THE MODEL OF PGSD-UT'S STUDENTS WORKSHEET BASED ON DISPLAY COMPONENT BASED THEORY AS A LEARNING STRATEGY IN FACE TO TUTORIAL

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Abstrak

This study is a qualitative and quantitative study that aims to develop a model of the Student Worksheet (SW) based on Component Display Theory (CDT) (Merrill , 1994) as a learning strategy to help tutor to solve learning difficulties of under graduate Primary School Teacher Education (S1 PGSD) of Universitas Terbuka (UT) in learning PEMA4201 Statistics in Education course throgh the Face to Face Tutorial (FFT). The research method used classroom action research on 2 classroom of FFT by purposive random sampling on S1 PGSD students of semester VII in the district of Tangerang in Indonesia. The study was conducted at Public Vocational HighSchool (SMK Negeri) 1 in Cikokol, Tangerang Cikokol . Analysis of qualitative data using portfolio assessment on CDT-SW and descriptive analysis of learning outcomes . The results shows that of CDT-SW model can be sused by integrating self directed learning as expository learning module encapsulates the Presentation Primary Form (PPF) with a problem-based learning as an inquiry in the Presentation Secondary Form (SPF) and Inter Relationship Display (IRD) as a prescription in solve learning dificulties. Participant's attitude scale showed that 51.55 % of participants stated on the quality of the FFT by using CDT-SW is good , where as participants showed thatself-directed learning readiness is 49.65 % and as much as 48 % and agree with the application of CDT-SW to solve the problem of learning difficulties in learning the subject through FFT.

Key Words: Student's worksheet, Component Display Theory, Face to face Tutorial, Statistics in Education

INTRODUCTION

Curriculum of 2013 has a direct impact on the competencies of elementary school teachers in implementing the learning in the classroom. Faculty Teaching and Science Education Open University as an educational institution organizes under graduate courses of Elementary Teacher Education without leaving a teaching job at schools work place. Conceptually, curriculum of 2013 are thematic integrative which need competencies of attitudes, skills and knowledge as well as a holistic way of learning and fun, and the learning process emphasizes the cognitive, affective, psychomotor through test-based assessment and portfolios are complementary. But individually , many undergraduates S- 1 PGSD at the Open

University have difficulty to pass for several subjects. Students complaint was addressed to the head of the monitoring program to the Programme Study of S-1 PGSD good coming to work or study at. Data showed that the course of PEMA4210 Statistics in Education are about 15 % of students have low grade (D or E) for the test of 2011.1 , 2011.2 , 2012.1 (UT's Testing Center, 2013). Even though there were contribution of face to face tutorial score included, at the end of the semester grade were so low .

Rationale

This study will focus on students in independent learning difficulties. Difficulties students studying the module and attempt to deal with these difficulties is an important study in the open and distance education such as UT. The interest lies in the central role of the print instructional materials in the form of learning modules at UT. Modules are the primary educators in the learning system at UT, while the tutorial is a learning aid when students have difficulty in learning module is a key activity in independent study on open and distance education. Thus it is necessary to bridge the learning strategies independent learning difficulties and time efficiency in learning, teaching in elementary school and how mengintegraskan principles of learning theory in the tutorial at UT with the learning process in elementary school.

Several studies reveal about the difficulties of students studying the module . Fakhrudin (1992) revealed that the absorption ability of the student in learning modules for some amounted to 51.13 % falkultas for students of Faculty of Science , 42.13 % for the students of the State Administration of S - 1 , and 37 % for students of Economics and Development Studies . Less absorption is due to various factors , among others, the module is less clear , as found by the researchers . Of some observations in the field , not unfamiliar students to read (more accustomed to listening to lectures) contributed to the low absorption of the students when studying the module . In addition to the lack of absorptive capacity , not UT students also considered intensive study modules . It is revealed from

research conducted by Prasetyo , Haryanto , Juliana & Sutartono (2006) who noted that the frequency of UT students studying modules is low , as many as 48% of UT students only read two times or less modules to deal with final exams . With only two times reading modules of course is not possible all the material in the module can be studied . Was to be expected , students in this situation rely on face to face tutorial. Tutorial which originally was a relief to learn to be a major learning activities of students . Thus , the success of which is reflected in graduate study courses to be low .

Tutorial implementation is not maximized and not be impressed for the integral of self-learning activities of students studying modules with central activities . Tutor training was not a solution to the implementation of a good tutorial , Mujadi , Mariana and Malta (2010) reported that 86.1 % tutors who have been trained tutors has yet to understand the concept of the tutorial and did not make the tutorial as a learning aid for students . Furthermore , Pramono & Rajati (2011) reported that the implementation of face to face tutorial for Educational Statistics course is still dominated by lectures and one -way communication from tutors to students . Difficulties students understand a topic in a course module will not be resolved by repeating the topic through lectures , because reading itself and lectures both as a method of exposition or presentation . Learning difficulties of students in a subject should be resolved through other learning methods which solve the problem of the student .

Component Display Theory (CDT) is a learning theory that was developed by David Merrill (1994). Merrill CDT in theory classifies learning activities in two dimensions, namely: the dimensions of the lesson content (facts, concepts, procedures, and principles) and performance (given example, given the generality, apply, find). Generality (generality) is a statement of a definition, principles, or steps in a procedure. "Sample" is a specific illustration of an object, symbol, events, processes, or procedures. "Applying" means using suaru generality of the case. "Finding" means finding a new generality. "Facts" is an association between the time occurrences, or a name and section. "Concept" is a set of objects, events,

or symbols that have common characteristics. "Procedure" is the steps in an activity. "Principle" is a causal relationship in the process.Teori CDT menentukan empat bentuk presentasi utama (primary presentation forms = PPF), yaitu: rule atau kaidah (expository presentation of generality), example atau contoh (expository presentation of instances), recall atau mengingat (inquisitory generality), dan practice atau latihan (inqusitory instance).

CDT prescriptive theory is a step applicable to an instructional designer when he designed a study that is based on CDT. He simply specify the desired learning objectives, and then he chose prescriptions in accordance with pre-determined learning objectives. (Pustekkom-MONE, 2007:77)

Atwi Supaman (2012) describes learning as a strategy to manage the content and approach in instructional process in a comprehensive manner to achieve one or a group of instructional objectives. Thus, all efforts related to the management of the content and the learning process with a view to the achievement of learning objectives by students. According to Rowntree (in Vienna Senjaya, 2008), learning strategy is divided into two parts, namely: (1) exposition-discovery learning, and (2) individual-learning group. Continuum exposition - the discovery is a learning strategy that emphasizes not the other is in theory expository and inquisitory CDT

Focus of Problems

It is therefore necessary that tutorial learning strategies in accordance with the needs of students of S1 PGSD who take courses PEMA4210 Statistika Pendidikan (educational statistics), characteristics of content, and the expected performance characteristics of the learning. Component Display Theory (CDT) is a learning theory that provides a choice of features instructional strategies for specific learning conditions established by the characteristics of the learner, the content of teaching materials, and the performance or competence is the goal of learning. In order for learning in the tutorial integrates with student activities to learn through self-learning modules, required learning activities in tutorial are guided through

the Student Worksheet as a CDT-based learning strategies to help students achieve the required competencies.

Problem Formulation

Based on the background of the problems that have been disclosed, the research issues related to the development of a model student worksheet as a learning strategy in the tutorial. Specifically, the research problem is stated in the following question:

a. How to develop a CDT-SW as a learning strategy to integrate student self-learning activities with tutorial?

b. What is the attitude of students towards tutorial using the CDT-SW?

c. Is the use of CDT-SW effectively improve learning outcomes?

METHOD

This study aims to develop a madel of CDT-SW as a learning strategy to integrate student self-learning activities with tutorial, the attitude of students towards the use of the MFI, and test the effectiveness of tutorial are using CDT-SW to improve student learning outcomes. The benefits of this research is to increase the effectiveness of tutorial through the development of learning strategies in the tutorial activities. The effectiveness implementation of the tutorial is expected to help students achieve the required competencies. Richey and Klein (2005) states that research is the development of a systematic review of the design, development, and evaluation of a program, process, and products that need to meet the criteria of internal consistency and effective-to's. Furthermore, Richey and Klein (2005) describes three phases in the development of research, namely:

    a. Model development

    b. Model implementation

    c. Model Validation

THE RESULTS

1. CDT-Worksheet Tutorial Portfolio Assessment

The results data from a portfolio of research activities in Face to Face Tutorial, Tasks, and final examination are follows:

a. The relationship between the grade of the tutorial with final exam / GPA showed a positive relationship. (Class A average of 80.10 and SD 14.40, C + (2.4) / 1.76 GPA 2.34, Class B average of 71.45 and SD 15.00, C (2.1) / IP 1, 62 / GPA 2.818).

b. Final UAS grades, class A with a number of participants were 29 students obtain a passing grade B (44.8%) and the subsequent value of C (41.4%), while the value of A (3.4%), D (6.9%) and which does not pass E (3.4%). While the number of class B with a total of 33 student participants obtain a passing grade C (51.5%) and the subsequent value of B (27.3%), the value of D (21.2%), while the value of A and E (0%).

c. The increasing of GPA showed that the Class A acquire significant increase (**) (51.7%), mean (*) (31%), while the decrease (-) (17.2%) and greatly decrease (-) (0%). Class B acquire significant increase (**) (39.4%), mean (*) (36.4%), while the decrease (-) (24.2%) and greatly decrease (-) (0%).

d. In increasing the value of the grade point average (GPA) indicates that indicate that a Class A GPA obtain significant increase (**) (27.6%), mean (*) (27.6%), while the decrease (-) GPA (27.6%) and greatly decrease (-) (17.2%). Class B GPA obtain significant increase (**) (24.2%), mean (*) (18.2%), while the decrease (-) GPA (39.4%) and greatly decrease (-) (18.2%).

Thus the effectiveness of using CDT-Worksheet in increasing GPA of Class of A is higher than Class of B.

2. Grade Comparison Between Learning Outcomes Tutorial Class

The study was conducted by the use of two classes of tutorial Program S1 PGSD 2013.1 VII semester registration period, ie as many as 29 students of Class A and Class B as many as 33 students.
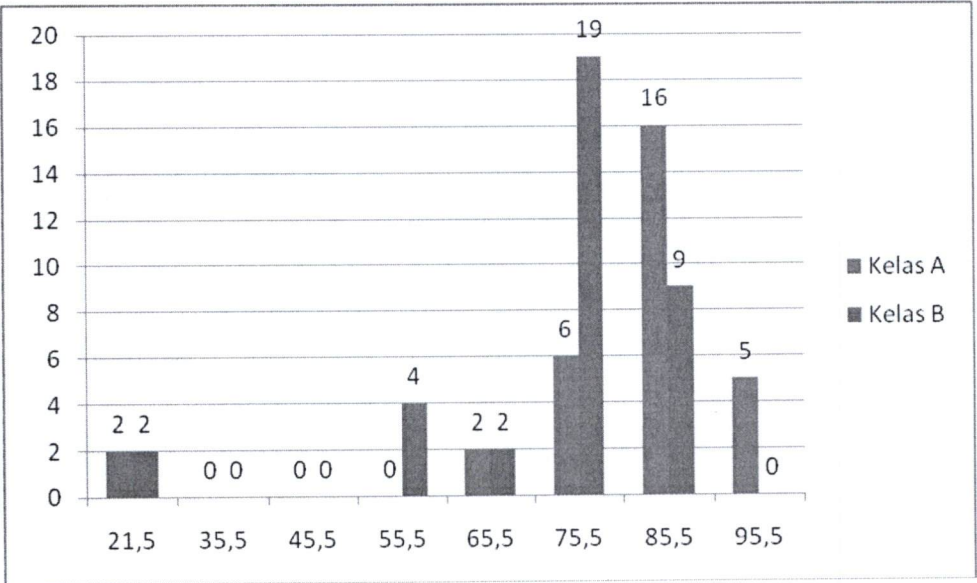
a. Comparison of learning outcomes

Tke score of Class A and B are presented in Table 1. and Figure 1

Table 1. Grade Comparison Between Class A and Class B

Score	Number of Student	
	Class A	Class B
21-30	2	2
31-40	0	0

| 41-50	0	0
51-60	0	4
61-70	2	2
71-80	6	19
81-90	16	9
91-100	5	0
Total	31	36

Figure 1. Score Comparison between Class A and Class B

Frequency distribution on scores of high value (81-100) of the Class A tutorial participants more than the Class B. While the majority of medium and low grades (0-80) the distribution of the relative score of the Class B more than the Class A. Thus the value of the Class A has a tendency towards higher score compared to Class B.

b. Grade Comparison Of Testing

Comparison of grade Class A and Class B are presented in Figure 2.
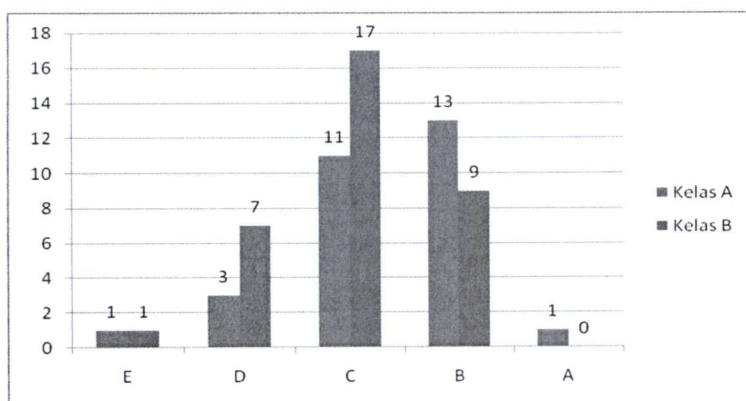
Figure 2. Grade Comparison between Class A and Class B

Based on Figure 2 and Figure 3. Seen that obtain a Class A value of 3.4 A Class B obtain the highest value of 44.8% compared with 27.3% Class B.

c. Evaluation of the Quality of Tutorial

Students attitude towards the quality of the Tutorial participants showed that most participants Class A as much as 69.2% said good while the Class B as much as 51.8% said very good.

d. Statement of Independent Learning Readiness in the Tutprial

Based on the questionnaire, participants stated the percentage of self-learning, the percentage of participants of Class A and Class B Ready largest states in independent study, ie 46.2% Kela A and Class B 53.1%. Other percentages for Class A Ready once (1.0%), Self-prepared (41.3%), less prepared (11.5%), and not ready (0%) and Class B Ready once (31.8%) , Simply prepared (13.0%), less prepared (0.5%), and not ready (1.6%) participants reflected efforts to fulfill the task of summarizing the module before the module material in the tutorial

e. Participants attitude towards application of CDT-SW in Tutorial

The most of the participants of the Class A (36.1%) and Class B states declared Agree completely and (43.1%) of the application of CDT- SW in tutorial. Most other Class A states agree once (8.1%), moderate (23.1%), Disagree (11.8%), Strongly disagree (0.9%). Class B represents moderate (6.4%), Disagree (3.2%), Strongly disagree (4.2%). Thus the application of CDT-SW is that there is still a need to adapt the

learning strategies they expect, while most slowly began to adapt to support the implementation of this learning strategy.

CONCLUSIONS AND RECOMMENDATIONS

From the research and development of CDT-SW, it can be concluded, that:

1. Development Model of CDT-SW can be applied if the conditions of learning that students learn independently pursued in the summary module implements CDT-SW learning, active participation in discussions, and sharing knowledge with tutors and fellow.

2. Attitude of students towards good quality tutorial activity (51.55%), whereas participants in the self-learning readiness indicates readiness (49.65%), and agree to the application of CDT-SW (48%).

3. Effectiveness of the application of the CDT-SW in tutorial shows the increase of as much as 51.7%.

    From the above conclusions can be recommends as follows:

1. Development of CDT-SW requires a thorough analysis of expected performance components to the content delivered and the integration between student readiness of participants to follow the tutorial module through the task of making independent reading activity and summarizes the module.

2. Application for self-study using the CDT-SW takes time to adapt themselves to provide internal motivation to encapsulate modules (PPF: EG and Eeg) and external motivation in the form of guided practice through the tutorial (PPF: IG and IEG) and prescription SPF enriched in S as well as information research results from the application of CDT-SW and independent learning are integrated in the tutorial

3. Changing habits learned from expository to the inquiry process requires time and seriousness in developing instructional media MFI-CDT in order to improve learning outcomes.

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