Sport Psychometric Through e-Learning: Offline, Edmodo, and Mobile Learning

James Tangkudung

Abstract— This research was aimed to create new textbook products that will be used in discussion activities and facilitate lecturers in delivering lecture material and achieving expected learning goals. This research was a Doctoral curriculum development for Mental Training Course (Sports Psychometry) based on KKNI using e-Learning (Offline (Mmi), Online (Edmodo) and Smart Phones (Sigil)). The method used was qualitative and quantitative research using the Research & Development (R & D) development model from Borg and Gall. Based on the results of the effectiveness test using the t-test, from the differences in the results of Sport Psychometric Material Knowledge between pretest and posttest, the price of tO = 42,647 was greater than the price tt = 0,000 (at the 0.05 significance level), so the null hypothesis was rejected. It can be proven, there was a significant difference between the results of the pretest and posttest of student knowledge.

Index Terms— Curriculum Program, Physical Education, e-Learning Educational.

I. INTRODUCTION

Education carried out in higher education over time has continued to change. The progress of information and communication technology (ICT) has become one of the factors of change in education system in Indonesia. Technology has a very important role for the education process and provides direction in the development of the world of education. In the history of the development of education, information technology is a part of the media to convey the message of knowledge to many people, ranging from printing technology a few centuries ago, such as printed books, to telecommunications media such as sounds recorded on tapes, Videos, Television CD and through e-Learning; Offline, Edmodo, and Mobile Learning. Source of learning is one component in the learning process that has an important role in achieving learning goals. As revealed in the National Education System Act, 2003 which states that learning is a process of interaction between educators, students and learning resources in a particular learning environment (KKNI,2012). [8]

Allison (2008, 752-771) said about, "learning resources are fundamental to good quality education; print based resources are well established as an integral part of teaching across all sectors of education and their use has evolved over a long period of time, especially in conventional, didactic modes of teaching". [1]

O' Malley et al. (2003) said that mobile learning is "... any sort of learning that happpens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of learning opportunities offered by mobile technologies". [7]

Geddes (2004) defined mobile learning as "the acquisition of any knowledge and skill through using mobile technology, anywhere, anytime, that results ini an alteration in behaviour". [3]

Keegan (2005) tried to define mobile learning by the size of the mobile device: "Mobile learning should be restricted to learning on devides which a lady can carry in her hand bag or a gentle man carry in his pocket. [5]

"This is similar to John Traxler's (2005) definition that mobile learning is any educational provision where the sole or dominant technologies are handheld or palmtop devices." Whereas the purpose of John Traxler's is any provision of education where a single or dominant technology is a handheld device or software that uses online internet, then learning using e-learning (Offline (Mmi), Online (Edmodo) and Mobile Smartphone (Sigil)) must be supported by sophisticated electronic technology. [4]

Level 9 of KKNI was first; capable to develop new knowledge, technology and or art in the scientific field or professional practice through research, to produce creative, original, and tested, second; capable to solve problems in science, technology, and or art in their scientific fields through inter, multi and trans-disciplinary approaches and third; capable to manage, lead, and develop research and development that is beneficial for science and the benefits of humanity and international recognition.

Based on several current supporting theories, Jakarta State University, and even the Higher Education Ministry of Research and Technology, have been aggressively appealing to lecturers to present learning in accordance with the development of the era of industry 4.0. An era where all technology, information and communication became things that were very familiar to the community. Laptop devices, smartphones and tablets today are not fancy, and have even become the lifestyle of today's society.

Thus, researchers try to develop student learning services by providing various electronic learning resources that can be accessed through various electronic devices either with the internet or without the internet.

Research and Development/R&D is the research method used to produce certain products, and test the effectiveness of the Product. So research and development carried out must go through a process or steps so that new products or improvements to existing products can be accountable for their results and benefits. [6]

Thus the research on the development of e-Learning based curricula can be concluded as a research that produces a product (Sport Psychometrics Textbook) which has been

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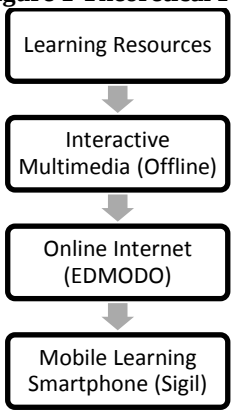
James Tangkudung, Professor at Postgraduate Studies, Dep of The Physical Education, State University of Jakarta (UNJ), Rawamangun, Jakarta, 13220, Indonesia.(E-mail: james24061952@gmail.com)

analyzed in advance the level of effectiveness in learning or learning, beginning with needs analysis, product development and product testing. The product is evaluated and revised from the results of the trial. In this case, the research that will be developed is a curriculum development model for the KKNI-based Physical Education Doctoral Program, based on e-Learning (offline (Mmi), online (Edmodo) and Mobile Smartphone (Sigil).

A. Figure 1 Theoretical Framework



Etymologically multimedia comes from Latin, which is from the word "multi" which means a lot; various and "medium" which means something that is used to convey or bring something.

So with the online internet the development of science is growing rapidly, the development of teaching and learning processes between teachers and students or lecturers and students can be helped and increased in accordance with the demands of global development globally. With the existence of online internet, a program emerged that could facilitate students and lecturers to communicate without direct face-to-face namely EDMODO.

Learning resources developed in this study are based on mobile learning. Ease of access without being limited by space and time. The source of learning for mobile learning allows students to study anywhere and anytime. Learning resources that are easily accessible certainly require a form adapted to the student habbit, which becomes the lifestyle of students. Smartphones have become part of the student lifestyle. Almost all students have a smartphone. Thus the development products in this study are designed to be adapted to smartphone devices.

II. RESEARCH METHODOLOGY

The method used was qualitative and quantitative research using the Research & Development (R & D) development model from Borg and Gall. [2]

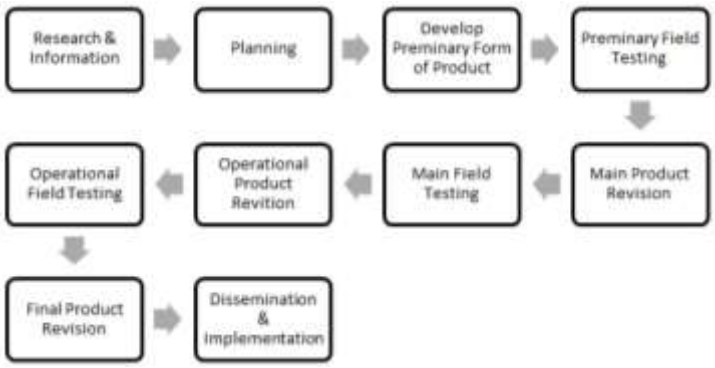
The research will be conducted at Universitas Negeri Jakarta. The research subjects are students of the Physical Education Doctoral Program in Mental Training (Sport Psychometrics).

The number of samples of 30 people consisted of two classes namely class A and B S-3 POR.

The time needed in research and development research with reference to research and development research from Borg and Gall takes 3 months with details as follows:

1. Preliminary research
2. Product development planning
3. Development of *Sport Psychometrics* book design.
4. Expert validation and product revisions
5. Small group trials and revisions
6. Field trials and revisions

B. Figure 2 R & D Model Borg and Gall



Explanation of Research Steps

1. First, determined problem or potential forms of basic product development.
2. Then, information collection is carried out as a rationale for conceptualizing.
3. Making learning material (product design), the design form is material.
4. Design validation, carried out by the experts concerned,
5. Revision, from expert test results (design validation).
6. Product testing, carried out by practicing a balance learning model at school.
7. Revised product trial results
8. Trial use or test a larger group, 30 children.
9. The second product revisions, made by experts, in order to obtain a perfect result.
10. Models can be produced. [2]

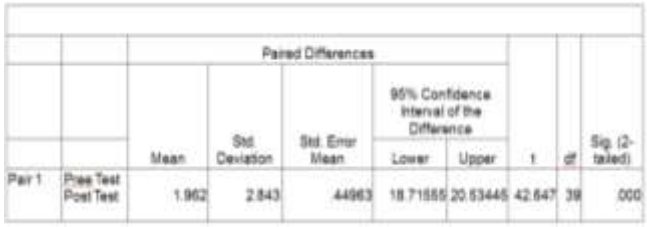
III. RESEARCH FINDINGS AND DISCUSSIONS

To test the effectiveness of application Textbook products based on KKNI by using e-Learning (Offline (Mmi), Online (EDMODO) and Mobile Smartphone (Sigil)) this "t-test" technique was used. Data from the pretest and posttest knowledge of sport psychology material skills using the Lillifors test at a significance level = 0.05. The summary of the calculation results is shown in the following table:

C. Tables 1 Effectiveness Test Results for Curiculum Development of The Pyhsical Education Doctoral Program in Mental Training (Sport Psychometrics) based on KKNI using e-Learning

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test	36.90	30	2.169	.34306
	Post Test	76.52	30	1.753	.27732

D. Table 2 Summary of Effectiveness Test Results for Curriculum Development of the Doctoral Program in Physial Education based on KKNI Mental Training Courses by using e-Learning with the t-test.



		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pree Test Post Test	1.962	2.843	.44963	18.71555	20.63445	42.647	39	.000

Mean : Average test results
N : Number of samples
Sig. : Significance level 0,05

Based on the results of the effectiveness test using the t-test (see Table 1), from the differences in the results of Sport Psychometrics Material Knowledge between the pretest and posttest, the price of tO = 42,647 is greater than the price tt = 0,000 (at the 0.05 significance level), the null hypothesis was rejected . So that it can be concluded that, there are significant differences between the pretest and posttest results of student knowledge.

From the research data (see Table 2), the average price of the pretest with mean = 46.90 is smaller than the average posttest mean = 66.52. Thus it can be stated that, KKNI-based learning products using e-learning (Offline (Mmi), Online (EDMODO) and Mobile Smartphone (Sigil)) for effective doctoral students are used to improve knowledge and ways of learning for the achievement of IQF curriculum learning.

CONCLUSIONS

Based on the results of expert evaluations and trials that have been conducted, the final or final product obtained from the Textbook product can improve the learning outcomes of Sport Psychometric science with 30 KKNI-based curriculum development materials using e-Learning (*Offline (Mmi)*, *Online (EDMODO)* and *Mobile Smartphone (Sigil))*, i.e.:

(1) Learning Development *e-Learning Competition*,
(2) Learning Development *e-Learning Reinforcement*,
(3) Learning Development *e-Learning* Sport *Communication*,
(4) Learning Development *e-Learning Stress Management Training*,
(5) Learning Development *e-Learning Leadership*,
(6) Learning Development *e-Learning* Determination,
(7) Learning Development *e-Learning Movement*,
(8) Learning Development *e-Learning Goal Setting In Sport*,
(9) Learning Development *e-Learning Commitment*,
(10) Learning Development *e-Learning Arousal*,
(11) Learning Development *e-Learning Attitude*,
(12) Learning Development *e-Learning Emotion*,
(13) Learning Development *e-Learning Tolerance*,
(14) Learning Development *e-Learning Team Work*,
(15) Learning Development *e-Learning Motivation*,
(16) Learning Development *e-Learning Intelligence*,
(17) Learning Development *e-Learning Responsibility*,
(18) Learning Development *e-Learning Self Talk*,
(19) Learning Development *e-Learning Cohesiveness*,
(20) Learning Development *e-Learning Personality*,
(21) Learning Development *e-Learning Anxiety*,
(22) Learning Development *e-Learning Concentration In Sport*,
(23) Learning Development *e-Learning Attention*,
(24) Learning Development *e-Learning Communication In Sport*,
(25) Learning Development *e-Learning Imagery*,
(26) Learning Development *e-Learning Goal Setting*,
(27) Learning Development *e-Learning Discipline*,
(28) Learning Development *e-Learning Confidence*,
(29) Learning Development *e-Learning Self Control*,
(30) Learning Development *e-Learning Aggressiveness.*

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REFERENCES

1. Allison, G. dan P. Zelikow. Essence of Decision: Mobile Learning Edition. London: Longman ,2008.
2. Borg, W, R & Gall, M, D. Eight Edition. Educational Research. USA: Pearson Education, 2007.
3. Geddes, mobile technology ,united Kingdom/USA :2004, h.225.
4. John Traxler's, educational mobile learning,USA : 2005, h.112.
5. Keegan, development knowledge and skll with learning (united Kingdom/USA :2005, h.225.
6. Meredith D. Gall. Joyce P. Gall. Walter R. Borg, Eighth Educational Research, USA: Pearson Education, 2007.
7. O'Malley et al. any sort of learning and fungtional mobile learning, united Kingdom/USA,2003.
8. UU Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.

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