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Table of Content   Page

THE DEVELOPMENT OF THE KEY DICHOTOMY "FAN ENCODED" AS A MEDIA LEARNING OF HIGHER BOTANY PLANTS

Dharmono[1], Muslimin Iberahim[2], Prabowo[3]
[1] Lambung Mangkurat University, [2-3] Surabaya State University

ABSTRACT

Key determination based a is an instrument or medium created specifically to expedite the implementation of the vegetation determinate in efforts to infuse the concept of plant. Key identification plants that have been be used in high school or college is from stenis (2003) and Backer & Bakhoizen (1995). This study aims to develop be a key dichotomy the plant to be the medium shaped "fan encoded". Basically a "fan encoded" having two faces will modified as a dichotomy. Sheets fan with two faces it contains about a picture or sketch the characteristics of the morphology of plants to be observed. The research of methode used is research and development (R & D) modified from Borg and Gall (1993). The research results show that, the average yield an assessment of products by validator expressed was perfectly valid, the average yield assessment by lecturers partner was perfectly valid, and the results of read by students was very good.

Keywords : *Development , key dichotomy , fan encoded.*

INTRODUCTION

Some research on student who studies a botany higher plant or a taxonomic higher plant (Goodacre dkk., 1996; Syahbudin and Adriyanti, 2005; Modayan and Razek, 2008; Rustaman, 2008; Drinkwater, 2009) essentially concluded that a taxonomy higher plant identified as the eyes of college with raw material of which many rote and latin term, and less interesting. As a result learning become less passionate, dull and students tending to passive. Arrijani (2005) that the causes of the limited mastery students to lecture matter a taxonomic higher plant caused by guidelines arranged more to variation the atmosphere learning and activities is limited to the collection of specimens plant just. The survey (Dharmono, 2011) against learning taxonomy plants in some universities (ITB, UNS and USU) especially the students have attended lecture botany plants shows that learning botany plants is boring (80%) and uninteresting (75%), elusive (95%), methods used monotonous, namely lectures and classical lab work (80%)

The determination of the media to be used based on what is would be taught, how taught and how will be evaluated and who becomes students. So the professional teacher ability to be raised, that in turn would have a positive impact on improving the quality of the process and study results (Arsyad, 2009). With the media education in fact interesting, data, pictures, charts, photographs or video with or without sound made the learning be more attractive. The materials can be presented with a chain of events simplified or enriched, so the learning does not constitute the discussion tedious students.

Key based dichotomy determination key is an instrument or medium that is particularly to facilitate the pendeterminasian tumbuh-tumbuhan in an effort to infuse the concept (Dasuki, 1994). The

identification of been used in high school or college is from Stenis (2003) and Backer & Bakhoizen (1995). This study will develop be a key identification the plant be a media "Fan Encoded". Basically fan encoded having two the to be modified as dichotomy. Sheets fan with two the it contains about a picture or sketches character morphology of plants to be observed accordance with the class to be observed. The translate of pictures or sketches morphology the media uses dichotomy key fan encoded, expected to improve motivation and learning outcomes students. The purpose of this research is the key identification develop fan encoded as a media learning botany higher plant decent reviewed from the perspective of validity. Media which will be developed based on identification of key herbs Steenis (2003) and Backer & Bakhoizen (1995) development through research.

RESEARCH METHOD

The Research is the type of research development, namely research to find and develop a new prototype decent. This research develop a key dichotomy fan encoded as a media learning a higher botany plant is worth reviewed in terms of the validity. The procedure research development adopt Borg and Gall procedure (Sugiyono, 2013). The subject of study is a student course of biology doing education lecture botany higher plants. Research conducted analysis by feasibility study or validation by 3 expert, 2 lecturer partners and the reads by 20 students. Validation criteria using Linkert scale as follows :

Table 1 . The validity of the criteriae Expert, partners and the students

Scoore*	Validity of Expert-partners	Students read test
3,25 – 4,00	Perfectly valid	Very Good
2,50 – 3,24	Enough valid	Good
1,75 – 2,49	Less valid	Less Good baik
1,00 – 1,74	Invalid	Is not Good

* Akbar (2009)

RESULT AND DISCUSSION

The results of the testing data against assessment expert, lecturers and response partner student who used the key dichotomous fan encoded as a media learning higher botany plant can be seen in table as follows:

Table 2. Validation the results Experts, lecturers partners and students read

No	Criteria	Validity of Expert	Validity of lecturers partners	Students read test
1	Highest	4,0	4,0	3,80
2	Lowest	3,0	3,5	3,35
	Average	3,6	3,8	3,4
	Validation	Very Valid	Very Valid	Very Good

The table 2 above it is known that, from 12 questions given on 3 experts have a score in the interval 3,0-4,00 with average value 3,6. This means that most experts said very reasonable or valid signature dichotomy fan encoded used as a media learning higher botany plants.

Meanwhile value given by 2 the lecturer partners have score in the interval 3,5-4,00 with average value 3,6. This means that partner lecturer said very reasonable or valid signature dichotomy fan encoded used as a medium learning higher botany plants. Validation early product is very important that it can be seen weakness or deprived of material developed from the relevance, accuracy, the language and learned. The advice experts used to revise device developed. Validation expert still in judgment based on rational thinking, yet the field. Because of that required assessment of the wearer namely lecturer useful to perform revision are medium used is in accordance with the need in the field and also need to be tested from the media developed to obtain effectiveness and efficiency. As described by Setyosari (2013) that the expert or validation done with respondents experts useful to review early products and advice for improvement. This is confirmed by Depdiknas (2008) that validation product aims to obtain recognition of products or endorsement needs so it can and suitable in learning

Meanwhile questions provided to 20 students have a score in the interval 3,35 -3,80 with average value 3,4 which means most students said the key dichotomy fan encoded is very good used as a media learning higher botany plants. This implies that material easy to understand and easily applied the material in the life of days by student. That means that learning that media develope can become tools used at the time of the learning process lasting to give learning experience quality to the students. The read test is important that the media developed matches the students who will use it in the field in real terms. In addition the media appropriate characteristic students allow students can also used it on himself, and were add student learning experience. The read test is important that the media developed matches the students who will use it in the field in real terms. In addition the media appropriate characteristic students allow students can also used it on himself, and were add student learning experience. Revisions is based on input from validator, lecturers partners and students. This weakness and attempted to be reduced by improving media. The same thing is also shown by research Citrawati (2006), Adnyana and Citrawati 2008), and Suratsih (2010), that revisions done with input from validator and test read students make its development become better to tried out.

CONCLUSION AND SUGGESTION

The result showed that the key average assessment dichotomy fan encoded very good used as a learning media of higher botany plant by validator expressed is perfectly valid (3,6), the average assessment by partner lecturer is perfectly valid (3,8) and the read test by students is very good (3,4). However that nedia developed can be used as required by in the field, there needs to be tested from the media developed further.

ACKNOWLEDGMENT

yet perfect, because of that criticism and suggestions for improvement in the future very we expect. Hopefully the result of this research to benefit the education world and improving the quality of Indonesian human resource.

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