

## **Design and Development of English Instructional Material Based on CAI Model at Economics Faculty**

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### **Abstract**

The method used in this study is Research and Development (R&D) with five design phases. The research objective is designing English material and developing English instructional material to increase students' English proficiency at Economics faculty through Computer-Assisted Instruction (CAI) model. The result of study shows that students' English proficiency in accounting and management departments can be significantly increased by applying CAI based material design with 86% of accounting students obtained 84% of the total 95 students who took the test obtained a complete score with mean 80.92 or B+. The total accounting department students were 28 who obtained score 75 was 27 students in which 8 of them obtained equal and higher than score 86. The management students were 32 students who obtained score 75 was 29 students in which 11 of them obtained equal and higher than score 86. Meanwhile, the development study students were 35 students who obtained score 75 was 31 students in which 5 of them obtained equal and higher than score 86. This result of analysis is in line with the results of the students' needs (wants) in English learning by analyzing the students' response on questionnaire, there were 79% of accounting department students responded positively to the material application, 69% of management students, and 71% of development study students. All categories are good to very good. It is concluded that CAI model based English instructional material could increase the students' English proficiency at economics faculty.

**Keywords** : design, development, English, instructional, material

## **Introduction**

Development of Information Computer and Technology (ICT) in this era of global communication gives available information currently to wide society. It contributes positively towards material development even more interesting and fun ideas. On other side, the existence of ICT as new technology devices challenges the lecturers to master and use it for choosing and spending it effectively and efficiently in teaching and learning process. In this case, lecturer's professionalism does not only cover pedagogical competence to teach students, but also competence in organizing information and environment (including place, method, media, assessment system, and facility) to facilitate students learning activity for its ease and effectiveness. Development of ICT also has possible chance to use multimedia interactively in form of learning multimedia. The use of interactive multimedia has component of audio-visual to in teaching the learning material can attract students to learn the material.

Interactive multimedia can also provide opportunities for students to conduct quasi-experimental and exploratory for providing learning experience rather than simply listening to lecturers' explanations. English Course is one of the general subjects and it is a compulsory university course. The English language course is also one of the supplementary materials for the national education system in order to improve the quality of Indonesian human beings, giving improvement of spirituality in order to balance the progress of science and technology today. A balance between the students' expertise and additional knowledge gained during education. Students may be good at management or accounting because their intellectual intelligence is better. In other hand,

sometimes students have good academic achievement and satisfy it actually has an emotional intelligence that is far from expectations. Students can easily master the science of management in accordance with the field of expertise coupled with the presence of English language courses in Non-English Department is very promising will provide quality output.

However, English Language materials for Non-English Language Department are full of abstract concepts that are still difficult to be understood by learners, especially to develop skills in English (Surjono & Susila, 2013, p. 55). Therefore, in learning English subjects for non-English majors should be more emphasized on functional skills. This means that learning outcomes should be applicable in everyday life, both in the context of the implementation of life in the community and in the work environment. Teaching and learning process is an activity in which the process of students' learning and teaching in an interactive context and educational interaction between lecturers and students, so there is a change in the level of knowledge, understanding and skills or attitudes. There are two most important aspects, namely teaching materials and methods or learning media as teaching aids. Learning media can enhance students' learning process that is expected to enhance students' learning outcomes. Proper use of media can be useful for students to learn according to their abilities, and can clarify the presentation of messages. Furthermore, the presence of media in the learning process has a very urgent meaning, the lack of clarity of material delivered can be helped by presenting the media. The complexity of the material presented to students can be simplified with the media. In short, media can be a solution.

Using CAI-based learning model of learning can be more efficient and

effective so that the enrichment of material to learners can be further improved, even with the ability of lecturers using this learning model is able to bring students to level of analysis and exploration of each learning material. Learning model is one of the factors that helped teacher to determine the success of teaching (Ruhimat, 2009). Thus, the learning model can effectively assist students and lecturers in delivering learning materials in relation to the teaching objectives formulated in teaching plan. Under these conditions, CAI-based learning model can improve process efficiency and the quality of teaching and learning outcomes.

One of CAI-based learning models is to use media, multimedia, or macromedia. This use is one of the various programs in learning media. The advantages of CAI are multimedia displays, a mix of graphics, text, animation and sound. In addition, the program can create interactive buttons with a movie, make color transparencies in the movie, make animated changes from one form to another, can create animated movements by following a predefined path, and can be converted and published into types such as swf, html, gif, jpg, png, exe, mov. So, it can make the learning process more fun and make learners are interested in the material being taught. This is supported by the design of CAI-based English materials where each form of practical activities can be easily done by the students. On the assumption that with integrative and attractive English material development design applied and taught by using CAI-based learning model, the achievement of learning objectives can easily be reached in the learning objectives, in this case the students are not only experts in the department but the students are also able to

use English actively in accordance with majors.

At Tadulako University, non-English majors programmed English courses 1 and 2 in each semester. Each department has been facilitated with a variety of patent and reliable technology tools. Some departments in the faculty have also had laboratories for the use of language learning. In addition, teaching English in each major has been widely utilizing ICT in learning process. But, the problem then requires attention is the absence of design development of English material in the majors according to the vision and mission. There is no recommendation of the learning model and the unavailability of CAI-based instructional modules.

Output of students who have already programmed English courses are not able to use English in speaking according to their respective fields, whereas students who have finished programmed English course must be able to speak English about economics, law, agriculture, biology, or history. Based on the above background, the researcher is interested in conducting applied product research about: Design of Material Development and Computerized Learning Model Based on Computer Assisted Instruction (CAI) in Non English Language Department.

In view of Hannafin & Peck the classification of activity types in the CAI-based learning model is practice and exercise sessions, tutorial or instructional sessions, games, and simulations or modeling (Hannafin & Peck, 1988). In practice and exercise sessions, computers provide feedback on topics taught even when using other media. Practice is very important in many skills. Some of things that make a medium suitable for practice

and exercise are medium with computer capabilities that can manipulate numbers quickly, can adapt students needs, provide quick feedback, and continue to provide instruction when students find learning difficulties. In addition, tutorial and instructional sessions become sessions that trigger students' independence in learning. In a tutorial or instructional session, the computer actually teaches new information. This process resembles the interaction that involves students and lecturers when the learning process. The lecturer gives the concept, each student understands the concepts and the subsequent instruction provided based on the student's response.

The wise educator chooses CAI method in accordance with the learning activities, learning profiles, external constraints, and specific goals that he must meet. CAI based learning is a learning that based on the concept of computer and multimedia learning and requires LAN, WAN, or internet. The use of ICT requires technological devices. Therefore, Computer Assisted Instruction (CAI) is computer-assisted in learning process or learning that fully uses computer, tool, media, multimedia and CAI based on material development design.

In some concepts, CAI is explained supportive with CAI-based English learning model where various practice and exercise activity in English language can be done well. Sumarno states that CAI generally refers to all educational software accessed through computers where users can interact with it (Sumarno, 2011). Computer system can present a series of learning programs to students, either in the form of concept information or exercise questions to achieve certain goals, and the system to do learning activities by interacting with computer systems. It can be said that CAI is the use

of computers as an integral part of the instructional system, where usually the user is bound to a two-way interaction with the computer. On the other hand understanding CAI is similar to teaching and learning activities involving various types of activities, namely: practice and exercise sessions, tutorial or instructional sessions, games, and simulations or modeling.

Learning technology with ICT continues to grow with time. But, in principle the technology can be grouped into two, namely: Technology based learning and Technology based web-learning. Technology based learning consists principally of Audio Information Technologies (radio, audio tape, voice mail telephone) and Video Information Technologies (video tape, video text, video messaging). While technology based web-learning is basically Data Information Technologies (bulletin board, Internet, e-mail, tele-collaboration).

Benefits that can be obtained by students and lecturers in the application of CAI-based learning model. For the learners, it is clear that the CAI learning model will train the independence of learners. In addition, it also makes it easy for learners to access learning materials from anywhere. Therefore, learners can save costs and time. Clearly, the most important advantage is that learners can learn according to their abilities without need to feel inferior or embarrassed with other friends, who may be faster and clever in learning. The following are some of the benefits that can be gained for learners with a CAI-based learning model. In particular, learners can build interactions when learners engage in discussions, learners can repeat difficult learning materials over and over again until understanding is obtained (Sunardi, Raden, & Harjo, 2014, p. 42). In addition, learners can develop technical skills in

using the internet, responsible for their learning performance, and build self-knowledge and self-confidence.

Meanwhile, benefits for teachers, CAI-based learning model also provides up-to-date material to learners. In particular, the advantages of using this model is the ease of accessing anytime and anywhere, reducing the cost of using learning materials, encouraging teachers to access up-to-date learning resources, and enabling teachers to communicate their ideas within an unlimited scope. For managers of educational institutions, they have very large benefits, among them is to improve the prestige and accountability of institutions, and provide opportunities to promote the development model through global media to the world.

## **Method**

The method of this research dealt with R&D composed of scientists or researchers, which all tasked with applied research in scientific fields with university setting, which was aimed at designing and developing English instructional material based on CAI model with website design for producing future products or the improvement of current products and procedures. Conducted research on instructional material development of education was appropriately done in research and development (R&D). According to what Gay introduced about introduction to research and development (R&D), it was used in the following condition. The purpose was not to test a theory, but to develop and validate the whole components in certain concept for the working of effectiveness. The product must be developed to fulfill needs of users based on a decided model. R&D resulted products which have been validated in the field and revised as needed (Gay, 1991). In

this research the researcher chose the spiral model as referenced by (Cennamo & Kalk, 2005, p. 6). The spiral model was known 5 (five) development phases: (1) define, (2) design, (3) demonstrate, (4) develop, and (5) deliver. The population of this study was students of Non-English majors of Tadulako University in this case economics faculty

In accordance with the general objectives of this study, create an English learning model with the design of material development through a CAI-based learning model complete with media creation and implementation. So the most appropriate method to achieve the purpose of this research is Research and development (R & D). Borg & Gall explains educational research and development (R & D) is a process used to develop and validate educational production (Borg & Gall, 1989, p. 423). From this understanding can be seen that the steps of research and development is a series of cycles, each step will be passed or done always refers to the results of previous steps, until finally obtained a new educational products (Murni & Wati, 2013). R & D produces products that have been tested in the field and have been revised at a certain level of effectiveness.

## **Findings and Discussion**

This research was conducted at Faculty of Economics and Business of Tadulako University. The research was designed initially by R&D method but after observation at location found some factors that hinder to directly apply research and development. In addition, at the same time the curriculum at the University has improved needs revitalization of the new curriculum oriented KKNi or according to Law No. 44 of 2015 on national standards of higher

education, and Presidential Regulation No. 8 of 2012 on the Indonesian National Qualification Framework (KKNI). The researcher takes this step of change without compromising the content and purpose of this study. The researcher uses design research methods to improve the quality of English learning through CAI, designing or improving previous designs, and implementing learning with reference to the theory and principles of reality based on the teaching of the Faculty of Economics and Business.

The steps taken by the method of design research (Gravemeijer & Cobb, 2006) are 1). Preparing for the experiment (research preparation); 2). Design experiment (implementation of experimental design); 3). Retrospective analysis (analysis of data obtained from previous stages).

### Document

Documentation is used to collect data relating to teaching English in the

Faculty of Economics and Business. Based on the results of observations conducted, it was found that the lack of documents and archives of English learning tools available in the Faculty of Economics and Business became one of the causes why the students is not motivated to learn English independently. In every study program there is no availability of English language materials used in the faculty environment that should exist.

### Product Validity in Workshop

The development of CAI products in this study focused on multimedia using computers with blog-based online instruction, learning English beginning with needs analysis, learning design development, product development, expert validation, product revision, and then product testing. Based on these steps have been generated research data into the results of the workshop on the development of materials as follows.

Table 1  
Assessment of Expert for Eligible Product Material CAI

NO	NAME	POSITION	ELIGIBLE	EFFECTIVE	APPEARANCE	PROG
1	DR. Harifuddin Thahir, M.P	Dekan Fekon	4.00	3.80	3.00	4.00
2	Drs. Khaeruddin Thaha, M.Hum	Dosen Bahasa Inggris Fekon	3.85	4.00	3.75	4.00
3	Muhsin, S.Pd., M.Pd	Dosen Bahasa Inggris	4.50	4.25	4.00	4.50
4	DR. Ferry Rita, M.Hum	Dosen Bahasa Inggris	4.00	4.00	3.75	4.00
5	Hj. Hastini, S.Pd., M.A	Koord. Prodi. Bahasa Inggris	3.55	4.00	3.50	4.00
6	Wahyudin, S.Pd., M.Pd	Pengajar Tim MKU	3.50	3.75	3.65	4.00
7	DR. Mawardin M. Said, M.Hum	Pengajar Tim MKU	3.75	3.80	4.00	4.00
<b>Penilaian Rata-Rata</b>			<b>3.88</b>	<b>3.94</b>	<b>3.66</b>	<b>4.07</b>

Based on the data above, next conversion is to change quantitative to

qualitative data, it is based on the following analysis.

Table 2  
Conversion of Data Qualitative

Grade	Score	Interval	Data Qualitative
A	5	$X > 4,08$	Excellent
B	4	$3,36 < X \leq 4,08$	Good
C	3	$2,64 < X \leq 3,36$	Fair
D	2	$1,92 < X \leq 2,64$	Less
E	1	$X \leq 1,92$	Poor

Adapted interval score (Sukardjo, 2005).

The data of the workshop is the data obtained based on the assessment of material and media experts through the workshop. The material expert assesses the content and learning aspects, the media expert judges the display and programming aspects. After the analysis, the average score of expert material valuation for content aspect was 3.88 and for learning aspect was 3.94. Using a score range of 1 to 5, the average score of expert material judgments for content and learning aspects in accordance with the 5 score scale conversion guidelines is "good".

Meanwhile, the average score of expert media assessment for display aspect of 3.66 and the programming aspect of 4.07. The average score of expert media judgments on the aspect of display and programming is "good" criterion.

Based on the results mentioned above, it is concluded that CAI with the focus of blog-based multimedia learning is feasible to be used in learning both in terms of content and learning aspects as well as from display and programming aspects because it obtains the average value of the overall "B" or is classified as "Good". This conclusion is taken in accordance with the feasibility value set in this study that if the material and media experts give a minimum grade "C" or with the criteria of "fair", the development of

productis considered appropriate for the use in learning process.

Based on the test result, it is known that two out of three students showed the attractiveness of CAI multimedia developed on the criterion "very interesting", while one student showed the appeal of multimedia on "interesting" criterion. In a classroom test, it is well known that the management, development study, and accounting classes showed the attractiveness of the product on the "very interesting" criterion. While eight students showed the attractiveness of the product on the "interesting" criterion. The criterion of attractiveness is obtained based on the conversion of quantitative data to the qualitative data of scale 5 (Sukardjo, 2005, pp. 53-54). It can be concluded that the product developed "is very interesting". This conclusion is based on more than half the number of students showed the attractiveness of the product is on the criterion "very interesting".

### Observation

Observation is used to collect data on students' learning activities, lecturer's activities in managing English learning process. In addition, students and lecturer activities data are recorded and transcribed in to a description. The result of observation indicates that lecturer used minimal methods and media in the classroom teaching activities. The results

are obtained from indirect interviews with lecturers and students who have programmed English language courses. Constraints generally experienced by students are monotonous teaching and often boring that reduced the students' interest in learning, so it is very difficult to improve learning achievement, especially English. While lecturer faces many difficulties in applying teaching methods because of facilities weaknesses such as online connections, electricity, and computer devices that help and facilitate

lecturer to access online learning resources.

Based on the observations above, the researcher stated that with CAI-based learning it is possible to improve student's motivation in learning English because the taught material can be accessed through computer facilities, laptop, android, tab, and other facilities. This can be an overcome by the researcher with CAI-based research results. The following presented the results of the students' assessment of the prototype of CAI-based learning model.

Table 3  
Conversion of Students Qualitative Data Assessment

Grade	Score	Interval	Data Qualitative
A	5	$X > 4,08$	Very Interesting
B	4	$3,36 < X \leq 4,08$	Interesting
C	3	$2,64 < X \leq 3,36$	Fair
D	2	$1,92 < X \leq 2,64$	Uninteresting
E	1	$X \leq 1,92$	Strongly Uninteresting

Adapting interval assessment (Sukardjo, 2005)

This result is evidence from the conversion result that 45 students rated, an average of 4.10 on the feasibility of using the product. In addition, students also found that application in the classroom was believed to increase students' motivation and learning in the classroom, it is indicated the students' assessment average was 4.76 or "very interesting" interval.

### Result of Test

The test is used to collect data on students' learning outcomes after obtaining

CAI-based learning. The results obtained by the students showed a significant improvement in English learning process. Besides the written test, the researcher also conducted an oral English test and found great results that there are some students of CAI English-based subjects have demonstrated their ability by being able to speak to answer the researcher's questions although with less grammatical, but overall an improvement compared to previous learning is very successful after this research.

Table 4  
Students Grade of English with CAI-based Learning Model

NO	STUDENTS	MAJORS	SCORE	GRADE
1	RATKLIF FEBRIANTO	MANAGEMENT	78.00	B+
2	CLAUDIA M. BAGINDA	MANAGEMENT	65.00	C+
3	ZAINAL MURSYID	MANAGEMENT	88.00	A
4	SULFIANTI S.	MANAGEMENT	62.00	C+
5	YULIANTI DWI ASTUTI	MANAGEMENT	80.00	B+
6	MAGFIRA	MANAGEMENT	65.00	C+



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7	MUH. ALFISYAR AR.	MANAGEMENT	75.00	B
8	WAHYU FRIZA	MANAGEMENT	80.00	B+
9	NUR ANISA	MANAGEMENT	75.00	B
10	ANNISA ANGGRAINI A.	MANAGEMENT	80.00	B+
11	M. TAKDIR	MANAGEMENT	85.00	A-
12	DEVA YULIANTI	MANAGEMENT	95.00	A
13	MOHAMMAD FAHMI	MANAGEMENT	90.00	A
14	ILHAM AKBAR	MANAGEMENT	65.00	C+
15	MUHAMMAD ASLAM AZIS	MANAGEMENT	65.00	C+
16	KUDRAT SUMAGA	MANAGEMENT	85.00	A-
17	MUH. RIDWAN JAFAR	MANAGEMENT	84.00	A-
18	SUKRI	DEVEL.STUDY	65.00	C+
19	AXEL DAVID ANUGRAH P.	DEVEL.STUDY	98.00	A
20	IRHAN	DEVEL.STUDY	85.00	A-
21	JULIANTO	DEVEL.STUDY	85.00	A-
22	YAYUK SAHARA	DEVEL.STUDY	75.00	B
23	NURUL ARINI	DEVEL.STUDY	65.00	C+
24	ELOISON F. WENGKAU	DEVEL.STUDY	85.00	A-
25	RITA VERONIKA	DEVEL.STUDY	85.00	A-
26	ANDREW K. PANDU'U	DEVEL.STUDY	75.00	B
27	ANDI RIANSYAH LATJUBA	ACCOUNTING	85.00	A-
28	YUSRIPAL	ACCOUNTING	95.00	A
29	ARDIANSYAH	ACCOUNTING	90.00	A
30	INCE ARFIANI	ACCOUNTING	80.00	B+
31	INDRIANY	ACCOUNTING	70.00	B-
32	SIDHIK PRAMONO JATI	ACCOUNTING	75.00	B
33	EKA RIZKA RAMADHANTY	ACCOUNTING	65.00	C+
34	NUGRAHA PUTRA	ACCOUNTING	65.00	C+
35	MAYA RISKI	ACCOUNTING	85.00	A-
36	NANANG WAHYULLAH	ACCOUNTING	75.00	B
37	BUDI PUTRA PERSADA	ACCOUNTING	85.00	A-
38	NEDYA SININTA	ACCOUNTING	70.00	B-
39	CHRISTIAN OKTAVIANI	ACCOUNTING	75.00	B
40	MOH. DEDDY PRATAMA	ACCOUNTING	85.00	A-
41	RISKI	ACCOUNTING	80.00	B+
42	DEDE KURIANG	ACCOUNTING	80.00	B+
43	ANDRIANI S. LAODE	ACCOUNTING	65.00	C+
44	PUTRI WAHYU LESTARI	ACCOUNTING	80.00	B+
45	DELLY RIA NOVITHA M.	ACCOUNTING	80.00	B+
<b>Mean Score (Average)</b>			<b>78.22</b>	<b>B+</b>

Result of analysis based on the studentsscores, there were 6 students got A, 11 students got A-, 9 got B+, 7 got B, and 2 got B- so the total amountwere 35 students got the complete score. While the number of 10 students got score C+, in this case the total students took the test were 45 students.In comparison, learning with the CAI model proved to have a positive impact on improving students' ability. It can be explained that in the previous English class that did not use the CAI model, the average students score is B-. After applying the learning with CAI model the students score is B+, and the

classical passing grade is obtained 78% of the students got the complete score (minimum B-).

### Result of Interview

Interview wasdone to collect lecturers' response data on English based learning at the Faculty of Economics and Business. Interview data was obtained in April 2017 at the Faculty of Economics and Business of Tadulako University. After completing the questionnaire, the lecturers were directly interviewed. The researcher interviewed the lecturers directly one by one in the rest area at the

Faculty of Economics and Business office. The English materials used in the Faculty of Economics and Business are mostly made by respective lecturers themselves. There are teams from MKU that provide outlines but the design and content of the materials taught are mostly made by the lecturers themselves, the team consists of several lecturers appointed by LABDAS (formerly MKU unit at university). Two lecturers who teach sometimes use English material that has a correlation with the economy but only partly. Then the other lecturers teach Basic English material. Actually, at Tadulako University students learn speaking, reading, writing and listening but only a few that discuss about economics in English speaking.

All the lecturers interviewed explained that English material taught in the Faculty of Economics and Business is relevant but has not fulfilled the needs of students connected with the field of work that they get in the future. All lecturers basically agree with the application that English is used to communicate daily, in other words English becomes important in field of work because it assists students in improving their ability to work real world. Based on a result of research that mostly based on interviews with business people, economists and other experts English is important as much of the English you will hear in your professional life will be spoken by people who don't have English as their first language (MacKenzie, 2010). In this case, English always becomes important to be learnt for its usefulness although with they who are non-native speakers. But a lecturer questioned whether it is applicable or not for the reason English major itself does not apply daily English in communicating even with other majors.

Based on the results of the interviews, the researcher then conducted a meeting for sharing perception among

lecturers of English subjects in the Faculty of Economics and Business. The researcher did not invite all lecturers because of limited time. Therefore, only senior lecturers with experience teaching in the Faculty of Economics and Business are invited with the hope that their experiences and contribution can be really given in the effort of drafting the design and English learning model at Faculty of Economics and Business.

## **Discussion**

### **English Learning Design**

At this stage, the researcher is in the preparing for the experiment and preparing the learning process or hypothetical learning trajectory (HLT). In making HLT researcher does: a). Literature review as well as discussions with English lecturers in Faculty of Economics and Business who are experienced in English content. The direction of the vision and mission of the faculty is very influential on the outcomes of alumni who are rescued can be used for the learning process; b). Making the English learning tools based on data and documents and learning tools in the faculty, some learning tools made in English, among others: syllabus, RPS, learning media, teaching aids and teaching materials oriented KKNI; c). The design of CAI-based English learning model, by combining English language learning syntax and data obtained from the faculty as the context of its realistic problems. The learning model stages are:

- 1) The use of context-based excellence faculty of economics and business.
- 2) The use of progressive models.
- 3) Utilization of student construction results
- 4) Development of interactivity and character

### **Pre-Design Prototype of English Learning Material**

At this stage, the researcher and lecturers undertook the pre-design study of CAI learning prototype in all majors at the Faculty of Economics and Business. In preliminary design review of the prototype, the researcher and several partner lecturers observed and checked the suitability and feasibility of prototype CAI-based English learning design. Some sources of learning are used as references for teaching English subjects in all majors at the Faculty of Economics and Business but no recommended teaching materials. This is because of no coordination among the faculty, study program, and lecturers of English subjects who notabeneanya are mostly lecturers of English Education Program from FKIP UNTAD. In general, the materials recommended for teaching English in the Faculty of Economics and Business do not meet the criteria and content of English for economics.

English 2 book is the result of learning preparation MKU Team and managed by Language Center of Tadulako University and is mostly used by English lecturers. Based on the results of study with English language course instructor in the Faculty of Economics and Business, then resulting teaching tools based on CAI include syllabus, RPS, and CAI-based Textbook. The CAI-based learning tool is the result of integration of several sources of teaching materials recommended by lecturers of course subjects through perception equation activities. After that, the recommendation is then analyzed in the next activity is the workshop of RPS and CAI-based materials management that produces the product in the form of CAI-based English learning tool as a model. This model is trusted to improve the

students' ability in active English both orally and in writing in the field management, development, and accounting as well as the field of economics in general.

Next is a workshop model for preparation of materials that are held together by involving students and lecturers of course subjects to balance the interests, needs, and opportunities availability of resources used. Students engagement is useful because students directly sort and select the material and subject matter that is absolutely necessary in their majors. In addition, it supported the future needs of students in the world of work so that certain topics can be selected directly by the students and then refined by the course team, and then compiled based on the criteria of design teaching materials English oriented KKNi or SN DIKTI.

### **CAI-Based Learning Model of English**

The form of CAI varies suitable with material characteristics and objectives to be achieved. It is described by Hannafin & Peck that some forms of CAI media, namely (1) Tutorial, tutorial form program follow the tutor system conducted by the instructor, but without the presence of instructor. The interaction that occurs only between students and the material presented is communicative as if there was a tutor directing the learning. (2) Drill-and-practice, a drill-and-practice form allows students to improve the skills of a previously taught concept, rule, or procedure through practice and examples. (3) Simulation, the simulation program tries to resemble the dynamic process that occurs in the real world, so it is as though as students are experiencing the real event without having to face the real risk. (4) Instructional Games or learning games, this program contains games related to the

subject matter (Hannafin & Peck, 1988, pp. 139-157).

On the other hand, according to Rusman, the form of CAI media, namely (1) Drill and Practice, drills program will be implanted certain habits in the form of exercise (Rusman, 2012). By the continuous practice, it can be embedded and become a habit. Flowcharts for pouring content and computer-based learning systems into CAI programs are done through the creation of flowcharts. (2) Tutorials, tutorial program is basically the same as the guidance program that aims to provide assistance to students in order to achieve optimal learning outcomes. (3) Simulations, this program displays subject matter that is packaged in the form of simulations of learning in the form of animation that explains the content in an interesting, life, and combines elements of text, images, audio, motion, and harmoniously harmonious colors. (4) Instructional Games, the program is to provide a learning experience that provides learning facilities to enhance students' skills through an educational game (Rusman, 2012).

The form of learning that is displayed on the development of this CAI is drill and practice in variation with online blog based simulation. Submission of materials with drill and practice is chosen because with this system, students can receive materials at once and practice speaking, writing, reading, and listening skills. This can motivate students in learning, so that the learning process is effective and have variations in the learning process. In this product development process, to process design on CAI, researcher use Adobe Photoshop CS6 application, Corel draw X5, quiz application designer hot potatoes, and weblog online blogspot.com. In this research the lecturer skill in designing CAI model with computer function becomes an

important point. Nim Park & Son have conducted a research and they concluded that internal factors such as teachers' limited computer skills, knowledge about computers and beliefs and perceptions also seem to significantly affect teachers' decisions on the use of CALL (in this case CAI) (Nim Park & Son, 2009).

In line with opinion (Hannafin & Peck, 1988, pp. 8-10), CAI media applications have the advantage of increasing individual interaction, cost effectiveness, easy data storage, and motivating learners. From the results of this study described the benefits and strengths of using CAI products in learning English subjects on the students of the Faculty of Economics and Business as follows: (1) Improve interaction, CAI media can cause interaction between students and computers; (2) Individuals, with CAI media students can decide for themselves what they do first; (3) Administrative advantages and cost-effectiveness; (4) Giving motivation, computer able to give illustration, animation, music, narration and interesting appearance that can give effect to students; (5) Immediate feedback, CAI media developers can design a learning situation that requires students to do something and get positive feedback immediately after students do something; (6) Easily store data; (7) Integrity of learning, a teacher cannot convey the exact same thing for the second time; and (8) Students control using computer-assisted learning program applications can control their own learning situation, and the students can also adjust the speed of learning or choose interesting topics for them.

Based on the results of analysis, it can be concluded that the student's English language ability is relatively low can be solved by applying CAI-based material design. This is based on test results indicating that 78% of the total 45 students

took the test obtained a complete score with an average 78.22 or B+. This data reinforces the finding that the average of students' previous English skills when the class is taught does not use CAI-based material design is still low on average with the final grade B-.

According to the students needs (wants) that English learning 50% of students place an increase in oral communication or speaking skills (Speaking) and 30% writing as a top priority in learning English for preparing to enter the workforce. The results also show that CAI is effective in reading activities. An interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning takes place. CAI uses a combination of text, graphics, sound and video may trigger the learners in learning (Silva, 2016).

### Conclusion

CAI in this case is applied in English class in Faculty of Economics and Business. In general, lecturers contend the design of the material is very decisive in improving students' English proficiency in the Faculty of Economics and Business. All lecturers are also confident and optimistic that CAI-based learning model can improve students' English proficiency.

The results of this research is the result of the development of multimedia English learning in the Faculty of Economics and Business through steps of analyzing, designing, producing, validating, revising, and testing. The quality of multimedia-based learning CAI developed in terms of content and learning is "good". Using a score interval 1 to 5, the content aspect showed an average score 3.88 and the learning aspect showed an average score 3.94. While CAI with the

focus of blog-based multimedia learning feasible to be used in learning both in terms of content and learning aspects as well as from the aspect of display and programming because it obtains the average score of the overall "B" or pertained "Good" criterion. Based on the test result, it is known that two out of three students showed the attractiveness of CAI multimedia developed on the criterion "very interesting", while one student showed the appeal of multimedia on "interesting" criterion. In a classroom practice, it is well known that the management, development study, and accounting classes showed the attractiveness of the product on the "very interesting" criterion.

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