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The Criteria of Learning Media Selection for Character Education in Higher Education

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Abstract: Learning media constitutes something that can deliver message, stimulate thought, feeling and will encourage the learning process. This article is aimed to analyze the weight of criteria in selecting instructional media in the subjects that include character education in higher education. The method used is a weighting through Analytical Hierarchy Process method, the data calculation obtained based on the results of Focus Group Discussion. The analysis shows a priority rangking from the most important criteria that consist of: the conformity to learning purpose, learning method, the state of participants, availability,andefficiency. This article recommends the use of instructional media that optimizes human senses utilization to capture a variety of learning materials/ content.
Keywords: media, Analytical Hierarchy Process (AHP), Focus Group Discussion (FGD) criterion, weight

A. Introduction

Character education is the development of the learners' ability to behave properly marked with the improvement of various capabilities that make human beings religious creature (submissive to the concept of God), and fulfill their duty as the leadersof the world. The ability that needs developingfor learners is the ability to be themselves, the ability to live in harmony with humans and other creatures, and the ability to make the world as a vehicle for the prosperity and welfare for all (Kesuma, Triatna, &Permana, 2013).

Therefore, the essence of character education is the process of guiding learners to behavioral changes, attitude changes, and cultural changes, which eventually someday realize a civilized community (Aushop, 2014). The supporting facilities to implement character education application is an important part that must be provided because it is seen as a tool to improve teaching performance in implementing instructional activity, because the available adequate learning facilities can enable lecturers to improve the quality of teaching.

Education media plays an important role in the learning process. The use of educational media can help lecturers in delivering the lecture material. Learning success is determined by two main components, namely the method of teaching and the learning media. Both of these components are interrelated and inseparable. The use and selection of one particular teaching method has consequences on the use of appropriate types of learning media. The function of media in teaching and learning is to increase the stimulation of the learners in learning activities (Ali, 2009).

Educational media is commonly defined as tool, method, and technique used in order to further make the communication and interaction between lecturers and students in the process of education and teaching more effective. Thus educational media is an integral part of the educational process, and is one aspect that must be mastered by every teacher in carrying out his professional functions. Because this field has evolved due to the advances in science and technology and people's attitudes change, it has been interpreted broader

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and has a wider function, so that it has a very important value in education (Haryoko, 2012).

Learning media is a means for channeling learning messages and information. Well-designed learning media will greatly help learners achieve learning objectives. Each of these types of learning media has the characteristics, advantages and disadvantages. Therefore, it is necessary to make systematic planning for the use of instructional media (Nurseto, 2011). This article discusses the weighting of the key factors (criteria) in selecting instructional media at university using the Analytic Hierarchy Process (AHP).

B. Methodology

The systematics of problem solving is adapted to the need-based analysis AHP (Saaty, 1988, 1994a, 1994b). The systematic analysis conducted in this study follows the lines of systematics presented in Figure 1.

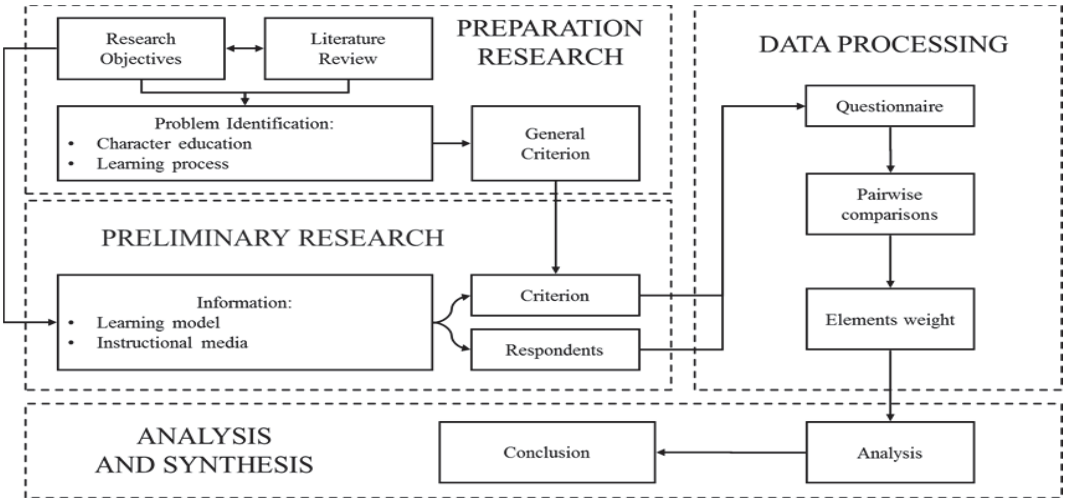

Figure 1. Systematic analysis

The limitation of problem in this article is the selection of instructional media for character education. The definition of character education used is the definition of Amri, Jauhari, and Elisah (2011), which elaborate that character education is a system of instilling character values, which includes knowledge, awareness, willingness and action to implement the values toward the Almighty God, ourselves, others, and the environment so that students become perfect human. Character education can be integrated in the learning process of each subject. Learning materials related to norms or values on each subject need to be developed, elaborated explicitly, and associated with the context of everyday life. Thus, learning the values of character does not only lie on the cognitive level, but also touches the internalization and real implementation in every-day lives of learners in the community. The data used to determine the assessment criteria and weighting encompass the gained data based on Focus Group Discussion conducted specifically for this study.

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C. Result and Discussion

1. Criteria

In general, education is the interaction between some factors involved within it to achieve the goal of education. The interaction of these factors can clearly be seen in the learning process, when the educators teach values, knowledge, and skills to the students and the students receive that instruction process. The goal of educational process is not merely intellectual development of learners by supplying as much knowledge as possible. However, education is a process of understanding, contemplating and practicing knowledge. Thus, the ultimate goal of education is the personality development of students as a whole to change their behaviors and attitudes from negative to positive one, from destructive to constructive one, from thebad character to the good one, including maintaining the good charactersthat students have (Zaini, 2013).

Amri, Jauhari, and Elisah (2011) state that the purpose of the education based-character model is forming full human with good characters, by developing the physical, emotional, social, creative, spiritual, and intellectual aspects of learners optimally. There are some ways to establish true learners:

a. To apply the learning methods that involve the active participation of learners, a method that can increase the motivation of learnersbecause entire human dimensions engage actively with the given concrete meaningful, and relevant subject matter in the context of their life (student active learning, contextual learning, inquiry-based learning, integrated learning);
b. To create a conducive learning environment (condicive learning community), so that students can learn effectively in an atmosphere that provides a sense of safety, respect, without threats, and encouragement;
c. To provide explicit, systematic, and continuous character education; and
d. To provide the teaching method that gives attention to the uniqueness of each learner, and implements all aspects of human intelligence

Basically teaching or lecturing is a reciprocal transactional communications process between lecturers and students and among students themselves to achieve the instructional objectives that have been established effectively. In this case the students as learners are treated as a major subject in the lecture activity and the lecturer occupies a central and strategic enough position to create a conducive atmosphere of the lectures, that easily direct students to achieve optimal goal of the lecture. In addition, with the development of technology, the lecture activity can be optimized or developed using appropriate instructional media, so that students easily catch the lecture material (Mediawati, 2011).

Furthermore, Nurseto (2011) states that the function of instructional media emphasizeson the following points:

a. As a supporting means to achieve a more effective learning situations.
b. As one of the components that are interconnected with other components in order to create an expected learning situation.
c. Accelerating the learning process.
d. Improving the quality of teaching and learning process.

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e. Actualizing an abstract so as to reduce the occurrence of verbal diseases (disturbance).

Meanwhile, Nurryna (2009) stated that in general media has the followingutilities:

a. To clarify the message in order that it is not too verbal.
b. To overcome the limitations of space, time, energy and power of the senses.
c. To excite learning, make more direct interaction between students and learning resources.
d. To allow children to learn independently according to their talents and visual, auditory and kinesthetic abilities.
e. To give the same stimuli, equalize experience and raise the same perceptions.

In teaching-learning process, learning media has a very important role, because the unclear delivered material can be helped by using the media as an intermediary means in learning activity. The complexity of teaching materials can be simplified with the help of the media. Learning media can represent what is less for lecturers to convey through certain words. Learning media can also help to concretize material abstract. Thus, students can easily catch material with media than without the aid of media (Mediawati, 2011).

Bukit (2014) states that media is essentially one component of the learning system. As a component, the media should be an integral part and should be in accordance with the overall learning process. The end of electing media is the use of media in learning process that allows students to interact with the selected media. The selection of media can not be done arbitrarily, but it is based on certain criteria. Errors during selection, both in selecting media types and topic of media, will lead to long unintended consequence. In general, the criteria that should be considered in the selecting instructional media are as follows:(1) purpose; (2) target of media usage (the condition of learners); (3) characteristics of media; (4) time; (5) cost; and (6) availability.

Meanwhile, according to Sadiman, Rahadjo, Haryono, & Rahadjito (1990) in identifying nine key factors that should be considered in choosing instructional media. The nine key factors include the limitation of institutional resource, media suitability with the subjects, the characteristics of students or learners, educators behavior and skill level, objective oflearning subject, the relationship of learning, learning place, time and degree of media diversity.

However, based on the result of focus group discussion, the criteria which are generally used can be identified for the selection of instructional media are: (1) learning purpose; (2) learning method; (3) state of participants; (4) efficiency; and (5) availability. Based on the above discussion the criteria are adjusted to the main topic of the selecting instructional media, and the developed criteria model are as follows:

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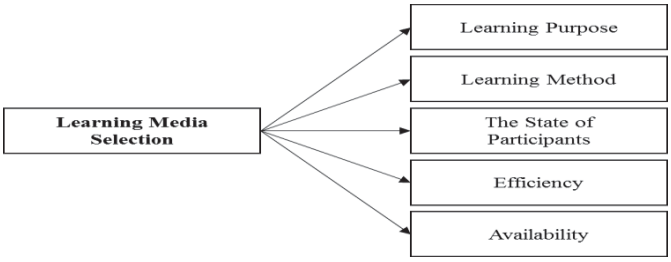

Figure 2. Decision Criteria

2. Analysis and Synthesis

Analysis and synthesis are intended to gain weight of the key factors in selectinginstructional media. This process is done by measuring the weight of the relative importance of hierarchy based on AHP model. (calculation results are presented in appendix A) After fulfilling the requirements of consistency index, the calculation results for the weight of each element are presented in Table 1.

Table 1. Result of the weighting key factors in selecting instructional media

No	Category	Priority	Rank
1	Learning Purpose	44.6%	1
2	Learning Method	22.3%	2
3	The State of Participants	17.5%	3
4	Efficiency	6.9%	5
5	Availability	8.6%	4

Based on the calculation result of the weighting of each element, it can be seen that each element has a different weight. It can be translated that the greater the weight value of an element, the element hasbigger influence on the selection of instructional media. As an illustration,that the factor or element of the conformity to learning purpose is the most important role as a factor of success in selecting instructional media.

The success of multimedia usecannot be separated from how the media is well planned. Media that can change the behavior of students and improve particular learning outcomes, cannot take place spontaneously, but it required a comprehensive analysis by taking into account various aspects that can affect the success of learning (Suartama, 2010). Based on the observation result, the use of instructional media in teaching activity can improve: clarity aspects of teaching, ability to explore the need for development of teaching materials,providingopportunity for businesses to efficiently maximize the available time, implementing teaching innovation, and improving evaluation and feedback on the result of teaching.

It is important to be noticed that the use of educational media should be able to further improve learning achievement. In this case, Mediawati (2011) stated that the essence of learning achievement must be characterized by a change in behavior of students after completing the process of learning that form the positive change

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regarding the knowledge, attitude and psychomotor skills (skills). The threerealms mentioned by Bloom, as follows:

a. Cognitive Domain

Cognitive domain is an ability to restate concepts or principles that have been studied and capability development of intellectual skills (knowledge) in various levels, namely: (a) Recall of the data (memorizing/ C1); (b) Comprehension (understanding/ C2); (c) Application (Application/ C3); (d) Analysis (Analysis/ C4); (e) Synthesis (Synthesis/ C5); and (f) Evaluation (Evaluation/ C6)

b. Affective Domains

Affective domain is associated with the emotional development of the individual student such attitude, appreciation, interest, attention, and the formation process of internalization of the character. Affective learning outcomes can be demonstrated by the positive changes in the behavior of learners, such as attention to the lesson, discipline, motivation to learn, appreciating teachers and friends, study habits and good social relations. Bloom divides affective domain into five categories, namely: (a) Receiving (Revenue); (b) Responding (providing response); (c) valuing (Assessment); (d) Organization (Organizing); and (e) characterization (characterization)

c. Psychomotor Domain

Psychomotor domain is associated with motor skills of learners or manipulations which are not caused by biological maturity. The ability of motion or manipulation will be controlled by the psychological maturity of learners themselves.

Furthermore, according to Sugiyono (2010) that looking at the development of instructional media for the steps of research and development includes the following:

a. Potential and problems raised in the empirical data. Potential is everything when used it will have an added value, whereas the problem is a deviation between the expected and what happened.
b. Data collection, it collects information that can be used as material for planning a specific product that is expected to resolve the problem.
c. Product design, it is a description of a product to be made.
d. Design validation, it is a process to assess whether the activity in a rational product design will be more effective than the old one or not. Design validation carried out by experts or experienced experts are to assess the new product, before the facts on the ground.
e. Design revision, it is to improve product design by the researcher based on the validation results by experts.
f. Product trial, it tests the use of the product to determine the effectiveness of the product. The test is done by comparing the values before and after the experimental class with the control class.
g. Product revision, it is to improve the product based on the result of the product test.
h. Utility testing, it is implementing the new product in a broader scope.
i. Product revision, it is carried out when there are shortcomings and weaknesses in their use on wider educational institutions.

j. Mass production, it is done when the products tested are declared to be effective and feasible in some testing times, and the cooperation with a company to produce the massive products can be done.

D. Conclusions

Supporting facilities for carrying out teaching activities is an important part that must be provided because it is seen as a means to improve teaching performance in implementing the learning activity, because the available adequate learning facilities can enable lecturers to improve the quality of teaching. The analysis shows a priority rangking from the most important criteria that consist of: the conformity to learning purpose, learning method, the state of participants, availability,andefficiency.

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Appendix A. Result of BPMSG AHP Priority Calculator

http://bpmsg.com/academic/

Home version 2015-11-15

BPMSG AHP priority calculator

Criteria

Input number and names (2 - 15) 5 Go OK

Pairwise Comparison AHP priorities

10 pairwise comparisons. Please do the pairwise comparison of all criteria. When completed, click *Calculate Result* to get the priorities.

Which criterion with respect to *AHP priorities* is more important, and how much more on a scale 1 to 9?

	A - Importance - or B?			Equal	How much more?
1	learning purpose	or	learning method	1	2 **3** 4 **5** 6 **7** 8 **9**
2	learning purpose	or	the state of participants	1	2 **3** 4 **5** 6 **7** 8 **9**
3	learning purpose	or	efficiency	1	2 **3** 4 **5** 6 **7** 8 **9**
4	learning purpose	or	availability	1	2 **3** 4 **5** 6 **7** 8 **9**
5	learning method	or	the state of participants	1	2 **3** 4 **5** 6 **7** 8 **9**
6	learning method	or	efficiency	1	2 **3** 4 **5** 6 **7** 8 **9**
7	learning method	or	availability	1	2 **3** 4 **5** 6 **7** 8 **9**
8	the state of participants	or	efficiency	1	2 **3** 4 **5** 6 **7** 8 **9**
9	the state of participants	or	availability	1	2 **3** 4 **5** 6 **7** 8 **9**
10	efficiency	or	availability	1	2 **3** 4 **5** 6 **7** 8 **9**

CR = 9.2% OK

Calculate Result AHP Balanced scale Download_(.csv) dec. comma

AHP Scale: 1- Equal Importance, 3- Moderate importance, 5- Strong importance, 7- Very strong importance, 9- Extreme importance (2,4,6,8 values in-between).

Priorities

These are the resulting weights for the criteria based on your pairwise comparisons

	Category	Priority	Rank
1	learning purpose	44.6%	1
2	learning method	22.3%	2
3	the state of participants	17.5%	3
4	efficiency	6.9%	5
5	availability	8.6%	4

Number of comparisons = 10
Consistency Ratio CR = 9.2%

Decision Matrix

The resulting weights are based on the principal eigenvector of the decision matrix

	1	2	3	4	5
1	1	3.00	3.00	5.00	5.00
2	0.33	1	3.00	2.00	2.00
3	0.33	0.33	1	3.00	4.00
4	0.20	0.50	0.33	1	0.50
5	0.20	0.50	0.25	2.00	1

Principal eigen value = 5.415
Eigenvector solution: 6 iterations, delta = 3.4E-8