and ANEKA concept. The design of this application is essential for being known by the general public because it provides an illustration of an application that is used to evaluate the character and capability of students to learn computers with recommendations in the form of priority indicators that need to be improved in students based on the evaluation results of the Countenance evaluation model based on Tri Hita Karana-ANEKA aspects.
1. Introduction

The misuse of information technology functions in the learning process causes a decrease in the learning quality and raises the moral degradation of students. The abuse occurs as a result of the self-awareness deficiency of students in responding to the changes that occur in the learning process in the 4.0 industrial revolution era. All the learning processes carried out in IT Vocational schools are hoped able to utilize information technology optimally when the 4.0 industrial revolution began. This is able to cause the transfer of knowledge, and access to teaching materials is able to be handled quickly anytime and anywhere without being restricted by space and time.

However, the facts that occur in the field (especially in Bali Province) showed something else and not as be expected, where there was a tendency for IT Vocational students to misuse information technology-based learning facilities for things that deviate from the subject material. They tend to use information technology facilities during learning to access negative things, such as porn videos, online games, online gambling, and other harmful sites. Based on those facts, it is necessary to carry out a comprehensive evaluation of the learning process assisted by information technology in IT Vocational schools.

Some conventional evaluation models had been used to evaluate the implementation of learning in IT vocational schools, but the results had not accurately demonstrated the obstacles that cause moral decline and student achievement. Based on those situations, then need an application based on an evaluation model that is fast and accurate is able to carry out an evaluation process starting from the description situation stage that triggers a moral decline and student achievement decrease in the learning process until the stage of giving recommendations and decisions. The one application innovation that can be used to evaluate the implementation of information technology-assisted learning at IT Vocational schools in Bali Province is the evaluation application of the Countenance model based on a combination of Tri Hita Karana and ANEKA.

Based on the existence of that innovation, the main objective of this research was to determine the design of the Countenance model evaluation application based on Tri Hita Karana-ANEKA. From that research goal, so was able to be created the problem statement of this research, namely: how is the design of the Countenance model evaluation application based on the combination of the Tri Hita Karana concept and the ANEKA concept that is used to evaluate students’ morale and achievement while participating in the computer learning process at IT Vocational schools in Bali Province?

The presence of this research was based on the several results of previous research. Some of the studies previous that background this research include the following: 1) the research that was conducted by Kamal and Elim (2018), showed the results that the implementation of the project-based learning model was used effectively to assess the behavior and attitudes of civil servants candidates. The obstacle that was found in the Kamal and Elim’s research was the implementation of the learning model only focuses on the aspect of anti-corruption and had not touched other aspects, such as accountability, nationalism, public ethics, and the quality commitment that are needed by civil servants candidates to be more professional; 2) The research that was conducted by Hilyana and Hakim (2018) showed the results of integrating character values from the ANEKA concept into the learning process. That research has a connection and similarity with this research, namely in terms of integrating ANEKA concepts into indicators of moral assessment and student achievement at IT Vocational schools. The obstacle that was found in the Hilyana and Hakim’s research was the absence of the Tri Hita Karana concept which was used as a foundation in controlling the integration of ANEKA values so that ANEKA values were not able to be internalized optimally in the learning process; 3) The research that was conducted by Parwati et al. (2017)
showed a positive influence from the *Tri Hita Karana* concept in the learning process, especially in the field of tourism. That research has similarities and relevance to this research in terms of the utilization of the “*Tri Hita Karana*” concept, namely as a basis for determining judgment standards in the Countenance evaluation model that was used to evaluate the computer learning process of IT Vocational students. The obstacle that was found in the research conducted by Parwati, Suparta, and Mariawan was the absence of accurate calculations in determining the implementation effectiveness level of *Tri Hita Karana* concept in the learning process; 4) The research that was conducted by Gondikit (2018) showed the results of antecedents, transactions, and outcomes in the matrix description that was in accordance with antecedents standards, transaction standards, and outcomes standards on judgment matrix in evaluating Post PT3 Program. Gondikit’s research has similarities in this research related to the use of the description matrix and judgment matrix that was used in evaluating the computer learning process at IT Vocational schools. The obstacle that was found in Gondikit’s research was the determination of judgment standards data that had not been based on concepts that were able to control and measure student character accurately.

Based on the objectives, the problem statements, and previous researches that background this research, so it is necessary to research on application design by applying the Countenance evaluation model based on the combination of the *Tri Hita Karana* concept and the ANEKA concept. The design results can be used as a basis for making applications in physical form to evaluate the computer learning achievement and morale of IT Vocational students in Bali Province optimally.

2. Basic literatures
Some pieces of literature that were used as a theoretical basis in this research were related to the Countenance evaluation model, ANEKA concept, and the *Tri Hita Karana* concept. According to Gondikit (2018), Miller et al. (2016), Thanabal et al. (2015), Fatima et al. (2016) stated that the Countenance evaluation model is a flexible evaluation model by using description matrix and judgment matrix stages so that it can be used in various situations depending on the objectives to be achieved by the evaluators.

Ariah et al. (2018) stated that Countenance is an evaluation model consisting of three stages of evaluation, including: antecedents (it can also be termed as context), transactions (it can also be termed as processes), and outcomes (it can also be termed as outputs). Dewantara (2017) also has an idea which is basically similar to the concept of the Countenance evaluation model revealed by Ariah, Jalal, and Supena, where Dewantara revealed that in evaluating the learning process are needed evaluation stages, such as planning (it termed antecedents), implementation (it termed transactions), and output (it termed outcomes).

Based on some thoughts about the Countenance evaluation model, it can be taken in general that Countenance is one of the evaluation models that can be used to evaluate various programs types in accordance with the evaluation focus that has set previously by evaluators based on two matrices, namely description matrix which has three stages (antecedents, transactions, and outcomes) and judgment matrix which has three stages (antecedents standard, transactions standard, and outcomes standard).

According to Hilyana and Hakim (2018), the concept of ANEKA was introduced by the government of the Indonesia Republic to educate and train the candidates of civil servants to become state servants who are professionals in carrying out their duties. Ariawan et al. (2018), Febriansyah and Ramdlany (2016) stated that “ANEKA is an acronym of the following five words: 1) Accountability (in English) or Akuntabilitas (in Indonesian); 2) Nationalism (in English) or Nasionalisme (in Indonesian); 3) Public Ethics (in English) or Etika Publik (in Indonesian); 4) Quality Commitment (in English) or Komitmen Mutu (in Indonesian); 5) Anti-corruption (in English) or Anti Korupsi (in Indonesian)".
The ANEKA concept is similar to Ssonko’s (2010) thinking which stated that public services must be managed properly by firmly carrying out the concepts of ethics, accountability, transparency, integrity, and professionalism. Ssonko’s statement regarding the concept of ethics that must be implemented to obtain quality public services have been introduced by the Indonesian government in the concept of ANEKA especially in the section on public ethics, the accountability concept in carrying out public services has also been contained in the ANEKA concept especially in the part of akuntabilitas (accountability), the transparency concept in carrying out public services is contained in the ANEKA concept, especially the part of anti korupsi (anti-corruption), the integrity concept in carrying out public services is contained in the ANEKA concept especially in the part of nasionalisme (nationalism), the professionalism concept in carrying out public services is contained in the ANEKA concept especially in the part of komitmen mutu (quality commitment). Based on some thoughts about ANEKA, so it can be concluded that ANEKA is a concept initiated by the government of the Republic of Indonesia to prepare the prospective civil servants to become professional civil servants through training and education about character values (including accountability, nationalism, public ethics, quality commitment, and anti-corruption) that must be internalized in each of their self.

According to Sukarma (2016), and Perbowosari (2019), stated that Tri Hita Karana is a concept that has been inherited as a culture in the life of Balinese people about three causes of well-being, which including: Parahyangan, Palemahan, and Pawongan. The same statement also was expressed by Sukawati (2017), Astawa et al. (2019), Wesnawa and Saustra (2016), Ariyanto et al. (2017), Suci et al. (2018), Wiradika and Jaedun (2018), Kusuma et al. (2019), Sukarma et al. (2018), who stated that Tri Hita Karana is three causes of happiness and prosperity, which include: Parahyangan, Pawongan, and Palemahan. Mudana et al. (2018), stated that Parahyangan means a harmonious relationship that occurs between humans and God, Palemahan means a harmonious relationship that occurs between humans and the environment, and Pawongan means a harmonious relationship that occurs between fellow human beings. Based on some thoughts about Tri Hita Karana, so it can be concluded that Tri Hita Karana is the three sources of happiness and prosperity for humanity obtained through good relationships that are spiritually connected between mankind and God (it termed Parahyangan), good relations that awake between humankind and the surrounding natural environment (it termed Palemahan) and good relationships that are intertwined between humanity (it termed Pawongan).

3. Method
This research used the R & D development method with Borg & Gall model (Setiadi et al., 2016), that focuses on the design stage. The user interface design for the evaluation application of the Countenance model based on Tri Hita Karana-ANEKA was done at the design stage. The respondents who were involved in testing this evaluation application consist of four experts, namely: 2 education experts with scientific specifications in the field of educational evaluation and two informatics experts with scientific specifications in the field of artificial intelligence.

The instruments that were used by experts to assess the evaluation applications were in the form of questionnaires consisting of 10 items. The technique that was used to analyze the collected data was a quantitative descriptive technique, where the percentage level of design quality that was obtained through experts’ assessment results then described based on standard five-point reference scores. Maryansyah (2016) stated that the formula that was used to determine the percentage level of design quality can be seen in equation (1), while the standard five-point reference scores can be seen in Table 1 (Ariawan et al., 2018), (Sugiharni, 2018).

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

Notes: $n = \text{total number of questionnaires item}$

$\sum = \text{total}$
4. Results & discussion
This research resulted in the user interface design of the evaluation application of the Countenance model based on Tri Hita Karana-ANEKA. Some forms that exist in the user interface design of the evaluation application can be seen in the following Figures 1–10.

The experts' evaluation results toward the evaluation application design of the Countenance model based on Tri Hita Karana-ANEKA were used as a basis to obtained general conclusions on the quality of application design. The experts’ evaluation results to the evaluation application design can be seen in Table 2.

Figure 1 shows the display of the main menu design, which functions as the primary pointer to go to other forms. Figure 2 shows the display of indicators input design, which functions as a facility to enter data of Tri Hita Karana aspects, ANEKA components, ANEKA aspects, and ANEKA indicators. Figure 3 shows the design display of scores input from respondents, which functions to enter the scores given by respondents on each indicator in ANEKA aspects. Besides, this form also provides facilities to calculate the average of the scores that had given by all respondents to each ANEKA indicator.

The indicators that are given scores in the component of accountability, especially in the honest aspect, including: the indicator of I-1 namely “dare to admit mistakes/negligence”, the indicator of I-2 namely “working the exam questions according to abilities”, and the indicator of I-3 namely “don’t cheat on the exam”. In the component of accountability, especially in responsibility aspect,

| Quality Percentage (%) | Category   |
|------------------------|------------|
| 0–54                   | Poor       |
| 55–64                  | Less       |
| 65–79                  | Moderate   |
| 80–89                  | Good       |
| 90–100                 | Excellence |

Table 1. The standard five-point reference scores

Figure 1. Design of main menu.
including: the indicator of I-4 namely “doing the task seriously”, and the indicator of I-5 namely “finishing the task on time”. In the component of accountability, especially in consistent aspect, including: the indicator of I-6 namely “the teachers do not hesitate in making decisions”, and the indicator of I-7 namely “the teachers consistently and correctly in assessing the student’s ability”. In the component of accountability, especially in aspect of prioritize the public interests, including: the indicator of I-8 namely “during group activities, the group leader always takes a decision based on the agreement with group members”, and the indicator of I-9 namely “during group activities, the group leader allows group members to show their opinions”. In the component of accountability, especially in participatory aspect, including: the indicator of I-10 namely “being able to help friends who have difficulties in learning without instruction from the teacher”, and the indicator of I-11 namely “during in group activities, group members participate in giving input/opinions when making decisions”. In the component of accountability, especially in aspect of target clarity, including: the indicator of I-12 namely “obtaining the learning material based on the lesson plans”, and the indicator of I-13 namely “the learning purpose is referred to the needs of the workforce”. In the component of accountability, especially in neutral aspect, including: the indicator of I-14 namely “it does not take sides between one of the friends who are at loggerheads”, the indicator of I-15 namely “it does not distinguish between the computer subject and other supporting subjects”.

The indicators that are given scores in the component of nationalism, especially in aspect of work ethic, including: the indicator of I-16 namely “during group activities, all group members are earnestly completing the assignment”, and the indicator of I-17 namely “during group activities, all group members finishing the task on time”. In the component of nationalism, especially in confidence aspect, including: the indicator of I-18 namely “believe that the work carried out jointly will get optimal results”, and the indicator of I-19 namely “the students who are not too smart have the confidence to be able to complete the task, as long as they try it diligently”. In the component of nationalism, especially in transparent aspect, including: the indicator of I-20 namely “during group activities, all group members want to share their knowledge”, the indicator of I-21 namely “the teachers share their knowledge to the students”, and the indicator of I-22 namely “giving the right solution when the members others are asking a question”. In the component of nationalism, especially in the aspect of not greedy is the indicator of I-23 namely “during group activities, all the group members have to work as a team, so the leader of the group does not work
In the component of nationalism, especially in wise aspect, including: the indicator of I-24 namely “take the solution to a problem by thinking of all parties interests”, the indicator of I-25 namely “take the best decision that will be implemented by all parties”. In the component of nationalism, especially in tolerant aspect, including: the indicator of I-26 namely “willing to accept the different opinion”, and the indicator of I-27 namely “willing to accept the various abilities of
Figure 4. Design of evaluator data input.

Figure 5. Design of Antecedents from description matrix.
friends”. In the component of nationalism, especially in deliberation aspect, including: the indicator of I-28 namely “decision-making took together with the groups based on deliberation and consensus”, and the indicator of I-29 namely “avoiding the decision unilaterally”. In the component of nationalism, especially in aspect of mutual help, including: the indicator of I-30 namely “the
Figure 8. Design of judgment matrix.

Figure 9. Design of recommendations and decisions.
smartest students help and teach other students who are not too smart”, and the indicator of I-31 namely “during group activities, all group members help each other in projects either in small projects or large projects”. In the component of nationalism, especially in kinship aspect, including: the indicator of I-32 namely “teachers and students show familiarity in the learning process at school” and the indicator of I-33 namely “familiarity among students is already happening and a strong sense of brotherhood, both at school and outside school”. In the component of nationalism, especially in aspect of mutual cooperation, including: the indicator of I-34 namely “during group activities, all the group members cooperation in finishing the task that is considered difficult”, and the indicator of I-35 namely “all class components (both teachers and students) help each other to create conducive learning situations”.

The indicators that are given scores in the component of public ethics, especially in aspect of high integrity, including: the indicator of I-36 namely “maintain school reputation”, the indicator of I-37 namely “always maintain the reputation of the school if there is an insult to the school”. In the component of public ethics, especially in aspects of respect, including: the indicator of I-38 namely “giving greetings for teachers during the learning process and the learning completion”, the indicator of I-39 namely “always ask the permission on the teacher when you want to leave the class”, and the indicator of I-40 namely “give a smile when meeting a teacher/parent”. In the component of public ethics, especially in aspect of obey the command, including: the indicator of I-41 namely “conducting the instructions as best as possible given by the teacher during the learning process”, and the indicator of I-42 namely “listening and conducting the positive advice

Table 2. The experts’ evaluation results toward evaluation application based on Tri Hita Karana-ANEKA

| Respondents          | Items- | Σ   | Quality Percentage (%) |
|----------------------|--------|-----|------------------------|
|                      | 1 2 3 4 5 6 7 8 9 10 |     |                        |
| Education Expert-1   | 4 5 4 4 5 4 4 4 4 43  | 86.00 |
| Education Expert-2   | 5 4 5 4 5 4 4 4 4 44  | 88.00 |
| Informatics Expert-1 | 4 4 4 5 4 4 4 5 5 44  | 88.00 |
| Informatics Expert-2 | 4 4 5 5 4 4 4 4 5 44  | 88.00 |
| Average              | 87.50  |     |                        |
that is given by the teacher”. In the component of public ethics, especially in aspects of careful, including: the indicator of I-43 namely “careful in expressing opinions”, and the indicator of I-44 namely “careful and critical in learning the influences that come from outside”. In the component of public ethics, especially in polite aspect, including: the indicator of I-45 namely “expressing the opinion with courteous”, and the indicator of I-46 namely “avoid utilization of harsh words when communicating with teachers or friends”. In the component of public ethics, especially in aspect of obeying on the regulations, including: the indicator of I-47 namely “following the rules”, and the indicator of I-48 namely “avoiding the things that against the rules”.

The indicators that are given scores in the component of quality commitment, especially in efficiency aspect, including: the indicator of I-49 namely “students can develop computer applications that can minimize the operating expenses”, and the indicator of I-50 namely “students can develop computer applications that can minimize the use of resources”. In the component of quality commitment especially in effectiveness aspect is the indicator of I-51 namely “students can develop computer applications that help in making decisions both quickly and accurately”. In the component of quality commitment especially in innovation aspect, including: the indicator of I-52 namely “students can develop smart applications”, and the indicator of I-53 namely “students can develop wireless computer applications that can be accessed anytime and anywhere”. In the component of quality commitment, especially in aspect of quality oriented, including: the indicator of I-54 namely “students can develop dynamic and responsive computer applications so that are can interact with the changes”, and the indicator of I-55 namely “students can develop computer applications that are sustainable and integrated”.

The indicators that are given scores in the component of anti-corruption, especially in independent aspect, including: the indicator of I-56 namely “finishing the exam by the self ability”, and the indicator of I-57 namely “working individual tasks maximally”. In the component of anti-corruption, especially in fair aspect, including: the indicator of I-58 namely “the teachers fair in giving a score to the students”, the indicator of I-59 namely “students use the same right to get knowledge”, and the indicator of I-60 namely “the punishment from a teacher based on the level of the mistakes”. In the component of anti-corruption, especially in brave aspect, including: the indicator of I-61 namely “always ready to report if there is cheating while on the exam”, and the indicator of I-62 namely “always ready to admit one’s own mistakes if indeed proven guilty”. In the component of anti-corruption, especially in care aspect, including: the indicator of I-63 namely “attention to things that allow cheating in the learning process”, and the indicator of I-64 namely “attention to the utilization of the facilities of learning support carefully”. In the component of anti-corruption, especially in aspect of hard working, including: the indicator of I-65 namely “constant answering exam questions without being influenced by friends to conduct the dishonesty”, and the indicator of I-66 namely “never give up to complete a difficult task”. In the component of anti-corruption, especially in discipline aspect, including: the indicator of I-67 namely “never skip school during the learning process”, the indicator of I-68 namely “doing the task following the guidelines and instructions that are given by the teacher”. In the component of anti-corruption, especially in simple aspect, include: the indicator of I-69 namely “dressed neatly and according to the rules”, and the indicator of I-70 namely “it does not exhibit excessive cleverness”.

Figure 4 shows the design display of evaluator data input, which functions to enter the evaluator self-data. The data entered, such as ID evaluator, evaluator name, and affiliation. Figure 5 shows the design display of antecedent from the description matrix, which functions to enter the average data of each indicator score that has been obtained previously on the form of scores input from respondents. Figure 6 shows the design display of the transaction from the description matrix, which functions as a facility for calculating the average and determining the minimum value on each ANEKA aspect, which is reviewed from the elements of Tri Hita Karana. Aspects of the accountability component that are integrated with the Parahyangan concept, including: honest, responsibility, and consistent. Aspects of the accountability component that are integrated with Divayana et al., Cogent Psychology (2020), 7: 1773095 https://doi.org/10.1080/23311908.2020.1773095
the Pawongan concept, including: prioritize the public interests, and participatory. Aspects of the accountability component that are integrated with the Palemahan concept, including: clarity of the target, and neutral. Aspects of the nationalism component that are integrated with the Parahyangan concept, including: work ethic, confidence, transparent, not greedy, and wise. Aspects of the nationalism component that are integrated with the Pawongan concept, including: tolerant, deliberation, and mutual help. Aspects of the nationalism component that are integrated with the Palemahan concept, including: kinship, and mutual cooperation. Aspects of the public ethics component that are integrated with the Parahyangan concept, including: high integrity, respect, and obey the command. Aspects of the public ethics component that are integrated with the Pawongan concept, including: careful, and polite. The aspect of the public ethics component that is integrated with the Palemahan concept is an aspect of obeying on the regulations. The aspect of the quality commitment component that is integrated with the Parahyangan concept is an efficiency aspect. Aspects of the quality commitment component that are integrated with the Pawongan concept, including: effectiveness, and innovation. The aspect of the quality commitment component that is integrated with the Palemahan concept is an aspect of quality oriented. Aspects of the anti-corruption component that are integrated with the Parahyangan concept, including: independent, fair, and brave. The aspect of the anti-corruption component that is integrated with the Pawongan concept is a core aspect. Aspects of the anti-corruption component that are integrated with the Palemahan concept, including: hard working, discipline, and simple.

Figure 7 shows the design display of outcomes from the description matrix, which functions as a facility to determine priority indicators for each component ANEKA that reviewed from Tri Hita Karana aspects. Figure 8 shows the design display of the judgment matrix, which serves as a facility to do several things, including: 1) displays the value of the ANEKA component which is reviewed from Tri Hita Karana aspects; 2) inputting scores for antecedents standards, transaction standards, and outcomes standards; 3) determine the weight; 4) normalization calculation; 5) determination of V–vector values for each ANEKA component, which is reviewed by the aspects of Tri Hita Karana; 6) determine the list of priority indicators for each Tri Hita Karana aspect. Figure 9 shows the design display of recommendations and decisions, which functions as a facility for determining recommendations and decisions. The recommendation contains a list of ANEKA indicators that are a priority for each aspect of Tri Hita Karana. Decisions contain ANEKA indicators, which are a priority for each Tri Hita Karana aspect. Figure 10 shows the display of searching design, which functions as a facility to be able to search data that related to several things, including: 1) the evaluator identity, 2) the date of evaluator carries out the evaluation, 3) the recommendations and decisions that have been resulted.

Based on Table 2 above, it was shown that the percentage of evaluation application design quality was 87.50%. This means that the design of the application was good when it was viewed from the acquisition of the standard five-point reference scores in determining the percentage of design quality. Based on percentage scores of the design quality, there was generally no need for major revisions to the application design. The instrument items that were used for the assessment were 10 items, including a) item-1 which questions about the suitability and completeness of available features on the main menu design, b) item-2 which questions about the suitability and completeness of available features in the design of indicators input, c) item-3 which questions about the suitability and completeness of available features in the design of scores input from respondents, d) item-4 questions about the suitability and completeness of available features in the design of evaluator data input, e) item-5 which questions about the suitability and completeness of available features in the design of antecedent from description matrix, f) item-6 which questions about the suitability and completeness of available features in the design of transaction from description matrix, g) item-7 which questions about the suitability and completeness of available features in the design of outcomes from description matrix, h) item-8 which questions about the suitability and completeness of available features in the design of judgment matrix, i) item-9 which questions about the suitability and completeness of available features in the design of recommendations and decisions, and j)
item-10 which questions about the suitability and completeness of available features in design of searching.

The results from this research had been the answer to the weaknesses of previous research that was conducted by Kamal and Elim (2018), where the results of this research had been able to show designs that facilitate the use of other ANEKA components besides anti-corruption, namely accountability, public ethics, quality commitment and nationalism in determining one’s moral quality and attitude. All ANEKA components were used as the basis for determining antecedents, transactions, and outcomes in the matrix description section that is owned by the Countenance evaluation model. Validity evidence that the results of this research were able to show all ANEKA components which intended can be explicitly seen in Figure 5 to 7. Efforts that can be made to improve the reliability of this research in the future are related to the use of the ANEKA components, the aspects and the evaluation indicators on each ANEKA component need to be updated to suit the conditions, technological developments, and student learning environment at the time.

In addition to Kamal and Elim research, this research was also able to answer Hilyana and Hakim’s research questions in 2018, where this research was able to produce a design that facilitates the use of Tri Hita Karana concept in determining antecedent standards, transaction standards, and outcome standards that was required on the judgment matrix in controlling the data that comes from the description matrix that had integrated by ANEKA concept. Validity evidence that the results of this research were able to show design which intended, can be explicitly seen in Figure 8. Efforts that can be made to improve the reliability of this research in the future related to design that facilitate the concept of Tri Hita Karana in the judgment matrix are to establish clear standards follow the development of conditions at the time and remain in accordance with the basic concept of Tri Hita Karana.

The research obstacle of Parwati et al. (2017) were also successfully answered through this research by showing a design that facilitates accurate calculations by applying the simple additive weighting method to obtain the effectiveness level from the internalization of Tri Hita Karana concept in determining the indicators that become a priority for improvement so that students’ morals and achievements can be better. Validity evidence that the results of this research were able to show the design that facilitates the implementation of the SAW method, which intended can be explicitly seen in Figure 8 specifically in the weighted process, normalization process, and ranking process. Efforts that can be made to improve the reliability of this research in the future related to design that facilitate the implementation of the SAW method are to set clear weight standards following the perceptions/assessments of each decision-maker at the time.

This research had also provided a solution to the obstacle of Gondikit research (Gondikit, 2018) by showing the design that was used to enter the data/scores of judgment standard that was based on the Tri Hita Karana concept so that it is able to measure students’ morale and performance in the learning process accurately. Validity evidence that the results of this research were able to show the design to enter the data/scores of judgment standard in accordance with Tri Hita Karana which intended can also be explicitly seen in Figure 8 specifically in the Combobox of “antecedents standards”, Combobox of “transaction standards”, and Combobox of “outcomes standards”. Efforts that can be made to improve the reliability of this research in the future related to the data/scores of judgment standard on the judgment matrix are entered the valid data/scores that are adjusted to the standards set and in accordance with Tri Hita Karana concept.

Even though this research had been able to be a solution to the problems/constraints that were found in several other studies, but this research was also not perfect, so the several obstacles were found. The first obstacle was no design in the form of mobile technology, so the design display cannot adjust to the screen size of each smart phone. The second obstacle was no design showed the facility to print the evaluation results in the.pdf format.
6. Conclusion & recommendations

The evaluation application design that implements the Countenance evaluation model base on Tri Hita Karana and ANEKA had been well structured. Several facilities that make it easier for respondents to input assessment scores on evaluation indicators, making it easy for evaluators to input assessment weights and perform calculation processes so that the results of decisions are more fast and accurate. The seventy indicators were given assessment scores on the antecedents, transactions, and outcomes in the description matrix with reference to the ANEKA component. Fifteen standards were given assessment scores on the antecedent standards, transactions standards, and outcomes standards in the judgment matrix with reference to ANEKA components integrated with the Tri Hita Karana concept. Some recommendations that can be given as a solution to the obstacles that were found in this research, including: designing an evaluation application in the form of mobile technology and making a facility to print evaluation results in the form of Portable Document Format.

Cover Image
Source: Author

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I. G. Arihah, Jalal, F., & Supena, A. (2018). Evaluation of school culture in character building at ummul quro elementary school in Bogor, Indonesia. International Journal of Advances in Scientific Research and Engineering, 4(7), 136–139. https://www.ijasre.net/index.php/ijasre/article/view/506

Ariawan, I. P. W., Simatupang, W., Ishak, A. M., Agung, A. A. G., Suratmin, Adiarta, A., & Divayana, D. G. H. (2018). Development of ANEKA evaluation model based on TOPSIS in searching the dominant aspects of computer learning quality determinants. Journal of Theoretical and Applied Information Technology, 96(19), 6580–6596. http://www.jatit.org/volumes/Vol96No19/25Vol96No19.pdf

Ariyanto, D., Putri, I. G. A. M. A. D., Ratnadi, N. M. D., Sujana, I. K., & Ariartha, I. B. O. (2017). Successful adoption of e-monitoring for budgeting implementation in context of mandatory environment and Tri Hita Karana culture. Research Journal of Finance and Accounting, 8(9), 1–9. https://www.iiste.org/Journals/index.php/RJFA/article/view/37271

Astawa, I. G., Budiarsa, M., & Simpen, I. W. (2019). The Re-presentation of the Tri Hita Karana concept in the Awig-awig (customary law) text of tenganan pegring-singan village: critical ecolinguistics perspective. Journal of Language Teaching and Research, 10(2), 396–401. https://doi.org/10.17507/jltr.1002.23

Dewantara, I. P. M. (2017). Stake evaluation model (countenance model) in learning process Bahasa Indonesia at Ganaseha University of Educational. International Journal of Language and Literature, 1(1), 19–29. https://doi.org/10.23887/ijll.v1i1.9615

Fatima, G., Molik, M., Abid, U., & Nayab, D. E. (2016). Early childhood special education program at the outcome phase: An evaluation from stake’s countenance model perspective. Bulletin of Education and Research, 38(2), 281–292. http://psu.edu.pk/images/journal/ier/PDF-FILES/20_38_2_16.pdf

Febriansyah, H., & Ramdlany, D. M. A. (2016). The future of government model after mentality and bureaucracy reform in Indonesia. The Social Sciences, 11(7), 1297–1304. https://medwelljournals.com/abstract/?doi=sccience.2016.1297.1304

Gondikat, T. J. (2018). The evaluation of post PT3 program using Stake’s countenance model. Malaysian Journal of Social Sciences and Humanities, 3(4), 109–118. https://mssocialsciences.com/index.php/mjssh/article/view/137

Hilayana, F. S., & Hakim, M. M. (2018). Integrating character education on physics courses with Schoology-based E-learning. Journal of Information Technology Education: Research, 17, 577–593. https://doi.org/10.28945/4164

Kamal, M., & Elim, J. (2018). Implementation of project based learning model for anti corruption subject in fundamental training for BPKP’s civil servant candidates of the millennials generation. Advances in Social Science, Education and Humanities Research, 262, 114–122. https://doi.org/10.2991/ictte-18.2018.19

Kusuma, I. G. A. T., Londra, N., & Widnyana, I. W. (2019). Construction of welfare mediation model based on Tri Hita Karana on the economic effect of tourism sector toward happiness to improve life satisfaction of local community. Asia Pacific Management and Business Application, 8(1), 45–72. https://doi.org/10.21776/upbapba.2019.081.01.05

Maryansyah, Y. (2016). An analysis on readability of English reading texts for grade IX students at MTSN 2 Kota Bengkulu. Premise Journal, 5(1), 69–88. http://dx.doi.org/10.24127/pj.v5i1.416

Miller, R. L., King, J. A., Mark, M. M., & Coracelli, V. (2016). The oral history of evaluation: The professional development of Robert stake. American Journal of
Mudana, I. G., Suamba, I. B. P., Putra, I. M. A., & Ardini, N. W. (2018). Practices of Bali tourism development, threefolding, and Tri Hita Karana local knowledge in new order Indonesia. *Journal of Physics: Conference Series*, 953, 1–13. https://doi.org/10.1088/1742-6596/953/1/012108

Parwati, N. N., Suparta, I. N., & Mariawan, I. M. (2017). The impacts of Tri Hita Karana-based educational tourism. *Advances in Social Science, Education and Humanities Research*, 134, 10–14. https://doi.org/10.2991/icirad-17.2017.3

Perbowosari, H. (2019). The local wisdom value of man-dhasiya tradition (Study of Hindu Education). *Vidyottama Sanatana International Journal of Hindu Science and Religious Studies*, 3(1), 1–12. https://doi.org/10.25078/ijhrs.v3i1.790

Setiadi, G., Joyoatmojo, S., Sajidan, & Soeharto. (2016). The development of blended learning-based self-learning on classroom action research training material to improve teachers professionalism. *International Journal of Education and Research*, 4(9), 213–224. https://journal.uns.ac.id/icte/article/view/6910

Ssonko, D. K. W. (2010). Ethics, accountability, transparency, integrity and professionalism in the public service: The case of Uganda. Paper presented at Capacity Building Workshop for Public Sector Human Resource Managers in Africa, Cotonou, Republic of Benin, 12–16 April 2010, 1–18.

Suci, S., Sonhadji, A., Imron, A., & Arifin, I. (2018). Organizational harmony in Hindu higher educatiob institution based on Tri Hita Karana culture. *Vidyottama Sanatana: International Journal of Hindu Science and Religious Studies*, 2(1), 49–59. https://doi.org/10.25078/ijhrs.v2i1.526

Sugiharni, G. A. D. (2018). The development of interactive instructional media oriented to creative problem solving model on function graphic subject. *Journal of Educational Research and Evaluation*, 2(4), 183–189. https://doi.org/10.23887/jere.v2i4.16694

Sukarma, I. G., Nitisith, P. K., & Budosi, I. G. (2018). Integrating Tri Hita Karana values in teaching reading: Students’ and teachers’ opinions. *SHS Web of Conferences*, 42, 1–6. https://doi.org/10.1051/shsconf/20184200089

Sukarma, I. W. (2016). Tri Hita Karana theoretical basic of moral Hindu. *International Journal of Linguistics, Language and Culture*, 2(3), 102–116. https://sloap.org/journals/index.php/jllc/article/view/122

Sukawati, T. G. R. (2017). Establishing local wisdom values to develop sustainable competitiveness excellence. *Journal of Management and Marketing Review*, 2(3), 73–82. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3009627

Thanabalan, T. V., Siraj, S., & Alias, N. (2015). Evaluation of a digital story pedagogical module for the indigenous learners using the stake countenance model. *The Turkish Online Journal of Educational Technology*, 14(2), 63–72. http://www.tojet.net/articles/v14i2/1429.pdf

Wesnawa, I. G. A., & Suastra, I. W. (2016). Tri Hita Karana (THK) concept in rural settlements of Bali. *Journal of Education and Social Sciences*, 3, 75–78. https://www.jesoc.com/wp-content/uploads/2016/03/KC3_76.pdf

Wiradika, I. N. I., & Jaedun, A. (2018). The implementation of environmental care character education based on Tri Hita Karana and ecotourism at elementary schools in Nusa Penida, Bali. *Advances in Social Science, Education and Humanities Research*, 323, 261–265. https://www.atlantis-press.com/proceedings/icossce-icsmc-18/125910010
