# THE QUALITY EVALUATION OF SCHOOL MANAGEMENT MODEL BASED ON *BALINESE LOCAL WISDOM* USING *WEIGHTED PRODUCT* CALCULATION

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## ABSTRACT

The evaluation of the school management model, especially at the junior high school level, it aimed to provide information about the quality level of school management model based on local wisdom that was owned by the Bali region in particular. This research used an evaluative approach with evaluation design that used the calculation stage of weighted product method to determine the minor and major aspects as a determinant of school management model quality that was applied to junior high school level in Bali Province. Subjects that were involved in this study were selected by using purposive sampling technique which was amounted to 72 people, 27 teachers and 45 students who came from 9 junior high schools in Bali Province. The evaluation data were collected by using interview guides, questionnaires, observation guidance, and documentation studies. The data had been collected, and then was analyzed by using quantitative descriptive technique through interpretation of evaluation result data that utilized the calculation of weighted product method with the quality standard of evaluation result which refers to the evaluation of benchmark grade eleven. The result of this research was the quality level of school management model based on the local wisdom of Bali which was considered special because the percentage of quality level is 92.7%. In addition, through the calculation of weighted products which was obtained minor aspects of determining the school management model quality was the aspect of "*menyama braya*" while the major aspect was the aspect of "*karma phala*".

**Keywords:** *Evaluation, School Management Model, Balinese Local Wisdom, Weighted Product*

## 1. INTRODUCTION

At this time misuse of the information technology's function in schools, the errors in interpreting the paradigm of reform in all field s (including in the education field ) and freedom of self exploration, has triggered some form of unlawful activities, norms and ethics that are occurred in schools of Indonesia on general and specifically in the Bali province. These forms of violation are not only done by the students, even now it can not be denied that teachers and educational personnel have also been abusing the norms and codes of ethics that was attached to their positions. The forms of violation that is done by students at school, including: skipping, fighting, drinking, and etc. The forms of violation that is done by teachers and education personnel at

schools, including: sexual violence, narcotics abuse, gambling, and etc.

To minimize the occurrence of these violations, it is need for good school management. The form of school management that is suitable to use is a school management model based on local wisdom, so as to filter the negative effects of technological advances and other forms of negative influence through self-control approach, spiritual strength based on the philosophy of wisdom and Balinese culture, so as to construct human character and virtuous noble character.

In the fact, there have been several schools in the Bali Province that implementing a school-based management model based on local wisdom, particularly in rural schools belonging to the ancient Balinese village (Bali Aga), but it is not being realized and not introduced to schools which are in

urban areas. However, since the rise of dozens violence cases, especially sexual violence and involving schoolchildren [1], so the government (especially the Bali Province) issued a policy to use a school-based management model based on Balinese local wisdom at schools in Bali Province (both in the village and in the city).

The facts which is shown since the implementation of the government policy is that not all of schools can implement the school management model based on the Balinese local wisdom optimally because some aspects from the concept of Balinese local wisdom (*pasraman* concept, *guru* concept, *brahmacari* concept, *catur marga* concept, *menyama braya* concept, *ngayah* concept, *tat tvam asi* concept, and  *karma phala* concept) and culture of Balinese Local Wisdom (religious culture, work culture, thinking culture, rational culture, organizational culture, and *metaksu* culture) has not been implemented according to the standard/order that became the Balinese habit.

The concept of *pasraman*, is a boarding system that describes the intimate relationships that is occur among teachers with their students. The teachings gained in pasraman are emphasizes self-disciplines, develop noble character and diligent natures, hard-working, restraint of lust-prohibitive and avid to help others [2]. The concept of *guru*, is a duty or work that becomes a obligation that is done sincerely to escort or release humans from misery (stupidity and poverty) to a happy life and prosperity.  The concept of *brahmacari*, is an activity that be performed by someone who focuses on education for the rest of his life.  The concept of *catur marga*, is a four way or method of practicing the Hindu religion (Veda) in life and in the community.  In this case it can be interpreted as four ways to construct and practice knowledge at schools, families and communities. The concept of *menyama braya*, is an ideal concept of community life in Bali as a philosophy that comes from the cultural values and customs of Balinese people to live harmoniously.  Harmony contains intimate meaning, peaceful and not hostile, likened to the life of a married couple in a harmonious and peaceful household. The concept of *ngayah*, is an activity that is done on a voluntary basis and the drive to help or actively participate in community activities. This concept is almost similar to the mutual cooperation concept in the Indonesian culture context of general. The concept of *tat tvam asi*, is a recognition and appreciation of diversity and tolerance. The concept of *karma phala*, is a

reward or punishment that be given based on the result of an action that has been done.

*Religious culture*, are a culture that reflects Balinese human who is religious nature who gave birth to a clean, holy and pure culture which is inspired by religious teachings sourced from the Vedas [3]. *Work culture*, are everything that be done by the Balinese human based on Hinduism produce various forms of cultural products. *Thinking culture*, are a disclosure of Balinese people way of thinking that different in realizing the feel prostration to the God, so they can produce various cultural products that almost always nuanced Balinese culture based on Hinduism. *Rational culture*, are able to be interpreted that the Balinese culture is also rational, so that gave birth the application of cultural as rational. *Organizational culture*, are able to be interpreted that to sustain the growth of Balinese culture, it is need the support of traditional Balinese organization that be called *desa adat, banjar adat, tempekan* and some other terms. *Metaksu culture*, are a culture that has magical appeal, so it needs to be maintained and developed in professional circles.

Based on the un-optimal and inequitable implementation of school management based on the Balinese local wisdom throughout Bali Province, it is necessary to conduct evaluations that involving education evaluators and stakeholders in depth, systematic and valid using accurate calculation process, so that later is obtained the recommendation which right in facilitating decision making. It is in accordance with opinion of Wolfe and Williams [4]; Lucas, Dippenaar, and Toit [5]; Jampel, *et al* [6]; Toyoda [7]; Divayana, Adiarta, and Abadi [8]; Saucier, *et al* in 2014[9]; Divayana, Ardana, and Ariawan in 2017 [10]; Virués-Ortega [11]; Divayana [12]; Singh and Wassermann [13], Divayana, *et al* [14]; Norman and Parker [15]; Mahayukti, *et al* [16]; Finestack, *et al* [17]; Divayana, *et al* [18]; Picciotti, *et al* [19]; Divayana, Adiarta, and Abadi [20]; Andrews and Syeda [21]; Suandi, Putrayasa, and Divayana [22]; Ambekeh [23]; Divayana and Sanjaya[24]; Brink and Bartz in 2017 [25]; Divayana, *et al* [26]; Hanchon, *et al* [27]; Divayana, *et al* [28]; Molas-Gallart [29]; Chow and Hollo [30]; Gresham [31]; Wilcox and Heudes [32]; Climie, Mah, and Chase [33]; Schwab [34]; Bourke [35]; Hassan and Wium [36]; Climie and Henley [37]; Põldoja, Duval, and Leinonen [38]; Prinsloo and Harvey [39]; Liu, Xu, and Stronge [40]; Arnold and Reed [41]; Mengoni, Bardsley and Oates [42]; Wotela [43]; Harris-

Packer and Ségol [44]; Campanotta, Simpson, and Newton [45]; Firth, Frydenberg, and Bond [46]; Roberts, *et al* [47]; Lawrence and Cahill [48]; Sherry, Fulford, and Zhang [49]; Thurmond, *et al* [50]; Lowenthal, Bauer, and Chen [51]; Bruce, Luckner, and Ferrell [52]; Sumual and Ali [53]; Delahunty, Seery, and Lynch [54]; Jin, *et al* [55]; See, Gorard, and Siddiqui [56]; Donaldson and Papay [57]; Molina and Ratté [58]; Klerk, Veldkamp, and Eggen [59]; Hammonds, *et al* [60]; Oyelere, *et al* [61]; Sudiana, *et al* [62]; that in principle also has the same thinking about the outcome of the evaluation activities which is in the form of recommendations. Evaluation activities conducted on school management based on Balinese local wisdom must be through an accurate calculation process in order to be able to show the there is a quality level on implementation of school management. Therefore, it is need the right method which be used to perform the calculation process that is the method of *weighted product.*

Based on the problems that have been described, then the problem statement in this research is how the result calculation from quality of school management model based on local wisdom in Bali using the help of weighted product method?

This study is based on research that was conducted by Agung in 2014 [2] on the quality gap among favorite and non-favorite schools, by the research result that was showing a gap among favorite and non-favorite schools that students choose for quality reasons and good school management. The Obstacles found in research that was conducted by Agung was not able to show the major aspects as a determinant that school management can be said to qualify and minor aspects that the cause of school management can be said not qualified. This research is also based on research that was conducted by Arnyana, *et al* in 2017 [63] about determining the level on school culture effectiveness and character of junior high school students in Buleleng, with the results of research was showing the existence of assessment tools that have qualified of validity and reliability to be used as an evaluation tool. The obstacles found in the research that was conducted by Arnyana et al had not been able to show in detail the school management aspects that affect the level of school culture effectiveness and student character.

Based on the problems and research background of this research, and the innovation to use accurate and right calculation method which be used in assisting the evaluation process, then researcher is interested to take the research topic about quality determination of the school management model based on Balinese culture local wisdom by calculation process using *weighted product* method.

## 2. RESEARCH METHODOLOGY

*A. Research Approach*

This research used evaluative approach, by calculation process using *weighted product* method.

*B. Research Object*

The object of this research was the school management model based on Balinese culture local wisdom.

*C. Research Subject*

The Subjects that was involved in this research were determined by using a purposive sampling technique of 72 people, it consisted of: 27 teachers and 45 students from 9 junior high schools that is spread over 3 districts in Bali Province.

*D. Research Location*

The location of this research was conducted at 9 junior high schools in Bali Province, which are 3 junior high school that was classified in advanced level (it was represented by Denpasar), 3 junior high school that was classified in developing level (it was represented by Buleleng Regency), and 3 junior high school that was classified as newly grown (it was represented by Jembrana District).

*E. Data Collection*

The data collection tools in this study include: photo documentation, questionnaire observation guidelines, and interview guidelines. The Photo documentation is used as proof of the recording of the process in this research. The observation guidelines are used as guidance in observing the quality evaluation process of this school management model. The questionnaires that were distributed to the respondents were used to obtain the quantitative data which was required as inputs in the calculating process of evaluated object quality level. The Interview guidelines are used as guidance in interviewing teachers and students about the advantages and constraints that was felt in implementing the school management model based on Balinese culture local wisdom that was applied in each school.

*F. The Research Stage Design*

There are several steps that must be taken to determine the quality level of implementing the school management model based on Balinese culture local wisdom by using calculation of the Weighted Product method, which is more fully shown in Figure 1 below.
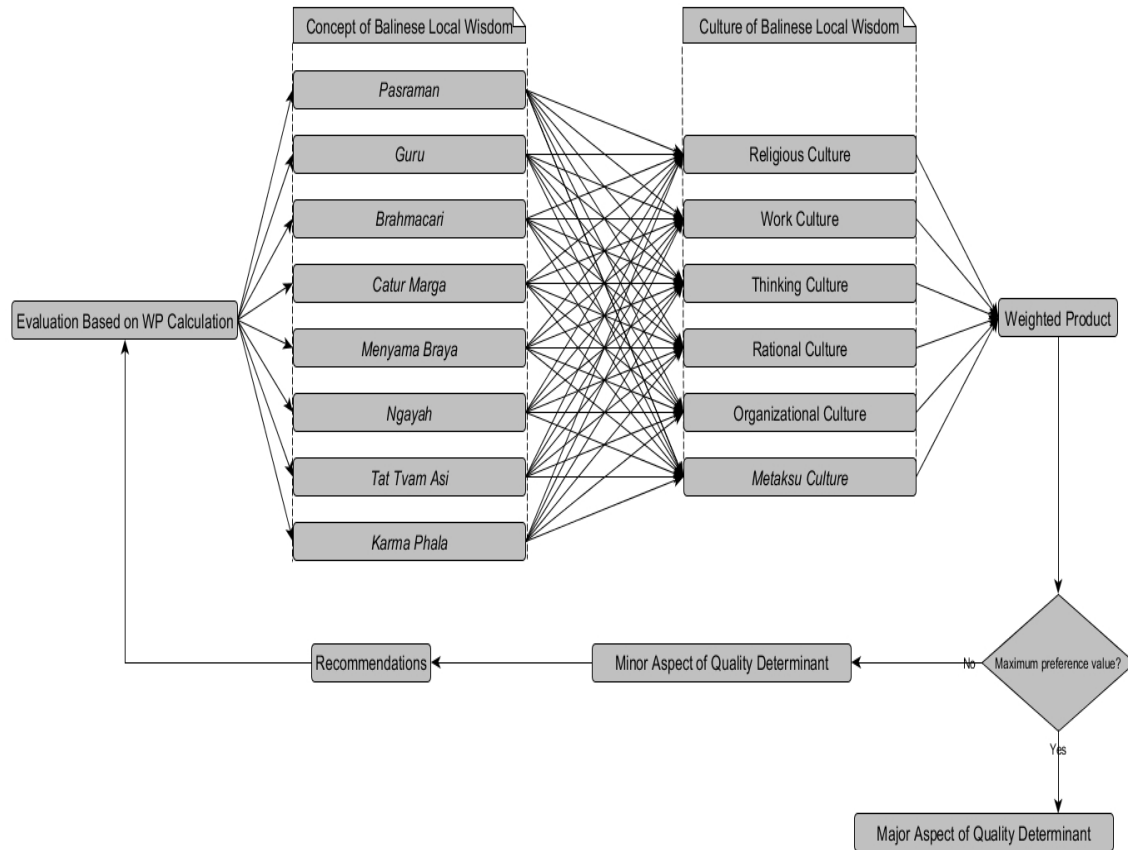
*Figure 1: The Design of Evaluation Stage on School Management Model Based on Balinese Culture Local Wisdom by using Calculation from Weighted Product Method.*

Figure 1 explains the stages in evaluating the school management model based on Balinese culture local wisdom that begun by the provision of preliminary data in the form of average scores on each cell of cross tabulation result among concept component of Balinese local wisdom and culture component of Balinese local wisdom. The average score is sourced from the respondent assessments (teachers and students) on the implementation of school management based on Balinese local wisdom. After giving preliminary data, next it is done calculation process by using weighted product method to determine the quality of school management model based on Balinese culture local wisdom that refers to major aspect and minor aspect. If the calculation by using weighted product method shows the maximal preference value then it is found the major aspect of quality determinant, whereas if it shows the minimum preference value then there is a minor aspect of quality determinant so it needs to be strengthened on that aspect by giving the right recommendation.

### G. Data Analysis Technique

The technique that is used to analyze the data in this research is quantitative descriptive through interpretation of the calculation results of weighted product method with the quality level score of evaluation results which refers to the benchmark reference scoring standards in eleven scale is shown on Table1 below.

*Table 1: The Benchmark Reference Scoring Standards In Eleven Scale*

| Quality Level | Predicate |
|---|---|
| 95-100 | Excellent |
| 85-94 | Good |
| 75-84 | Advanced |
| 65-74 | Intermediate |
| 55-64 | Enough |
| 45-54 | Elementary |
| 35-44 | Less |
| 25-34 | Very Less |
| 15-24 | Bad |
| 5-14 | Very Bad |
| 0-4 | Poor |

## 3.   RESULTS AND DISCUSSION

The evaluation results of school management model based on Balinese culture local wisdom can be shown in Table 2 below.

*Table 2: Hasil Evaluasi Terhadap Model Manajemen Sekolah Berbasis Kearifan Lokal Budaya Bali*

| Aspects From Concept of Balinese Local Wisdom | Culture of Balinese Local Wisdom | | | | | |
|---|---|---|---|---|---|---|
| | **Religious Culture** | **Work Culture** | **Thinking Culture** | **Rational Culture** | **Organizational Culture** | *Metaksu* **Culture** |
| 1.   *Pasraman* | 4.833 | 4.750 | 4.833 | 4.667 | 4.833 | 4.750 |
| 2.   *Guru* | 4.583 | 4.667 | 4.667 | 4.833 | 4.583 | 4.500 |
| 3.   *Brahmacari* | 4.750 | 4.667 | 4.917 | 4.667 | 4.583 | 4.750 |
| 4.   *Catur marga* | 4.667 | 4.583 | 4.500 | 4.750 | 4.667 | 4.833 |
| 5.   *Menyama braya* | 4.583 | 4.500 | 4.667 | 4.333 | 4.417 | 4.333 |
| 6.   *Ngayah* | 4.667 | 4.750 | 4.417 | 4.667 | 4.583 | 4.500 |
| 7.   *Tat Tvam Asi* | 4.500 | 4.667 | 4.417 | 4.167 | 4.083 | 4.333 |
| 8.   *Karma phala* | 4.917 | 4.833 | 4.917 | 4.667 | 4.833 | 4.833 |
| | | | | | Average Score | 4.634 |
| | | | | | Maximal Score | 5.000 |
| | | | | | Level of Quality | 0.927 |

Based on the evaluation data in Table 2 above, so in generally to obtain the quality level of school management model based on Balinese culture local wisdom and specifically to determine the major or minor aspect as a determinant of the quality from school management model based on Balinese culture local wisdom through calculation by using weighted method product. The process of calculating the weighted product method can be explained as follows.

### A.  Normalization Stage

Based on the facts which were seen in the field that all components of Balinese culture local wisdom are included in the benefit criteria, so the calculation process of normalization can be calculated by using the following formula [64]:

$$S_i = \prod_{j=1}^{n} x_{ij}^{w_j} \qquad (1)$$

With i=1,2, ........ , n, and $\sum w_j$ must be valuable = 1.
Where:
S  : The value of alternative preference of normalization result.
x  : The criteria value.
w  : It is states the criteria weight.
n  : It is states the number of criteria

$w_j$ is a rank that valuable of positive or negative. If it positive is for benefit attributes, and if it negative is for the cost attribute.

Referring to the data that is shown in Table 2 above and the weight that is given to each component of Balinese culture local wisdom with the composition of religious culture = 18%, work culture = 16%, thinking culture= 16%, rational culture= 17%, organizational culture = 16%, and

*metaksu* culture= 17%, then can be done the calculation of normalization as follows.

$S_1 = (4.833^{0.18})*(4.750^{0.16})*(4.833^{0.16})*(4.667^{0.17})*(4.833^{0.16}) (4.750^{0.17}) = 4.777$

$S_2 = (4.583^{0.18})*(4.667^{0.16})*(4.667^{0.16})*(4.833^{0.17})*(4.583^{0.16}) (4.500^{0.17}) = 4.637$

$S_3 = (4.750^{0.18})*(4.667^{0.16})*(4.917^{0.16})*(4.667^{0.17})*(4.583^{0.16}) (4.750^{0.17}) = 4.722$

$S_4 = (4.667^{0.18})*(4.583^{0.16})*(4.500^{0.16})*(4.750^{0.17})*(4.6673^{0.16}) (4.833^{0.17}) = 4.668$

$S_5 = (4.583^{0.18})*(4.500^{0.16})*(4.667^{0.16})*(4.333^{0.17})*(4.417^{0.16}) (4.333^{0.17}) = 4.470$

$S_6 = (4.667^{0.18})*(4.750^{0.16})*(4.417^{0.16})*(4.667^{0.17})*(4.583^{0.16}) (4.500^{0.17}) = 4.597$

$S_7 = (4.500^{0.18})*(4.667^{0.16})*(4.417^{0.16})*(4.167^{0.17})*(4.083^{0.16}) (4.333^{0.17}) = 4.357$

$S_8 = (4.917^{0.18})*(4.833^{0.16})*(4.917^{0.16})*(4.667^{0.17})*(4.833^{0.16}) (4.833^{0.17}) = 4.833$

### B.  Ranking Stage

Based on the calculation of normalization, next it is proceed on the calculation process to obtain the preference value by using the following formula [65]:

$$V_i = \frac{\prod_{j=1}^{n} x_{ij}^{w_j}}{\prod_{j=1}^{n} (x_{j*})^{w_j}} \qquad (2)$$

With i = 1, 2, 3, ………………, n

Where:
V  : The relative preference value of each alternative for ranking
X  : Criteria Value
w  : Criteria Weight

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

The calculation process to obtain the preference value (it is symbolized by the vector V) that is used for the basis of determining ranking is as follows.

$$V_1 = \frac{4.777}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.777}{37.061} = 0.129$$

$$V_2 = \frac{4.637}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.637}{37.061} = 0.125$$

$$V_3 = \frac{4.722}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.722}{37.061} = 0.127$$

$$V_4 = \frac{4.668}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.668}{37.061} = 0.126$$

$$V_5 = \frac{4.470}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.470}{37.061} = 0.121$$

$$V_6 = \frac{4.597}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.597}{37.061} = 0.124$$

$$V_7 = \frac{4.357}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.357}{37.061} = 0.118$$

$$V_8 = \frac{4.833}{4.777+4.637+4.722+4.668+4.470+4.597+4.357+4.833} = \frac{4.833}{37.061} = 0.130$$

Based on the calculation result by using the weighted product method above, it can be explained that the major aspect which determines the quality of school management model based on Balinese local wisdom is the aspect of "karma phala" because this aspect gets the highest preference value (0.130) if it is compared to other aspects, so this aspect is still implemented and it needs to be maintained its reliability. The minor aspect that determines quality is the "*menyama braya*" aspect because it gets the lowest preference value (0.121) when it is compared with other aspects, and from interviews and observations result it appears that this aspect is not being implemented optimally. Therefore, the aspect of "*menyama braya*" should be the priority and attention of all interested parties (especially teachers and students in carrying out the learning process at school). As for a form of attention on the aspect of "*menyama braya*" can be realized through mutual assistance activities to clean up the school environment, social services, celebrate school anniversary by inviting alumni, and other activities that can show and inspire the spirit of "*menyama braya*".

In addition to showing the major and minor aspects of the quality from school management model based on Balinese local wisdom, the results of this research have also shown the level of model quality that is equal to 0.927 or 92.7%. The percentage indicates a preferential category if it is matched with the benchmark reference standard by the eleven scale that is shown in Table 1. Therefore it can be generally interpreted that the school management model based on local wisdom applied in the Bali Province, especially at the junior high school level has been going well, although there are actually aspects that still need to get extra attention.

The results of this research have been able to answer the constraints of research that was conducted by Agung and the research that was conducted by Arnyana, *et al* that is by showing the major and minor aspects that determine the quality of school management model based on Balinese local wisdom, so that there is a direct explanation which is showing the aspects of Balinese local wisdom that affect the effectiveness/quality level of school management.

Although it has been able to answer the constraints of other research, but this research also has obstacles that is the inability to show the percentage level of positive influence and negative influence from each aspect of Balinese local wisdom that affect the quality of school management model based on Balinese local wisdom.

The difference in this research when compared with previous studies conducted by Aryana, et al and by Agung is this study can show the existence of major aspects or minor aspects of school management quality determinants while previous studies have not been able to show those major or minor aspects.

## 4. CONCLUSIONS

The result from the calculation of weighted product method accurately has been able to show the existence of minor and major aspects in the determinant from the quality of the school

management model based on Balinese local wisdom. The quality of school management model based on Balinese local wisdom in general has been included in the special category, but in particular also need attention to the minor aspect of that quality determinant. Future work that can be done to overcome the obstacles that is found in this research is to determine the positive ideal solution and negative ideal solution in each aspect of Balinese local wisdom by using Topsis method.

## ACKNOWLEDGMENTS

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