Development of ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha in computer learning on vocational school

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Abstract: The purpose of this research was to explain the findings of an evaluation model that can be used to evaluate the students’ positive characters in joining the computer learning process. The evaluation aspect used to evaluate the students’ positive characters was the ANEKA values with reference to the concept of Tri Kaya Parisudha (three things cause harmony) as the foundation of the positive character realization. The method used in this research is R&D method, with Borg and Gall model design. The number of respondents involved in simulating this model was 10 respondents. Determination of 10 respondents using purposive sampling technique, so it involves only eight computer teachers and two education evaluators as the stakeholders, has knowledge and experience about the model being developed. The tool used in collecting data from 10 respondents is questionnaires. The analysis technique that can be used to determine the positive characters was weighted product. The simulation results of this evaluation model implementation had been able to show accurate calculations to determine the most dominant positive characters required by students to join the computer learning process optimally.

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PUBLIC INTEREST STATEMENT
ANEKA-Weighted Product Evaluation Model Based on Tri Kaya Parisudha is one of evaluation models which is a combination of three concepts, namely ANEKA, Weighted Product, and Tri Kaya Parisudha. ANEKA can be used as a measuring tool for determining positive characters in the computer learning, where the term of ANEKA is an acronym for the words Akuntabilitas (Accountability), Nasionalisme (Nationalism), Etika Publik (Public Ethics), Komitmen Mutu (Quality Commitment), and Anti-Korupsi (Anti-Corruption). Weighted Product is a method that can use in making a decision, with the multiplication concept to connect the rating of attributes that have weighted. Tri Kaya Parisudha is the foundation for realizing positive characters that consist of three aspects, namely Manacika (good thinking), Wacika (good talking), and “Kayika” (good behaving). This model is important to know because this evaluation model provides convenience in determining the most dominant positive characters needed by vocational students in computer learning.
1. Introduction

Computer learning process can run optimally, as long as it was supported with qualified human resources and character, as well as adequate infrastructures. Qualified human resources and character here means associated with lecturer who have a good attitude and competence in the field of computers and supported by the students who have the adequate ability and high motivation to learn. Adequate infrastructure means the supporting infrastructure for conducting computer learning process, such as computers availability with the feasible conditions and specifications to be used and also a high-speed Internet access to support good learning process.

In general, most of the students, whether they were educated in computer field or not, were highly dependent on computers and the Internet as a facility that allows them to obtain the needed data and information to support the learning process. With the importance of information technology, especially the Internet for students in obtaining information, then the freedom of searching for information through the Internet can't be dammed/blockaded anymore. With the freedom of using the Internet in supporting the learning process would certainly have a positive and negative impact. Positive impacts are as follows: (1) students are more easily in obtaining the necessary knowledge resources in learning, (2) students' insights become more widespread because of obtaining appropriate and useful information in concised time, and (3) students indirectly become accustomed for using information technology. Meanwhile, the negative impact was decreasing student characters value due to the effects and negative information over the Internet. The use of the Internet excessively was only used for social media, online games, and other entertainment could affect the interest in learning, changed the habits, attitudes, and behavior of the students, so it tends to lead to a deterioration of students' moral/characters. It has a similarity with the results of the study conducted by Ngaffifi (2014, p. 42) which states that “technological advances will negatively affect socio-cultural aspects, as evidenced by the degradation of moral amongs the society, especially among adolescents and students”.

Some examples of the students' characters deterioration in schools due to Internet abuse include the following: students were lazy to do the task, discipline of students were decreased, the rise of cheat and instant in order to gain something, decreased courtesy and ethics of students to teachers, and others. The problem was reinforced by research conducted by Khairuni (2016, p. 105), which in essence stated that “the negative impact of social media abuse as one part of the Internet development was to make children less disciplined and lazy, neglectful and forget the time to make the assignment dormant, make children easily deceive (cheat the works of others), impolite in both dressing or speaking, often quarrelling, give bad comment to others, and berate other people”. If the omission occurred continuously and there was lack of control against the Internet use in supporting the computer learning process, then of course the quality of computer learning would decline and students' characters deterioration would also occur.

Based on problems related to the student character deterioration in the computer learning process that was influenced by the Internet abuse that had been described, it is necessary to evaluate in order to obtain the right solution for running computer learning process optimally. To obtain prompt and appropriate recommendations as solutions to the issue of character degradation encountered in the computer learning process, then it was required an evaluation model which was positive character oriented in general and it could specifically determine the required students' dominant positive characters in following the computer learning process.

Positive characters in computer learning process could be realized by always developing the concept of Tri Kaya Parisudha which consists of three aspects such as good thinking, talking, and
behaving. These three aspects could be implemented through the internalization of the basic values of ANEKA in computer learning process. Therefore, a suitable model was used to evaluate the required students’ positive-characters in computer learning which was called as ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha.

This evaluation model is a combination of three concepts namely the concept of ANEKA, the concept of Tri Kaya Parisudha, and the concept of Weighted Product. The concept of ANEKA used as an evaluation component. The concept of Tri Kaya Parisudha used as the foundation or standard for the evaluation component in defining the positive characters of the students. The weighted product concept is used to optimize the calculation results in determining the most dominant positive character. The primary purpose is to obtain more accurate and better calculation results, to get the most appropriate dominant positive character. This accordance with the statements of Arqub and Abo-Hammour (2014, p. 396), and also a statement from Abo-Hammour, Arqub, Momani, and Shawagfeh (2014, p. 2), which in essence states that optimization is a process implemented to acquire better results than previous results.

This research is one of the critical study results on the research about the development of evaluation model based on ANEKA value in improving the quality of computer learning on vocational school in Badung Regency that the author has done together with two other team members (Divayana, Abadi, & Adiarta, 2017, p. 35). Therefore at the same time with those research, autonomously the authors also conducted a study to develop an evaluation model that can be used to evaluate the most dominant positive characters must be owned by students in following the computer learning process.

Based on that, then the primary purpose of this research was to explain the basic concept of character evaluation model based on Tri Kaya Parisudha that could be used to evaluate the character of the students through the internalization of ANEKA values in the learning process as the evaluation aspect and the determination of the most dominant positive character which was required in joining computer learning process using the weighted product method.

Referring to the main objective, this research explained in general about several things, such as (1) basic concepts of evaluation, (2) positive characters in computer learning, (3) the concept of Tri Kaya Parisudha, (4) aspects of ANEKA evaluation in computer learning, (5) the concept of weighted product, and (6) description of ANEKA-Weighted Product Evaluation Model Based on Tri Kaya Parisudha on vocational school.

2. Method
The method can use in developing this evaluation model is the R&D (Research and Development) method, with the development design of Borg and Gall model which has 10 stages (Borg & Gall, 2008, p. 775), including (1) research and information collecting (the stage of information retrieval based on the literature study related to the current research), (2) planning (the stage of timing determine, the person who involved in assisting the testing, and even the determination of fund), (3) develop preliminary form of product (the initial design stage of the developed product), (4) preliminary field test (limited test stage on the initial design that has been established by involving a limited number of respondents), (5) main product revision (an improvement stage of the revision obtained from preliminary field test results), (6) main field test (an advanced test stage on the draft revised results that have been done in the main product revision stage by involving the number of respondents who exceed the preliminary field test), (7) operational product revision (an improvement stage of the revision obtained from the main field test results), (8) operational field testing (the test phase with more scale on the revised draft that has been done at the operational product revision stage with involves the number of respondents who exceed the main field test), (9) final product revision (stage of improvement on the revision that obtained from the results of operational field testing), (10)
dissemination and implementation (the stage of dissemination of finished products and ready to be applied in the field).

The main focus of this research include (1) the research and information collecting, (2) planning, (3) develop the preliminary form of product, and (4) preliminary field test phase of ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha using simulation. The stage of research and information collecting was done to obtain information about (1) basic concepts of evaluation, (2) positive characters in computer learning, (3) the concepts of Tri Kaya Parisudha, (4) aspects of ANEKA evaluation in computer learning, and (5) the concept of Weighted Product. In the planning stage, the timing and number of respondents involved in conducting preliminary field test on ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha were determined. In the stage of developing the preliminary form of product, an evaluation model that was suitable for this research was designed. In the preliminary field test stage, a test was performed on the results of ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha.

There are 10 respondents involved in conducting trials on this evaluation model, including eight computer teachers from one of the vocational school in Badung regency, Bali Province, namely SMK TI Udayana and two education evaluators from education office of Bali Province. Determination of respondents in this preliminary field test using purposive sampling technique.

The instrument used in collecting data is questionnaire. The number of items comprised of total 42 items is as follows: 1 item for aspect of responsibility, 3 items for aspect of target clarity, 1 item for aspect of consistent, 1 item for aspect of neutral, 1 item for aspect of communicative, 2 items for aspect of tolerant, 3 items for aspect of working ethic, 1 item for aspect of transparent, 2 items for aspect of confidence, 1 item for aspect of mutual cooperation, 1 item for aspect of wise, 1 item for aspect of respect, 1 item for aspect of politeness, 1 item for aspect of meticulously, 1 item for aspect of obey the instruction, 2 items for aspect of high integrity, 1 item for aspect of effectiveness, 1 item for aspect of efficiency, 4 items for aspect of innovation, 4 items for aspect of quality-oriented, 2 items for aspect of independent, 1 item for aspect of discipline, 1 item for aspect of honest, 1 item for aspect of brave, 2 items for aspect of hard working, and 2 items for aspect of care.

The technique used to analyze the positive character required in computer learning is the weighted product to obtain accurate calculation results, by giving the weight of decision makers on each aspect evaluated.

3. Results and discussion

3.1. Results

3.1.1. Research and information collecting

This stage can be regarded as a preliminary study stage. The results included in this stage include literature studies related to the issues studied. The results can be explained as follows.

(1) Basic Concepts of Evaluation

Evaluation is an activity undertaken by evaluators, policy makers in education or researchers in the field of education in order to take a decision based on systematic and structured steps from the process data collection, data analysis and data presentation about an object/program being studied/measured. This definition has the same meaning with the statement from Jampel et al. (2017, p. 6936), Divayana et al. (2017, p. 5518), Arnyana, Sadia, Suma, and Divayana (2017, p. 5351), Muammar, Widodo, and Sulhadi (2018, p. 21), Machaka (2017, p. 2), Bichi, Hafiz, and Bello (2016, p. 268), (Desai & Stefanek, 2017, p. 102), Ouadoud, Chkouri, Nejjari, and Kadiri (2016, p. 19), Wang, Wang, and Hu (2017, p. 82), and Samarakou et al. (2014, p. 43), implying that the core
evaluation has the main purpose of obtaining consideration in taking a decision on the object being evaluated.

(2) Positive Characters in Computer Learning

Some positive characters that need to be implanted in computer learning in order to create the learning process optimally are presented in Table 1.

*High logical thinking.* In the computer learning process, we cannot be separated from computer architecture, computer organization, digital circuit, algorithm, source code, database, and others. All of these things require a high sense of thinking in the process of understanding. In addition, all matters relating to the computer require a high logical thinking in order to be able in analyzing a problem and finding the appropriate solutions, acceptable reason, and clear procedures.

*Willingness to update knowledge.* The development of information technology requires students to update their knowledge about computers, so that students do not only know one particular thing.

*Able to take the best decisions.* With the negative effects of Internet utilization that arise through social media, online games, porn sites, and others, students must be able to take the decision to avoid those things that can damage the mental health and the spirit to learn. In addition, students should be able to take the decision to study the positive and beneficial outcomes obtained from the Internet, such as information related to the development of computers for education.

*Having achievement targets.* To be able to complete a project assigned, then as a student, they must have a clear achievement target in order to obtain good quality results.

*Good time management.* With the achievement targets in working on a particular project, then students must be proficient in managing the time in order to be able finishing the project on time and with the good quality results acquisition.

| Code | Positive characters                      |
|------|-----------------------------------------|
| P1   | High logical thinking                   |
| P2   | Willingness to update knowledge         |
| P3   | Able to taking the best decision        |
| P4   | Having achievement target               |
| P5   | Good time management                    |
| P6   | Having good communication skills        |
| P7   | High creativity                         |
| P8   | High meticulous                         |
| P9   | Patience                                |
| P10  | Unyielding                              |
| P11  | Stop plagiarism                         |
| P12  | Willingness to share                    |
| P13  | Not easily complacent                   |
| P14  | Like challenges                         |
| P15  | Able to work in team                    |
Good communication skills. In the computer learning process, sometimes we are not always able to solve a particular problem. It is necessary to ask other people who have better experiences either directly or through a particular community in the computer field. To be able to connect with other parties, it takes courage to ask with good communication skills.

High creativity. High creativity is required in creating the best solution based on information technology in a fast time over the existing problems.

High meticulous. In the computer learning process, especially related to create a particular program/application, it is required a high accuracy and meticulous in order to produce good quality and reliable product.

Patience. Patience is necessary for students who are taking computer learning especially related to create the program/application because to obtain good results it requires some testing process, ranging from trial and error, to field testing that takes a long time.

Unyielding. In the computer learning process, there should be no students who fear if they do some mistakes and yield.

Stop plagiarism. The habit of copying and pasting the others' work must be stopped, because such mentality will make students lazy and do not want to think.

Willingness to share. With the increasing number of new concepts and knowledge related to the field of computers, a student will not be able to master all of these new concepts and knowledge. Therefore, there should be a sharing of knowledge and experience between one student and the other.

Not easily complacent. In the computer learning process, as students, they should not feel easily complacent because they have only been able to complete a particular task/project because in fact there are still many problems that have not been solved and still need solutions with the assistance of information technology. Therefore, new thoughts/ideas need to be explored again to develop their competences.

Like challenges. As a student who pursues the field of computer, it takes a mental attitude in order to be able to develop creativity and logic of thinking. This challenge will stimulate the emergence of new ideas in solving a problem.

Able to work in team. When making projects/tasks on a large scale and demanded to be completed in quick time and work in a team, students must be able to work well in the team, so the project/task can be completed properly on time in accordance with predetermined.

(3) The Concepts of Tri Kaya Parisudha

According to Sugita (2017, p. 39), “Tri Kaya Parisudha represents three human behaviors of mind, speech, and attitudes that must be sanctified”. The same thing was expressed by Rindawan (2016, p. 152) who stated that “Tri Kaya Parisudha is three good behaviors consisting of, good thoughts, good utterances, and good deeds”. Damayanti (2014, p. 18) explained that “Tri Kaya Parisudha is one of the principles of Hinduism governing decency that is behavior”. Sudiatmika (2013, p. 15) stated that “Tri Kaya Parisudha is three good action, such as manacika (good thinking), wacika (tell the truth), kayika (good behavior)”. Utami, 2017, p. 363) essentially states that “Tri Kaya Parisudha has the meaning of educating human beings to think, say, and behave well when carrying out all its activities”. This Utami statement is in line with Widyanis (2015, p. 2) statement which explains that “Tri Kaya Parisuda consists of manacika (mind), wacika (speech) and kayika (deeds) which can be used as guidance in carrying out activities”.
According to Budiarta and Krismayani (2014, p. 74), the concept of Tri Kaya Parisudha consists of (1) manacika which means clean and holy thinking, (2) wacika which means to tell the truth, and (3) kayika which means to do what is right. Simply put, Tri Kaya Parisudha in the learning process is realized with the following things: (1) participant learners are trained to always think well individually (manacika) through the giving of problems or cases about learning materials, (2) learners trained to learn to speak and discuss in solving existing problems (wacika) to find its solving ideas, and (3) learners are trained to apply the idea (kayika) in the field or real life. Aryani (2017, p. 150) states that “good and right thinking is often referred to as a form of implementing the concept of manacika parisudha, speaking good and true is often referred to as the implementation of the concept of wacika parisudha, and doing good and true is often referred to as a form of implementation of concepts kayika parisudha”. Kepramoreni, Sudarma, Irianto, and Rahman (2014, p. 4) argue that “The Tri Kaya Parisudha is a doctrine of purity, in which Tri Kaya represents three basic behaviors, while Parisudha points to things to be purified, such as 1) manacika which is the mind purification with stopping to desire goods that are not belonging to us; 2) wacika which is the purification of words by stopping lying or breaking promises; and 3) kayika which is the purification of action by stopping doing bad deeds and against the law”. Sinarwati (2013, p. 231 states that Tri Kaya Parisudha in the learning process realized by giving the opportunity to learners to do some things includes (1) thinking of a concept of material that has been determined by the teacher (this often termed manacika), (2) communicating well and courteously about a concept that has been learned together with other friends for getting the agreement (this often termed wacika), and (3) doing the tasks assigned by the teacher diligently and full responsibility based on the concept of the materials that have been learned (this often termed kayika).

Based on some of these definitions, it could be proposed the general synthesis that Tri Kaya Parisudha comes from the vein of ‘Tri’ means three, Kaya means deeds, and Parisudha means holy/good/right. Therefore, Tri Kaya Parisudha is three deeds that must be sanctified by good thinking good, good speaking, and good behaving.

As evident from Table 1, the concept of Tri Kaya Parisudha underlies the positive characters of students in computer learning, as shown in Table 2.

| Code | Tri Kaya Parisudha | Positive characters |
|------|-------------------|---------------------|
| P1   | Manacika          | High logical thinking |
| P2   | Manacika          | Willingness to update knowledge |
| P3   | Manacika          | Able to taking the best decision |
| P4   | Manacika          | Having achievement target |
| P5   | Manacika          | Good in time management |
| P6   | Wacika            | Having good communication skills |
| P7   | Kayika            | High creativity |
| P8   | Kayika            | High meticulous |
| P9   | Kayika            | Patience |
| P10  | Kayika            | Unyielding |
| P11  | Kayika            | Stop plagiarism |
| P12  | Kayika            | Willingness to share |
| P13  | Kayika            | Not easily complacent |
| P14  | Kayika            | Like challenges |
| P15  | Kayika            | Able to work in team |
From Table 2, it can be seen that there are five positive characters based on the concept of *manacika*, one positive character based on the concept of *wacika*, and nine positive characters based on the concept of *kayika* in the implementation of computer learning process.

(4) Aspects of ANEKA Evaluation in Computer Learning

The concept of ANEKA was initially introduced in the Education and Training for Candidate Civil Servants Class III in the Republic of Indonesia. This preemption activity is an absolute requirement that must be taken by the Candidate of Civil Servant to be appointed as Civil Servant. Divayana et al. (2017, p. 5519) stated that “the expectation after the activities of Preemption Class III was completed so that the basic values of ANEKA can be actualized earnestly by the civil servants of the Republic of Indonesia at their respective places of duty, to be a professional civil servant”. Basically, the term of ANEKA on ANEKA evaluation model is an abbreviation of *Akuntabilitas* (in Indonesian)/Accountability (in English), *Nasionalisme* (in Indonesian)/Nationalism (in English), *Etika Publik* (in Indonesian)/Public Ethics (in English), *Komitmen Mutu* (in Indonesian)/Quality Commitment (in English), and *Anti Korupsi* (in Indonesian)/Anti-Corruption (in English). For further explanation about the meaning of the word ANEKA, see Table 3.

Particularly in the process of computer learning, accountability refers to the obligation of students to fulfill all tasks assigned to them responsibly. The attitude of nationalism refers to the love of students to the schools in which they gain knowledge by always maintaining the good name of the school and improving the learning achievement. Public ethics refers to students’ ability to keep ethics and morals in their associations at school or even outside of school. Quality commitment refers to the spirit of students to improve their competence and ability to be better and qualified. Anti-corruption refers to the ability of students to avoid attitudes that lead to fraud in the learning process.

(5) The Concept of Weighted Product

*Weighted product* is one of the decision-making methods, in which in the process of taking decision is taken based on the highest value of some alternative values obtained from the multiplication of weighted attributes. To obtain weighted attributes is done through the process of normalization by using multiplication between attribute ratings that have been raised beforehand with attribute weights. The formula used in the normalization process in *weighted product* method is as follows (Ahmadi & Wiyanti, 2014, p. 20):

$$S_i = \prod_{j=1}^{n} x_{ij}^w$$

where $i = 1,2,\ldots,m$ and $\Sigma w_j$ must be worth $= 1$.

where $S$ is the value of alternative preference result of normalization, $x$ is the criterion value,

| Alphabet | In Indonesian | In English |
|----------|---------------|------------|
| A        | *Akuntabilitas* | Accountability |
| N        | *Nasionalisme* | Nationalism |
| E        | *Etika Publik* | Public Ethics |
| K        | *Komitmen Mutu* | Quality Commitment |
| A        | *Anti Korupsi* | Anti-corruption |
$w$ is the criterion weight, $n$ is the number of criteria, and $w_j$ is a rank that is either positive or negative. It is positive for profit attributes and negative for the cost attribute. Thus, the preference relative of any alternative is given as follows (Ahmadi & Wiyanti, 2014, p. 20):

$$V_i = \frac{\prod_{j=1}^{n} x_i^{w_j}}{\prod_{j=1}^{n} (X_j)^{w_j}}$$

where

- $V$ is the relative preference value of each alternative of ranking,
- $x$ is the criterion value, and
- $w$ is the criterion weight.

The alternatives to be selected are those that have the highest preference value.

The example of calculation weighted product method in taking decision in the field of education could be illustrated as follows: In a university called Universitas Pendidikan Ganesha, an evaluation was conducted by using the CIPP model on the utilization of e-learning. There were several aspects that were evaluated related to the utilization of e-learning, such as e-learning content, e-learning support facilities, readiness of lecturers, and readiness of students. The data obtained are shown in Table 4.

The decision-maker gives preference weight to each evaluation component with the following arrangement: [4 5 5 5].

Determine which dominant aspect gives the success of e-learning utilization at Universitas Pendidikan Ganesha!

Answer:

Before that, we have to fix some weight in order to make the value of $\Sigma w = 1$. Based on the following set of preference weights: [4 5 5 5], the fixed weights were obtained $w_1 = 0.211$; $w_2 = 0.263$; $w_3 = 0.263$; and $w_4 = 0.263$.

Categorization of each CIPP evaluation components include (1) Context components included in profit criteria, (2) Input components included in profit criteria, (3) Process components included in profit criteria, and (4) Product components included in profit criteria.

Furthermore, the normalization process that produces the $S$ vector is given as follows:

| Table 4. Data of the evaluation of e-Learning at Universitas Pendidikan Ganesha |
|---------------------------------------------------------------|
| Evaluation aspect                        | Evaluation components |
|-------------------------------------------|------------------------|
|                                           | C  | I  | P  | P  |
| E-learning contents                       | 94 | 95 | 86 | 92 |
| E-learning supporting facilities         | 92 | 92 | 87 | 88 |
| Readiness of the lecturers                | 87 | 85 | 84 | 82 |
| Readiness of the students                 | 82 | 81 | 82 | 80 |
After the value of the vector $S$ was obtained, the determination of vector value $V$ for ranking was conducted as follows:

$$S_1 = (94^{0.211}) \cdot (95^{0.263}) \cdot (86^{0.263}) \cdot (92^{0.263}) = 91.562$$

$$S_2 = (92^{0.211}) \cdot (92^{0.263}) \cdot (87^{0.263}) \cdot (88^{0.263}) = 89.603$$

$$S_3 = (87^{0.211}) \cdot (85^{0.263}) \cdot (84^{0.263}) \cdot (82^{0.263}) = 84.350$$

$$S_4 = (82^{0.211}) \cdot (81^{0.263}) \cdot (82^{0.263}) \cdot (80^{0.263}) = 81.206$$

The highest value was at $V_1$. This means that the most dominant aspect determining the success of e-learning utilization at Universitas Pendidikan Ganesha was the content of e-learning.

3.1.2. Planning

At this stage, the number of respondents involved in preliminary field test conducted by simulating the ANEKA-Weighted Product evaluation model based on Tri Karya Parisudha and the estimated time required for the preliminary field test were determined. The number of respondents involved and the time required is shown in Tables 5 and 6.

| Code | Respondent         | $\Sigma$ Respondent |
|------|--------------------|---------------------|
| R1   | Computer teacher   | 1                   |
| R2   | Computer teacher   | 1                   |
| R3   | Computer teacher   | 1                   |
| R4   | Computer teacher   | 1                   |
| R5   | Computer teacher   | 1                   |
| R6   | Computer teacher   | 1                   |
| R7   | Computer teacher   | 1                   |
| R8   | Computer teacher   | 1                   |
| R9   | Education evaluator| 1                   |
| R10  | Education evaluator| 1                   |
| Total|                    | 10                  |
As can be seen from Table 5, it takes eight computer teachers and two education evaluators to be involved in conducting preliminary field test on ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha.

As can be seen from Table 6, it takes 8 h for all computer teachers and 2 h for all education evaluator to conduct Preliminary Field Test on ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha.

In addition to the number of respondents and time, at this stage the aspects of ANEKA evaluation model in measuring positive character based on Tri Kaya Parisudha were also determined. The basic values of ANEKA were needed to be internalized in computer learning as a form of implementing the concept of Tri Kaya Parisudha so that it could be used to evaluate the students' positive character in computer learning process. The aspects of ANEKA evaluation model which were used to measure positive characters based on Tri Kaya Parisudha are shown in Table 7.

As can be seen from Table 7, it can be explained how each aspect of the evaluation can influence the success of determining the appropriate positive character in the learning process of the computer because it’s based on the concept of Tri Kaya Parisudha. Aspect A1 (responsible) based on the concept of kayika can influence the determination of one positive character that is P8 (high meticulous). Aspects A2 (target clarity) based on the concept of manacika can influence the determination of three positive characters, including P1 (high logical thinking), P2 (willingness to update knowledge), and P4 (having achievement target). Aspect A3 (consistent) based on the concept of manacika can influence the determination of one positive character that is P5 (good time management). Aspect A4 (neutral) based on the concept of kayika can influence the determination of one positive character that is P12 (willingness to share). Aspect A5 (communicative) based on the concept of wacika can influence the determination of one positive character that is P6 (having good communication skills). Aspect A6 (tolerant) based on the concept of kayika can influence the determination of two positive character that is P9 (patience) and P12 (willingness to share). Aspect A7 (work ethic) based on the concept of kayika can influence the determination of three positive character that is P10 (Unyielding), P13 (not easily complacent), and P14 (like challenges). Aspect A8 (transparent) based on the concept of kayika can influence the determination of one positive character that is P11 (stop plagiarism). Aspect A9 (confidence) based on the concept of kayika can influence the determination of one positive character that is P1 (high logical thinking), while Aspect A9 (confidence) that based on the concept of wacika can influence the determination of one positive character that is P6 (having good communication skills). Aspect A10 (mutual cooperation) based on the concept of kayika can influence the determination of one positive character that is P15 (able...
| No. | Evaluation component | Evaluation aspects | Concepts of Tri Kaya Parisudha | Positive characters |
|-----|----------------------|--------------------|--------------------------------|---------------------|
| 1   | Accountability       | A1 Resilient       | Kayika                         | P8 High meticulous |
|     |                      | A2 Target clarity  | Manacika                        | P1 High logical thinking |
|     |                      |                    |                                | P4 Having achievement target |
|     |                      |                    |                                | P2 Willingness to update knowledge |
|     |                      | A3 Consistent      | Manacika                        | P5 Good time management |
|     |                      | A4 Neutral         | Kayika                          | P12 Willingness to Share |
|     |                      | A5 Communicative   | Wacika                          | P6 Having good communication skills |
|     |                      |                    |                                |                     |
| 2   | Nationalism          | A6 Tolerant        | Kayika                          | P9 Patience          |
|     |                      |                    |                                | P12 Willingness to share |
|     |                      | A7 Work ethic      | Kayika                          | P10 Unyielding       |
|     |                      |                    |                                | P13 Not easily complacent |
|     |                      |                    |                                | P14 Like challenges  |
|     |                      | A8 Transparent     | Kayika                          | P11 Stop plagiarism  |
|     |                      | A9 Confidence      | Manacika                        | P1 High logical thinking |
|     |                      |                    |                                | Wacika P6            |
|     |                      |                    |                                | Having good communication skills |
|     |                      | A10 Mutual cooperation | Kayika               | P15 Able to work in team |
|     |                      | A11 Wise           | Manacika                        | P3 Able to taking the best decision |
|     |                      |                    |                                |                     |
| 3   | Public ethics        | A12 Respect        | Kayika                          | P15 Able to work in team |
|     |                      | A13 Polite         | Wacika                          | P6 Having good communication skills |
|     |                      | A14 Meticulously   | Kayika                          | P8 High meticulous |
|     |                      | A15 Obeying instruction | Kayika       | P9 Patient |
|     |                      | A16 High integrity | Kayika                          | P10 Unyielding       |
|     |                      |                    |                                | Manacika P4          |
|     |                      |                    |                                | Having achievement target |

(Continued)
| No. | Evaluation component | Evaluation aspects | Concepts of Tri Kayika Parisudha | Positive characters |
|-----|---------------------|--------------------|---------------------------------|---------------------|
| 4   | Quality commitment  | Effectiveness      | Manacika P3                     | Able to taking the best decision |
|     |                     | Efficiency         | Manacika P5                     | Good time management |
|     |                     | Innovation         | Kayika P7                       | High creativity      |
|     |                     |                    | Kayika P11                      | Not easily complacent|
|     |                     | Quality-oriented   | Kayika P8                       | High meticulous      |
|     |                     |                    | Manacika P4                     | Having achievement target|
|     |                     |                    | Manacika P2                     | Willingness to update knowledge|
|     |                     |                    | Kayika P11                      | Stop plagiarism      |
| 5   | Anti-corruption     | Independent        | Manacika P1                     | High logical thinking|
|     |                     |                    |                                  | Willing to update knowledge |
|     |                     | Discipline         | Manacika P5                     | Good time management |
|     |                     | Honest             | Kayika P11                      | Stop plagiarism      |
|     |                     | Brave              | Manacika P3                     | Able to taking the best decision|
|     |                     | Hard working       | Kayika P13                      | Not easily complacent|
|     |                     | Care               | Kayika P14                      | Like challenges      |
|     |                     |                    | Wacika P6                       | Having good communication skills |
Aspect A11 (wise) based on the concept of manacika can influence the determination of one positive character that is P3 (able to taking the best decision). Aspect A12 (respect) based on the concept of kayika can influence the determination of one positive character that is P15 (able to work in team). Aspect A13 (polite) based on the concept of wacika can influence the determination of one positive character that is P6 (having good communication skills). Aspect A14 (meticulously) based on the concept of kayika can influence the determination of one positive character that is P8 (high meticulous). Aspect A15 (obeying instruction) based on the concept of kayika can influence the determination of one positive character that is P9 (patient). Aspect A16 (high integrity) based on the concept of kayika can influence the determination of one positive character that is P10 (unyielding), while Aspect A16 (high integrity) that based on the concept of manacika can influence the determination of one positive character that is P4 (having achievement target). Aspect A17 (effectiveness) based on the concept of manacika can influence the determination of one positive character that is P3 (able to taking the best decision). Aspect A18 (efficiency) based on the concept of manacika can influence the determination of one positive character that is P5 (good time management). Aspect A19 (innovation) based on the concept of manacika can influence the determination of one positive character that is P1 (high logical thinking), while Aspect A19 (innovation) that based on the concept of kayika can influence the determination of three positive character including P7 (high creativity), P13 (Not easily complacent), and P14 (like challenges). Aspect A20 (quality-oriented) based on the concept of kayika can influence the determination of two positive character including P8 (high meticulous) and P11 (stop plagiarism), while Aspect A20 (quality-oriented) that based on the concept of manacika can influence the determination of two positive character including P4 (having achievement target) and P2 (willingness to update knowledge). Aspect A21 (independent) based on the concept of manacika can influence the determination of two positive character including P1 (high logical thinking) and P2 (willing to update knowledge). Aspect A22 (discipline) based on the concept of manacika can influence the determination of one positive character that is P5 (good time management). Aspect A23 (honest) based on the concept of kayika can influence the determination of one positive character that is P11 (stop plagiarism). Aspect A24 (brave) based on the concept of manacika can influence the determination of one positive character that is P3 (able to taking the best decision). Aspect A25 (hard working) based on the concept of kayika can influence the determination of two positive character including P13 (not easily complacent) and P14 (like challenges). Aspect A26 (care) based on the concept of wacika can influence the determination of one positive character that is P12 (willingness to share), while Aspect A26 (care) that based on the concept of wacika can influence the determination of one positive character that is P6 (having good communication skills).

3.1.3. Develop preliminary form of product

The result obtained at this stage is overview of ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha. The shape of this model can be seen in the Figure 1.

As shown in Figure 1, the ANEKA-based evaluation component has five components used to evaluate positive characters of students: accountability, nationalism, public ethics, quality commitment, and anti-corruption. Each of these components has evaluation aspects. The accountability components have evaluation aspects, such as A1 (responsible), A2 (target clarity), A3 (consistent), A4 (neutral), and A5 (communicative). The components of nationalism have aspects of evaluation, such as: A6 (tolerant), A7 (work ethic), A8 (transparent), A9 (confidence), A10 (mutual cooperation), and A11 (wise). Components of public ethics have aspects of evaluation, such as A12 (respect), A13 (polite), A14 (meticulously), A15 (obeying instruction), and A16 (high integrity). The components of quality commitment have aspects of evaluation, such as A17 (effectiveness), A18 (efficiency), A19 (innovation), and A20 (quality-oriented). The components of anti-corruption have aspects of evaluation, such as A21 (independent), A22 (discipline), A23 (honest), A24 (brave), A25 (hard working), and A26 (care).

All aspects of the evaluation must remain based on the concept of Tri Kaya Parisudha (manacika, wacika, and kayika) to evaluate the 15 positive characters of students (as shown in Table 2)
following the optimal process of computer learning in schools. To determine the most dominant positive character, it takes the calculation process using the weighted product method. If the calculation results have shown the most dominant results, it can be decided to display the Positive Dominant characters required by students following the computer learning process. If the calculation results have not shown the most dominant result, then it can be recommended to make improvements to the positive character that is not optimal to obtain the dominant result.
3.1.4. Preliminary field test
At this stage, a preliminary field test was conducted based on the evaluation model through simulation by 10 respondents. Some of the typical characteristics of this test are as follows:

(1) Filling questionnaires

The results of filling questionnaires by 10 respondents are shown in Table 8.

According to Table 8, there are 10 respondents (eight computer teachers and two education evaluators) involved in filling 42 items of evaluation questionnaires to determine the positive character of students in computer learning.

(2) Determination of the alternative values of each evaluation aspect

Based on the data shown on Tables 7 and 8, it could be determined that the alternative value of each aspect of the evaluation needed to determine the dominant positive character. The alternative value in question is shown in Table 9.

The black blocked alternative value was derived from the value of Σ from each item sourced from Table 8, while the 10 unblocked values were obtained from ANEKA evaluation aspect value to measure the positive character which was not given answer by 10 respondents.

The positioning of black blocked alternative values was based on the code of evaluation aspects and the positive character code if sourced from Table 4. For an alternative value on the 1st item with value 48 was placed in the position of line P8 (positive character based on the kayika concept of “high meticulous”) and column A1 (aspect of the “accountability” component, is “responsibility”). For alternative value on the 2nd item which was worth 46 placed in P1 line positions (positive character that was based on the concept of manacika is “high logical thinking”) and column A2 (aspects of the “accountability” components is “targets clarity”). For an alternative value on 3rd item with value of 44 was placed in the position of line P4 (positive character based on the manacika concept of “having achievement targets”) and column A2 (aspect of the “accountability” component is “target clarity”). For an alternative value on the 4th item with the value of 43 was placed in the position of line P2 (a positive character based on the manacika concept of “willing to update knowledge”) and column A2 (aspect of “accountability” component is “target clarity”). For an alternative value on the 5th item with the value of 48 was placed in the position of line P5 (the positive character based on the manacika concept of “good time management”) and column A3 (aspect of the “accountability” component is “consistent”). For an alternative value on the 6th item with value of 45 was placed in the position of line P12 (positive character based on the kayika, concept of “willingness to share”) and column A4 (aspect of the “accountability” component is “neutral”). For the alternative value of the 7th item with value of 46 was placed in the position of line P6 (positive character based on the wacika concept of “good communication skills”) and column A5 (aspect of the “accountability” component is “communicative”). For the alternative value of the 8th item with value of 26 was placed in the position of line P9 (the positive character based on the kayika concept of “high patience”) and column A6 (aspect of the “nationalism” component is “tolerant”). For an alternative value on 9th item with value of 45 was placed in the position of line P12 (the positive character which based on the concept of kayika is “willingness to share”) and column A6 (aspect of “nationalism” component is “tolerant”). For an alternative value on 10th item with values of 46 was placed in the position of line P10 (the positive character which was based on the concept of kayika is “unyielding”) and column A7 (aspect of the “nationalism” component is “work ethic”). So it went on to the alternative value on the 42nd item with values of 45 was placed in the position of line P6 (positive character based on the concept of wacika that was “good communication”) and column A26 (aspect of “anti-corruption” component that was “caring”). The positioning for the value of 10 that was not black-blocked was placed in a position outside the black-blocked values.
Table 8. Data of evaluation questionnaire filling results from 10 respondents

| Item number | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | Σ  |
|-------------|----|----|----|----|----|----|----|----|----|-----|----|
| 1           | 5  | 4  | 5  | 5  | 5  | 5  | 5  | 4  | 5  | 5   | 48 |
| 2           | 4  | 5  | 4  | 5  | 5  | 4  | 5  | 5  | 5  | 4   | 46 |
| 3           | 4  | 5  | 4  | 5  | 4  | 4  | 4  | 5  | 4  | 5   | 44 |
| 4           | 4  | 4  | 5  | 4  | 5  | 4  | 4  | 4  | 5  | 5   | 43 |
| 5           | 5  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 4   | 48 |
| 6           | 4  | 5  | 5  | 5  | 4  | 4  | 4  | 5  | 5  | 5   | 45 |
| 7           | 5  | 5  | 4  | 5  | 4  | 4  | 5  | 5  | 5  | 4   | 46 |
| 8           | 4  | 3  | 2  | 2  | 3  | 3  | 2  | 3  | 2  | 2   | 26 |
| 9           | 4  | 5  | 5  | 5  | 4  | 5  | 4  | 4  | 5  | 4   | 45 |
| 10          | 4  | 4  | 5  | 4  | 5  | 5  | 5  | 4  | 5  | 5   | 46 |
| 11          | 5  | 4  | 4  | 4  | 5  | 4  | 5  | 5  | 4  | 5   | 45 |
| 12          | 5  | 5  | 5  | 5  | 4  | 5  | 5  | 4  | 5  | 4   | 46 |
| 13          | 5  | 5  | 5  | 5  | 4  | 5  | 5  | 4  | 5  | 4   | 47 |
| 14          | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 4  | 5  | 4   | 47 |
| 15          | 5  | 4  | 5  | 5  | 5  | 4  | 5  | 5  | 5  | 5   | 47 |
| 16          | 5  | 5  | 5  | 5  | 4  | 4  | 5  | 4  | 4  | 4   | 44 |
| 17          | 4  | 4  | 4  | 4  | 5  | 5  | 4  | 4  | 5  | 5   | 45 |
| 18          | 4  | 5  | 5  | 5  | 4  | 4  | 5  | 4  | 5  | 5   | 45 |
| 19          | 5  | 4  | 4  | 5  | 4  | 5  | 4  | 5  | 4  | 4   | 44 |
| 20          | 5  | 4  | 4  | 5  | 5  | 5  | 5  | 4  | 4  | 4   | 46 |
| 21          | 3  | 4  | 4  | 3  | 2  | 2  | 2  | 2  | 3  | 3   | 24 |
| 22          | 4  | 4  | 5  | 5  | 4  | 5  | 4  | 5  | 4  | 4   | 43 |
| 23          | 4  | 5  | 5  | 4  | 4  | 4  | 5  | 5  | 5  | 5   | 44 |
| 24          | 5  | 5  | 5  | 4  | 5  | 4  | 5  | 4  | 4  | 4   | 45 |

(Continued)
| Item number | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 |
|-------------|----|----|----|----|----|----|----|----|----|-----|
| 25          | 5  | 4  | 5  | 4  | 4  | 5  | 4  | 5  | 5   | 46  |
| 26          | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 48  |
| 27          | 5  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 48  |
| 28          | 5  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 45  |
| 29          | 5  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 47  |
| 30          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 45  |
| 31          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 44  |
| 32          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 47  |
| 33          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 43  |
| 34          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 45  |
| 35          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 47  |
| 36          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 46  |
| 37          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 46  |
| 38          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 44  |
| 39          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 44  |
| 40          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 46  |
| 41          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 44  |
| 42          | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5   | 45  |
| Code | Accountability | Nationalism | Public ethics |
|------|----------------|-------------|---------------|
|      | A1  | A2  | A3  | A4  | A5  | A6  | A7  | A8  | A9  | A10 | A11 | A12 | A13 | A14 | A15 | A16 |
| Manacika P1 | 10  | 46  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Manacika P2 | 10  | 43  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Manacika P3 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 45  | 10  | 10  | 10  | 10  | 10  |
| Manacika P4 | 10  | 44  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 44  | 10  |
| Wacika P5  | 10  | 10  | 10  | 10  | 46  | 10  | 10  | 10  | 47  | 10  | 10  | 45  | 10  | 10  | 10  | 10  |
| Kayika P6  | 10  | 48  | 10  | 10  | 10  | 10  | 10  | 10  | 46  | 10  | 10  | 46  | 10  | 10  | 10  | 10  |
| Kayika P7  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P8  | 10  | 48  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P9  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 24  | 10  | 10  | 10  |
| Kayika P10 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 46  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P11 | 10  | 10  | 10  | 10  | 10  | 10  | 47  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P12 | 10  | 10  | 10  | 10  | 45  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P13 | 10  | 10  | 10  | 10  | 10  | 10  | 45  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| Kayika P14 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 46  | 10  | 10  | 45  | 10  | 10  | 10  | 10  |
| Kayika P15 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 44  | 10  | 45  | 10  | 10  | 10  | 10  |

(Continued)
| Code | A17 | A18 | A19 | A20 | A21 | A22 | A23 | A24 | A25 | A26 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Manacika P1 | 10 | 10 | 48 | 10 | 45 | 10 | 10 | 10 | 10 | 10 |
| Manacika P2 | 10 | 10 | 10 | 47 | 42 | 10 | 10 | 10 | 10 | 10 |
| Manacika P3 | 10 | 45 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Manacika P4 | 10 | 10 | 10 | 45 | 10 | 10 | 10 | 10 | 10 | 10 |
| Manacika P5 | 10 | 46 | 10 | 10 | 10 | 10 | 47 | 10 | 10 | 10 |
| Waica P6 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 45 |
| Kayika P7 | 10 | 10 | 48 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Kayika P8 | 10 | 10 | 10 | 44 | 10 | 10 | 10 | 10 | 10 | 10 |
| Kayika P9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Kayika P10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Kayika P11 | 10 | 10 | 10 | 43 | 10 | 10 | 45 | 10 | 10 | 10 |
| Kayika P12 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 44 | 10 |
| Kayika P13 | 10 | 10 | 45 | 10 | 10 | 10 | 10 | 10 | 44 | 10 |
| Kayika P14 | 10 | 10 | 47 | 10 | 10 | 10 | 10 | 10 | 46 | 10 |
| Kayika P15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
(3) Determination of weights for each evaluation aspect

After the data of Table 9 were obtained, then the weighing determination was conducted on each ANEKA evaluation aspects. The complete weights are given in Table 10.

The improved-weights could be done by dividing the value of each weight of decision-makers with the $\Sigma$ decision-makers weights.

For details, see the following examples:

Results of weight improvement for A1, i.e., $5/113 = 0.044$.

Results of weight improvement for A26, i.e., $4/113 = 0.035$.

(4) Determination of preference value for each positive character

Based on the alternative value of each evaluation aspect to measure the students’ positive characters obtained from Table 9 and the result of the fixed-weight improvement obtained from Table 10, it could be determined the value of preference for each positive character that students
need in joining the computer learning process. The process of calculating the value of preference in question can be calculated using the vector-S formulation:

\[
S_1 = (10^{0.044}) + (\frac{46^{0.044}}{C_16/C_{17}}) + (10^{0.035}) + (\frac{47^{0.035}}{C_16/C_{17}}) + (10^{0.035}) + (\frac{48^{0.035}}{C_16/C_{17}}) + (10^{0.035}) + (\frac{49^{0.035}}{C_16/C_{17}}) + (10^{0.035}) + (\frac{50^{0.035}}{C_16/C_{17}})
\]

\[= 12.947\]

\[
S_2 = (10^{0.044}) + (\frac{43^{0.044}}{C_3}) + (10^{0.035}) + (\frac{44^{0.035}}{C_3}) + (10^{0.035}) + (\frac{45^{0.035}}{C_3}) + (10^{0.035}) + (\frac{46^{0.035}}{C_3}) + (10^{0.035}) + (\frac{47^{0.035}}{C_3})
\]

\[= 12.006\]

\[
S_3 = (10^{0.044}) + (\frac{40^{0.044}}{C_16/C_17}) + (10^{0.035}) + (\frac{41^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{42^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{43^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{44^{0.035}}{C_16/C_17})
\]

\[= 11.723\]

\[
S_4 = (10^{0.044}) + (\frac{45^{0.044}}{C_3}) + (10^{0.035}) + (\frac{46^{0.035}}{C_3}) + (10^{0.035}) + (\frac{47^{0.035}}{C_3}) + (10^{0.035}) + (\frac{48^{0.035}}{C_3}) + (10^{0.035}) + (\frac{49^{0.035}}{C_3})
\]

\[= 12.024\]

\[
S_5 = (10^{0.044}) + (\frac{40^{0.044}}{C_16/C_17}) + (10^{0.035}) + (\frac{41^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{42^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{43^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{44^{0.035}}{C_16/C_17})
\]

\[= 12.116\]

\[
S_6 = (10^{0.044}) + (\frac{45^{0.044}}{C_3}) + (10^{0.035}) + (\frac{46^{0.035}}{C_3}) + (10^{0.035}) + (\frac{47^{0.035}}{C_3}) + (10^{0.035}) + (\frac{48^{0.035}}{C_3}) + (10^{0.035}) + (\frac{49^{0.035}}{C_3})
\]

\[= 12.402\]

\[
S_7 = (10^{0.044}) + (\frac{40^{0.044}}{C_16/C_17}) + (10^{0.035}) + (\frac{41^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{42^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{43^{0.035}}{C_16/C_17}) + (10^{0.035}) + (\frac{44^{0.035}}{C_16/C_17})
\]

\[= 10.719\]
\[ S_8 = (48^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (46^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) \times \]
\[ (10^{0.035}) = 11.923 \]

\[ S_9 = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) \times \]
\[ (10^{0.035}) = 10.670 \]

\[ S_{10} = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) \times \]
\[ (10^{0.035}) + (10^{0.035}) = 12.052 \]

\[ S_{11} = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) \times \]
\[ (10^{0.035}) + (10^{0.035}) = 12.052 \]

\[ S_{12} = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.044}) = 11.723 \]

\[ S_{13} = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (44^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) \times \]
\[ (10^{0.035}) = 11.880 \]

\[ S_{14} = (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.035}) \times \]
\[ (10^{0.035}) + (10^{0.035}) + (10^{0.035}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.044}) + (10^{0.035}) \times \]
\[ (46^{0.035}) + (10^{0.035}) = 11.931 \]
(5) Determination of dominant positive character

Based on the preferences value of each positive character obtained previously, it could be determined dominant positive character required in the computer learning process. The dominant positive character using vector-V formulations can be obtained as follows:

\[
S_{15} = (10^{0.044}) \ast (10^{0.044}) \ast (10^{0.044}) \ast (10^{0.035}) \ast (10^{0.035}) \ast (10^{0.035}) \ast (10^{0.035}) \ast (10^{0.035}) \ast (10^{0.044}) \ast (10^{0.035}) \ast (10^{0.044}) \ast (10^{0.044}) \ast (10^{0.044}) \ast (10^{0.035}) \ast (10^{0.044}) \ast (10^{0.044}) \ast (10^{0.044}) = 11.115
\]

\[
V_1 = S_1 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 = 0.073
\]

\[
V_2 = S_2 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402 + 10.719 + 11.923 + 10.670 + 11.259 + 12.052 + 11.723 + 11.880 + 11.931 + 11.115
\]

\[
V_3 = S_3 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 11.723 + 11.880 + 11.931 + 11.115
\]

\[
V_4 = S_4 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.024 + 10.719 + 11.923 + 10.670 + 11.259 + 12.052 + 11.723 + 11.880 + 11.931 + 11.115
\]

\[
V_5 = S_5 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.024 + 12.402 + 10.719 + 11.923 + 10.670 + 11.259 + 12.052 + 11.723 + 11.880 + 11.931 + 11.115
\]

\[
V_6 = S_6 / \sum_{i=1}^{15} S_i = 12.947 / 12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402 + 10.719 + 11.923 + 10.670 + 11.259 + 12.052 + 11.723 + 11.880 + 11.931 + 11.115
\]
\[ V_7 = \frac{S_1}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{10.719}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.061 \]
\[ V_8 = \frac{S_4}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{11.921}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.068 \]
\[ V_9 = \frac{S_4}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{10.670}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.060 \]
\[ V_{10} = \frac{S_9}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{11.259}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.064 \]
\[ V_{11} = \frac{S_{13}}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{12.052}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.068 \]
\[ V_{12} = \frac{S_{11}}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{11.723}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.066 \]
\[ V_{13} = \frac{S_{13}}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{11.880}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.067 \]
\[ V_{14} = \frac{S_{13}}{S_1 + S_2 + S_3 + S_4 + S_5 + S_6 + S_7 + S_8 + S_9 + S_{10} + S_{11} + S_{12} + S_{13} + S_{14} + S_{15}} \]
\[ = \frac{11.931}{12.947 + 12.006 + 11.723 + 12.024 + 12.116 + 12.402} = 0.068 \]
The highest value of vector \( V \) was found to be \( V_1 \) at 0.073. This means that the most dominant positive character needed in order to make students to learn optimally in the computer learning process was P1 (high logical thinking). The lowest value of vector \( V \) was found to be \( V_9 \) at 0.060. This means that the positive traits that need to be recommended for the improvement/refinement was P9 (patience).

3.2. Discussion

There were two important things to be the findings of the study on the ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha used to evaluate the character of students in the computer learning process: (1) the use of ANEKA values as evaluation aspects based on the concept of Tri Kaya Parisudha and (2) the use of weighted product methods to determine the most dominant students’ positive characters.

The use of ANEKA values as evaluation aspects was very precise, because the values of ANEKA could be used to measure the students’ positive characters that were a form of the implementation of Tri Kaya Parisudha in the computer learning process. As can be seen from Figure 1, the ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha has five evaluation components, namely: accountability, nationalism, public ethics, quality commitment, and anti-corruption. These five components of the evaluation have 26 aspects of evaluation that could be used to measure 15 students’ positive character as an implementation the concept of Tri Kaya Parisudha.

The “accountability” component used to measure the students’ positive characters in participating in computer learning comprised of five aspects: (1) “responsibility” based on the concept kayika to measure the positive character “a high meticulous”; (2) “targets clarity” based on the concept manacika to measure the positive character of the “high logical thinking”, “having achievement target” and “willingness to update knowledge”; (3) “consistent” based on the concept manacika to measure the positive character “good time management”; (4) “neutral” based on the concept kayika to measure the positive character “willingness to share”; and (5) “communicative” aspect based on the concept wacika to measure the positive character “good communication skills”.

The “nationalism” component used to measure the students’ positive characters in participating computer learning comprised of six aspects based on Tri Kaya Parisudha: (1) “tolerance” based on the concept kayika to measure the positive characters “patience” and “willingness to share”; (2) “work ethic” based on the concept kayika to measure the positive character “unyielding”, “not easily complacent”, and “like challenges”; (3) “transparent” based on the concept kayika to measure the positive characters “stop the habit of plagiarism”; (4) “confidence” based on the concept manacika to measure the positive character of the “high logic thinking”, while aspects of “confidence” based on the concept wacika to measure the positive character of “good communication skills”; (5) the aspect of “mutual cooperation” based on the concept kayika to measure the positive character “able to work in a team”; and (6) “wise” based on the concept manacika to measure the positive character “able to taking the best decisions”.

The “public ethics” component comprised of five aspects based on Tri Kaya Parisudha: (1) “respect” based on the concept kayika to measure the positive character “able to work in team”; (2) “polite” based on the concept wacika to measure the positive character “good communication skills”; (3) “meticulously” based on the concept kayika to measure the positive characters “high meticulous”; (4) “obeying instruction” based on the concept kayika to measure the positive character of “patience”; and (5) “integrity” based on the concept kayika to measure the positive character of “willingness to share”. The value of vector \( V \) was found to be 0.073. This means that the most dominant positive character needed in order to make students to learn optimally in the computer learning process was P1 (high logical thinking). The lowest value of vector \( V \) was found to be V9 at 0.060. This means that the positive traits that need to be recommended for the improvement/refinement was P9 (patience).
character “unyielding”, while the aspect of “high integrity” which is based on the concept manacika is used to measure the positive character “having achievement targets”.

The components of “quality commitment” comprised of four aspects based on Tri Kaya Parisudha: (1) “effectiveness” based on the concept manacika to measure the positive character “able to taking the best decisions”; (2) “efficiency” based on the concept manacika to measure the positive character “good time management”; (3) “innovation” based on the concept manacika to measure the positive characters “high logical thinking”, meanwhile the aspect of “innovation” based on the concept kayika to measure the positive character of “high creativity”, “not easily complacent”, and “like challenges”; and (4) “quality-oriented” based on the concept kayika to measure the positive aspects of “high meticulous” and “stop the habit of plagiarism”, while the aspects of “quality-oriented” based on the concept manacika are used to measure the positive aspects of “having achievement target” and “willingness to update knowledge”.

The “anti-corruption” component comprised of six aspects based on Tri Kaya Parisudha: (1) the aspect of “independent” based on the concept manacika to measure the positive characters “high logical thinking” and “willingness to update knowledge”; (2) “discipline” based on the concept manacika to measure the positive character “good time management”; (3) “honest” based on the concept kayika to measure the positive characters “break the habit of plagiarism”; (4) the aspect of “brave” based the concept of manacika to measure the positive character of “able to taking the best decisions”; (5) aspects of “hard working” that is based on the concept kayika used to measure the positive character of “not easily complacent” and “like challenges”; and (6) “care” based on the concept kayika to measure the positive character of “willingness to share”, while the aspect of “care” based on the concept wacika is used to measure the positive character “good communication skills”. The weighted method was used to determine the most dominant positive character from those 15 positive characters. This method was highly appropriate in this case, because the weighted product method could enter the weight value of decision maker on every aspect of evaluation used for measuring the students’ positive characters. The calculation result of this weighted product method provided an overview of the highest and lowest values. The highest value showed the most dominant positive character required by students in participating in the computer learning process, while the lowest value indicated positive character that needed to be given a recommendation to be improved/enhanced by reviewing the evaluation components up to the evaluation aspects in order to generate more optimal computer learning process.

Based on the results of simulation described previously above, it was obtained that the results of calculation of the dominant positive character using weighted product had managed to obtain the accurate results, so as to facilitate in taking decision and providing appropriate recommendations. The weighted product method was used to measure the dominant variable/components/aspects/specific characteristics in a particular domain which was very precise and accurate. It had also been demonstrated in the results of research conducted by Divayana, Adiarta, and Abadi “modified CSE-UCLA model using the weighted product in order to optimize the digital library services at the computer college in Bali” (Divayana, Adiarta, & Abadi, 2017, p. 3780), in which the study found an accurate calculation result obtained using the weighted product method to determine the highest to the lowest aspect in the evaluation components.

The results of this study had been able to provide a breakthrough/ideas through the findings of the evaluation models used to determine the most dominant positive characters. It could be used as a solution to solve the problems faced in the research conducted by Ngoﬁﬁ (2014, p. 42) related to deterioration morale among teenagers and students due to the negative effects of technological development, and also the problems faced in the research that had been conducted by Khairuni (2016, p. 105) associated with the negative impact of the misuse of social media as a part of the Internet development in the learning process. In addition to some positive things as a finding that had been obtained from the studies in this research, there were also weaknesses. It had not been tested the implementation of other methods in calculating determination of
dominant positive character, so that it could not stated the certain method could actually generate simpler calculation but create more accurate results than this weighted product method.

4. Conclusion
The use of ANEKA-Weighted Product evaluation model based on Tri Kaya Parisudha was found to be suitable for evaluating the students’ character in participating the computer learning process, because it could clearly and accurately measure dominant positive character which was an implementation of Tri Kaya Parisudha concept required by the student in the computer learning process. What could be done to overcome the weaknesses that may still be found in this study is trying to test the implementation of other methods to determine the calculation of dominant positive characters in computer learning.

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### Appendix

List of evaluation questionnaire of the positive characteristics of students which were used to obtain the data from 10 respondents who had indicated in Table 8.

| No. | Statement | Evaluation score |
|-----|-----------|------------------|
|     | I. Accountability components | \ | 
|     | A1 Aspect of responsibility | Poor | Less | Moderate | Good | Excellent |
| 1.  | 1. As a form of student responsibility towards the task given, even though it takes a long time, students with very thoroughly check the tasks before it is collected | \ | \ | \ | \ | \ |
|     | A2 Aspect of target clarity | Poor | Less | Moderate | Good | Excellent |
| 2.  | 2. Students use the logic of thinking well in formulating the achievement target of tasks completion | \ | \ | \ | \ | \ |
|     | 3. As a form of responsibility in doing the task, students have clear achievement goals when the task should be finished | \ | \ | \ | \ | \ |
|     | 4. Students want to develop their knowledge in order to support the achievement target of their task completion | \ | \ | \ | \ | \ |
|     | A3 Aspect of consistent | Poor | Less | Moderate | Good | Excellent |
| 3.  | 5. Students are able to manage their learning time regularly | \ | \ | \ | \ | \ |
|     | A4 Aspect of neutral | Poor | Less | Moderate | Good | Excellent |
| 4.  | 6. There is no gap between one student and the other in the computer learning process, they help each other and sharing each other in the discussion | \ | \ | \ | \ | \ |

(Continued)
| No. | Statement                                                                 | Evaluation score |
|-----|---------------------------------------------------------------------------|------------------|
| A5  | Aspect of communicative                                                   | Poor Less Moderate Good Excellent |
| 7.  | A good communication between one student and another and between the student and the teacher |                  |
| II. | Nationalism component                                                     |                  |
| A6  | Aspect of tolerant                                                       | Poor Less Moderate Good Excellent |
| 8.  | The students have a high patience in solving the problems found in the learning process of creating computer programs performed in a team |                  |
| 9.  | In group tasks, sharing can still occur among students who have high ability with students who have lower ability |                  |
| A7  | Aspect of working ethic                                                   | Poor Less Moderate Good Excellent |
| 10. | In doing the task of creating a group program, all members have an unyielding spirit |                  |
| 11. | Although one task in creating the program has been resolved, the students are not satisfied achieving that achievement only. Even students want to get additional task to hone their skills. |                  |
| 12. | Students love the challenges of doing complex tasks, it is conducted to hone their creativity |                  |
| A8  | Aspect of transparent                                                     | Poor Less Moderate Good Excellent |
| 13. | The habit of getting instant results has begun to diminish, it shows that students have begun to reduce the habit of copying and pasting the others' work directly from the Internet without trying to be independent to create it |                  |
| A9  | Aspect of confidence                                                      | Poor Less Moderate Good Excellent |
| 14. | Students have high confidence after being able to solve complicated problems in the process of creating computer program by using maximally logical thinking |                  |
| 15. | One of the students who have high ability, with confidence has tried to provide an explanation of problem solving in creating computer programs to his group members by using good and polite communication, so that the solidarity of the team is exist |                  |
| A10 | Aspect of mutual cooperation                                               | Poor Less Moderate Good Excellent |
| 16. | The students have been able to demonstrate solid teamwork in order to complete all the group tasks assigned by the teacher in the computer learning process |                  |
| A11 | Aspect of wise                                                            | Poor Less Moderate Good Excellent |
| 17. | One student who has a high ability in a group, able to well take the decision to solve complicated problems by involving all members of the group in accordance with the each ability. |                  |

(Continued)
| No. | Statement | Evaluation score |
|-----|-----------|------------------|
|     |           | Poor | Less | Moderate | Good | Excellent |
| III. | Public ethics component |     |      |          |      |            |
| A12 | Aspect of respect | 18. | The students are able to work well and solid in their team and based on mutual respect for each deficiencies and advantages |     |      |          |      |            |
| A13 | Aspect of politeness | 19. | Students are able to have a good discussion in their group through good and polite communication |     |      |          |      |            |
| A14 | Aspect of meticulously | 20. | In completing the group task to be assessed by the teacher, all students of the group members have meticulously checked the result before the task is collected |     |      |          |      |            |
| A15 | Aspect of obey the instruction | 21. | If one of the students in the group has been able to complete the tasks quickly of his/her part, then the student has been able to show patience in waiting for other members and even the student is willing to help other members in the completion of task |     |      |          |      |            |
| A16 | Aspect of high integrity | 22. | Each student who joined in a group, they never yield and leave the group with the reason that they do not have the ability and does not match the field studied |     |      |          |      |            |
|     |           | 23. | To obtain the good quality of results/products from the tasks assigned by the teacher, the students have a clear target plan for the accomplishment of the task completion |     |      |          |      |            |
| IV. | Quality commitment |     |      |          |      |            |
| A17 | Aspect of effectiveness | 24. | Students are effectively able to take the best decisions about solving a problem found in computer learning |     |      |          |      |            |
| A18 | Aspect of efficiency | 25. | The students have been able to manage the time well, which is the priority of problem solving |     |      |          |      |            |
| A19 | Aspect of innovation | 26. | The students have been able to use the logical thinking maximally in improving innovation |     |      |          |      |            |
|     |           | 27. | The students have been able to explore creative ideas to foster innovation |     |      |          |      |            |
|     |           | 28. | The students have shown an attitude not quickly complacent despite having been able to solve a particular problem |     |      |          |      |            |

(Continued)
| No. | Statement                                                                 | Evaluation score |
|-----|--------------------------------------------------------------------------|------------------|
| 29. | Students have begun to like topics in computer learning that are capable of challenging their abilities and evoking their logic of critical thinking | Poor Less Moderate Good Excellent |
| A20 | Aspect of quality-oriented                                               |                  |
| 30. | The students have been meticulous checking things related to the quality of the product which is the result of doing the tasks given by the teacher |                  |
| 31. | The students already have clear and accurate achievement goals to achieve as a manifestation of the quality of their abilities |                  |
| 32. | The students are willing to continue to learn and update the knowledge they have to improve their competence |                  |
| 33. | The students have stopped doing the cheating on the work of others      |                  |
| V.  | **Anti-corruption**                                                      |                  |
| A21 | Aspect of independent                                                    |                  |
| 34. | Students are able to sharpen their logical thinking independently by doing the individual tasks assigned by the teacher without cheating |                  |
| 35. | Students are independent and routinely willing to learn and update their ability to keep pace with the computers development |                  |
| A22 | Aspect of discipline                                                     |                  |
| 36. | The students regularly and obediently follow the learning time that they have set before |                  |
| A23 | Aspect of honest                                                         |                  |
| 37. | The students have been honest not to acknowledge the work of others as their work (plagiarism) |                  |
| A24 | Aspect of brave                                                          |                  |
| 38. | Students dare to take the best decision to choose computer learning as their interest |                  |
| A25 | Aspect of hard working                                                   |                  |
| 39. | The students have been able to show their hard work by not feeling complacent even though they have successfully completed the task given by the teacher |                  |
| 40. | Students like to do difficult assignments from teachers                  |                  |
| A26 | Aspect of care                                                           |                  |
| 41. | Students who have high ability willing to share with friends who have low ability |                  |
| 42. | With good communication, high-ability students are willing to teach their low-ability friends |                  |

*Notes: Excellent (score = 5), good (score = 4), moderate (score = 3), bad (score = 2), and poor/not answer (score = 1).*
