

Education and Training Materials Development of Grading Planner on the Religious Ministry by Using Dick and Carey Model

Agus Sunaryo¹, Punaji Setyosari², Sulton³, Dedi Kuswandi⁴
Universitas Negeri Malang, Jl. Phospat II No. 29, Kota Malang, Indonesia

Abstract: *This research aimed to improve the quality of education and training material for grading planner in the Religious Ministry by using Dick and Carey model. The teaching materials development used a model of Dick and Carey. The population was the whole young education and training grading planners in Lembaga Penelitian Ekonomi Makro Universitas Indonesia which consist of 20 people. The research instrument was questionnaire. Technical data analysis used descriptive percentages. The results showed that: 1)the completeness, correctness, and quality of components teaching materials design which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100 %) based on the expert evaluation of learning design. 2)the completeness, correctness, and quality of components teaching materials design which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100%) based on the expert learning content evaluation. 3)the completeness, correctness and quality of design components of teaching materials which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100%) based on the expert of instructional media evaluation. 4). completeness and correctness words and sentences, used illustrations, captions / graph / table / diagrams, used spelling, capitalization and punctuation, the teaching materials which were developed were decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% --100%) based individuals and groups evaluation. 5) The results of field testing and analysis showed that the average / mean pre-test score was 5.60 and the average / mean post-test was 8.25 or an increase of 2.65., After the development of teaching materials were applied in the grading of training*

Keywords: *teaching materials, the quality of learning, education and training grading of planner*

I. Introduction

Teaching materials play important role. It is from a learning process that can guide the training participants become independent learners or autonomous learners. According to Richard and Renandya (2010: 88) effective teaching materials is a professional tool that can help teachers to be more responsive as well as scaffolding that guides students could do more. Therefore good text books and teaching materials teaching materials based on technology will help teachers and training participants to gain a better pedagogical objectives achievement. If they are not provided effective instructional materials, the learning process can not be run well. It is based on the needs of the training participants.

To improve the efficiency and effectiveness of the learning process in the training planner hierarchical arrangements, it is necessary to develop teaching materials that have very important functions in learning technology. If learning can be achieved with both, the course will be able to support the quality of education, as one of the main problems encountered in the field of education to date with regard to the quality and efficiency (Ibrahim, 1994: 14)One of the initial activities to improve learning is to design instructional materials which refers to a model of development in order to facilitate learning (Degeng, 1989). Designing learning can be used as the starting point of learning quality improvement efforts. This implies that the improvement of the quality of learning must be preceded improvements in the quality of instructional design, and designing learning systems approach (Degeng, 1999: 2)It is important in designing instructional materials that the organization of the teaching materials contents should be based on the characteristic structure of the training contents, so to increase the learning acquisition and retention is rather than just following the textbook contents (Degeng, 1989). Reigeluth (1992: 22) also suggested that draft teaching materials should modify, one of the standard model (standard blue print) that best suits the specific needs of learning, Dimiyati (1993: 2) also confirms that the learners are associated with learning resources to learn the message will internalize. It is thought to improve cognitive, affective, and psychomotor

A study related to training module planner hierarchical arrangements showed that not all learning objectives contained in the module formulated as education product. Based on these definitions, the study relies on the efforts and validates an operational. As well, in the goals formulation still use the word education and training so that participants can understand. The materials in the module are also too many expired date, but

until now still in use, despite the lack of knowledge in accordance with the development of science and technology and education and training curriculum or change certain functional positions. Moreover, in the teaching materials do not contain specific guidelines for the training participants (tutee). Given the way of learning in training of grading planner refers to the self-learning system that emphasizes learning processes that occur on their own initiative, then the existence of such guidelines is very important for the success of the training grading planner participants.

The research problem is how to develop teaching materials Dick & Carey model in order to improve the quality of teaching training of grading planner's participants? The purpose of research is to produce teaching materials that can improve the quality of learning training of grading planners' participants in organizing training college.

Teaching materials developed through this research, it is learning instructional materials training view local content which is consisting of: (1) Module tutor and learning guide contains a general description of the instructions and guidelines for activities to do the process tutorial. By using teaching materials supplied: (2) Subjects tutee which can be used by the tutee to achieve the learning objectives of local content.

II. Method

This study was research and development. Sugiono (2011: 297) states that the Research and Development is a research method that is used to produce a specific product, and then test the effectiveness of the product.

The development of teaching materials in this study used a model of Dick & Carey (1990), with the criteria: (1) interesting, (2) the content is based on the specific goals of learning, (3) the order is right, (4) there is evidence of use of teaching materials, (5) there is a matter of practice, (6) no response exercises, (7) there is a test, (8) there is evidence of progress learners, and (9) there are instructions for the learner to the next activity.

The development of teaching materials used Dick and Carey model. It used a systems approach because it concerned the relationship between each component. The systems approach can also increase the chance of integrating all the variables that affect learning in instructional design.

The study population was participant young education and training of grading planners who conducted training Pusbindiklatren Bappenas year 2015 to determine the sample used

Step-by-step development of teaching materials according to the model of Dick and Carey (1990) are the following: (1) identify learning objectives, (2) analyze learning, (3) identify behaviors early / entry behavior, (4) formulate learning objectives, (5) develop the test items, (6) develop learning strategies, (7) develop the content of the learning program, (8) design and implement the evaluation, and (9) revising the learning package.

Research instrument for the evaluation purpose used questionnaires coded: 01 (expert instructional design); 02 (expert learning content), and 03 (media expert). Individual evaluation questionnaire used 04 codes which were given to 6 Training of younger grading participants of the three categories of achievement (high, medium and low) of each two people. Evaluation is done by using a small group of 05 codes questionnaire which were given to training of grading participants Nine young level of training places LPEM UI, of the three categories of achievement (high, medium and low) of each of three people.

As for the field trial is limited to 20 training young grading participants LPEM UI which used an objective test to obtain data on the pre-test and posttest. Limited results field trial is used as a material revision to the overall teaching material before it is applied to the broader target population. In addition to participants education and training youth level planners, in a limited field trial also involved the tutors' materials planning to provide feedback on the results of the development of teaching materials. Limited field trial used questionnaires code 06 for the pre-test and post-test for code 07, while for a response or assessment material development planning tutor questionnaire using 08 codes.

Questionnaires code 01, 02, 03, 04, 05, 06 and 08, using a scale of 1-4, while the instrument pre-test and post-test code 07 used a scale of 1-100.

Data from the expert of learning design evaluation, the expert of learning content, the expert of media content, individuals and small groups testing used the questionnaire scale 4 was processed based on the following criteria:

- 1 = Very good / right / clear / appropriate / logical / adequate / attracted / motivated
- 2 = Fairly good / right / clear / appropriate / logical / adequate / attracted / motivated
- 3 = Less good / right / clear / appropriate / logical / adequate / attracted / motivated
- 4 = Not good / right / clear / appropriate / logical / adequate / attracted / motivated

Data were analyzed descriptively further processed percentage using the formula:

$$\text{Score} = \frac{\text{total answer} \times \text{weight} \times \text{selection}}{\text{NX highest weight}} \quad 1000$$

N = total number of subjects

In order to give meaning and decision, it used the following criteria:

Table 1 Level of Achievement and Qualification

level of Achievement	Qualification
90% - 100%	Very good / right / clear / appropriate / logical / adequate / attracted / motivated
75% - 89%	Quite good / right / clear / appropriate / logical / adequate / attracted / motivated
55% - 74%	Less good / right / clear / appropriate / logical / adequate / attracted / motivated
<54%	Not good / right / clear / appropriate / logical / adequate / attracted / motivated

While the score results of a field trial were using an objective test analyzed. It was looking at the difference between the scores of pre - test and post - test.

III. Results And Discussion

The results of expert evaluation of learning material draft indicates that the completeness, correctness and quality of design components of teaching materials which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100%). The evaluation results show that expert learning content completeness, correctness and quality of design components of teaching materials which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100%). The results of the evaluation of instructional media experts show that the completeness, correctness and quality of design components of teaching materials which were developed were very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% --- 100%).

Above evaluation results were obtained after getting some feedback, criticisms and suggestions of experts of instructional design, teaching content experts, instructional media experts, the training grading participants' initial product development of teaching materials. During product development, revision performed twice and acquired five input, criticism and suggestions of experts learning design, expert learning content, critiques and suggestions in the revision 1-2 of experts on product development instructional materials, it can be seen in table 2 below this:

Table 2 Suggestions from experts of education design, expert of content and media learning on teaching material development product.

No.	Component Evaluation	Feedback, Feedback
(First Revision)		
1.	guidance	<ul style="list-style-type: none"> Information about competence should be included in the scene TKP Instructions should be placed before TUP
2	Summary	<ul style="list-style-type: none"> To be given a form of color presentation with illustrations
3	Answer key	<ul style="list-style-type: none"> Should be placed at the end of the learning activities. Need to be equipped with a statement / explanation right or wrong answers
4	Other things	<ul style="list-style-type: none"> To make it more interesting, it is necessary to use a mix of color matching. Dick and Carey lesson plan can be used, but they should be adapted in accordance with the modified fan training grading participants conditions and the local environment.

Individuals evaluation against typing, completeness and fixed words and sentences, use of illustrations, captions / graph / table / diagrams, use of spelling, capitalization and punctuation, indicate that the teaching materials developed otherwise very decent / good / right / clear / as / logical / adequate / interesting / motivating (90% --100%). Similarly, the results of the small group evaluation shows that typing, completeness and accuracy of words and sentences, use of illustrations, captions / graph / table / diagrams, use of spelling, capitalization and punctuation, of teaching materials developed very decent / good / right / clear / appropriate / logical / adequate / interesting / motivating (90% - 100%). Evaluation of training grading individuals' participants and groups no one advised to be revised.

Based on the results of qualitative evaluation of experts, education and training grading participants and groups, teaching materials revised / improved, and after all the components of teaching materials is considered decent / good / right / clear / appropriate / logical / adequate / interesting / motivating as has been stated previously, the teaching materials development results conducted limited field trial.

Limited Field Trial Results

The field trials are limited to 20 participants of the training subjects youth level in LPEM University of Indonesia, the result score pre test and post test was the following:

Table 3 Pre-test and post-test results Field Test Limited

No. res	Score Pre-test	Score Post-test	Difference	No. res	Score Pre-test	Score Post-test	Difference
1	6	9	+3	11	7	9	+2
2	6	9	+3	12	5	8	+3
3	5	8	+3	13	4	7	+3
4	7	10	+3	14	7	10	+3
5	4	7	+3	15	4	7	+3
6	6	9	+3	16	6	8	+2
7	6	8	+2	17	6	9	+3
8	4	6	+2	18	4	7	+3
9	6	9	+3	19	7	9	+2
10	6	8	+2	20	6	8	+2
Average	5.6	8.3	2.7	Average	5.6	8.2	2.6

Table 2 above shows that the average / mean pre-test score was 5.60 and the average / mean post-test score was 8.25, or an increase of 2.65. This means that the use of teaching materials product development results were able to improve the training of grading participants by 26.50%

IV. Conclusion

Based on the results of research and product development of teaching materials as stated previously, it can be concluded: (1) Product specifications of teaching materials that can be used by tutors and training participants as a guide or manual in studying and completing the learning materials, tasks tutorials, and evaluation of learning outcomes, is the teaching materials: (a) is deemed decent / good / right / clear / as / logical / adequate / interesting both from a design and contents: (b) serves as a medium of learning in the process of self-learning training grading planner participants. (2) The use of teaching materials products showed an increase learning outcomes of training participants grading planner, which is shown by the difference in the value of pre test and post test. This implies that the use of teaching materials product development results is able to improve the performance of the training grading planner participants

Reference

- [1]. AECT. 1986, *Education Technology: A Glossary of Terms*. Washington: AECT.
- [2]. Ary,D.,Jacobs,L.C.,danRazaviek,A.1982.PengantarPenelitianDalam Pendidikan.TerjemahanAriefFurchan.Surabaya:Usaha nasional.
- [3]. Arikunto, Suharsimi. 1996. *Prosedur Penelitian*. Jakarta : PT. Rineka Cipta
- [4]. Balitbang Depdiknas. 2002. *Indikator Pendidikan di Indonesia*. Jakarta : Balitbang Diknas.
- [5]. Baskara, Rana, 1997. Panduan KBM Sain dan Teknologi sebagai Solusi dalam Meningkatkan Pembelajaran Sain dan Teknologi (Makalah). Bandung: PPS IKIP Bandung.
- [6]. Blazely, Llyod D. et. all. 1997. *Science Study*. Jakarta : The Japan Grant Foundation.
- [7]. Bloom, B.S. 1979. *Taxonomy of Educational Objectives*. Book 1 : Cognitive Domain. London : Longman Group Ltd.
- [8]. Departemen Pendidikan Nasional Indonesia. 2003. *Undang-Undang Republik Indonesia Nomor 20 Tahun 2003*. Tentang Sistem Pendidikan Nasional.
- [9]. Degeng, I.N.S. 1989. *Pengaruh Penstrukturan Isi Teks Ajar dan Strategi Belajar Terhadap Perolehan Belajar Mengingat Fajkta dan Memahami Konsep*, Forum Penelitian Pendidikan, 6. (1), 74-91.
- [10]. Degeng, I.N.S, 1989, *Mencari Pendekatan Baru Pemecahan Masalah Belajar*, Kuala Kencana: PT. Threeport Indonesia.
- [11]. Degeng, I.N.S. 1998, *Teori Belajar dan Strategi Pembelajaran*, Surabaya: Citra Raya.
- [12]. Degeng, I.N.S. 1999, *Rancangan Pembelajaran, Teori dan Teknik Pembelajaran*. Malang: Universitas Kristen Cipta Wacana.
- [13]. Degeng, I.N.S. 1990. *Desain Pembelajaran Teori ke Terapan*, Malang. PPS IKIP Malang.
- [14]. DEPDIKNAS, *Kamus Besar Bahasa Indonesia*.
- [15]. Dick, W. dan Carey, L. 1990. *The Systematic Design of Instruction: Third Edition*. USA: Harper Collins Publishers.
- [16]. Dimiyati,M. 1993. *Pandangan Behavior Vs Konstruktivistik: Pemecahan masalah Belajar di Abad XXL*. Malang: PPS IKIP Malang.
- [17]. Joni, R.T. 1984, *Pengembangan Paket Belajar*, Jakarta: Depdikbud. P2LPTK
- [18]. Miarso,Yusuf Hadi. 1987.*Penelitian Instruksional PUA Survey ModelPengembangan Instruksional*.Jakarta:Depdikbud:Dirjen Dikti.
- [19]. Reigeluth, 1992. *Instructional Design Strategies and Tacties*. *Educational Technology Publication*. New Jersey: Englewood Cliffs.
- [20]. Richards, C.J. & Renandya, A.W. (2010). *Methodology in Language Teaching: An Anthology of Current Practice*, New York: Cambridge University Press.
- [21]. Seel, B.B. dan Richey, R.C. 1994. *Instructional Technology: The Definition and Domain of The Fied*. Washington: AECT.
- [22]. Suparman, A. 1991. *Desain Instruksional*. Jakarta: Depdikbud. Universitas Terbuka.
- [23]. Slavin, R.E. (1994). *Educational Psychology*. Massachusetts: A Division of Paramount Publishing.
- [24]. Senge, Peter. et. all. 2000. *Schools That Learn : A Fifth Discipline Resource*. London : Nicholas Brealey Publishing.
- [25]. Singarimbun, M.,dan Sofian Effendi. 1989. *Metode Penelitian Survei*. Jakarta : LP3S.
- [26]. Soeitoe S. 1982. *Psikologi Pendidikan untuk Para Pendidik dan Calon Pendidik*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- [27]. Sudjana, H.D., 1983. *Strategi Kegiatan Belajar Dalam Pendidikan Non Formal*. Bandung : FIP IKIP Malang.
- [28]. Sukmadinata, N.S. 2002. *Life Skill and Broad Based Education (Makalah)*. Bandung: UPI.
- [29]. University of Washington, College of Education. 2001. *Training for Indonesian Educational Team in Contextual Teaching and Learning*. Seattle, Washington USA
- [30]. Uno, B. Hamzah, Prof. Dr. M.Pd. 2008, *Model Pembelajaran Menciptakan Proses Belajar Mengajar yang Kreatif dan Efektif*. Jakarta: Bumi Aksara.