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### The Need Of Development Learning In Management Accounting Being Blended Learning Environmental Management Accounting

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#### ABSTRACT

Material need analysis of environmental management accounting was carried out through study program discussion forum. The feedback was obtained whether this course was offered to the student about to graduate or teaching material on environmental management accounting was being part of management accounting subject. The study aimed to identify the needs of development in learning management accounting being blended learning in environmental management accounting. Purposive sampling survey was used in this research. The samples were lecturer of private university and management accounting students. Reliability and validity test were applied, meanwhile, frequencies and descriptive analysis were also utilized for better result. The result showed that reliability test value was indicated measurement scale of learning need management accounting that was measured on aspect of formula competency subject, learning process, learning source, matching of learning outcome, active learning method, learning strategy, result and evaluation of learning, were reached a good reliability. The validity test ascertained that correlation all aspects of learning were significantly as measurement of learning need. The most of the respondents were replied "often" based on frequency analysis on the need of learning in management accounting subject. Meanwhile, descriptive analysis informed that the development of learning in environmental management accounting could be done through learning improvement in some aspects such as learning process, matching of learning outcome and learning method. All of blended learning devices, learning plan semester, syllabus and learning evaluation were presented in form of power point, teaching book and blog.

**Keywords:** Environmental Management Accounting, Blended Learning, Blended Learning Devices.

#### INTRODUCTION

Universities have a task to generating competent human resources in accordance with the demands of the world's qualifying practices (profession, company, or institution). Moreover, the development need of stakeholders must be noted. To design the course curriculum one needs the required stakeholder information about the competence and qualifications needs or expected learning outcomes.

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The development of stakeholders in environmental management trigger human resource needs that are necessary to present information in environmental accounting according to the rules of the profession. Environmental management accounting is the company's internal information for planning and control to be used in decision making. Environmental accounting is the process of generating information that is relevant to the ability to of minimizing environmental problem, hence, efficiency of environmental management is achieved with the assessment of environmental activities in the aspects of costs and benefits.

In accordance on Environmental Management No. 32/2009 in Indonesia that environment is spacing unity of all things, conditional power and living creatures (including human behavior that affects nature), life continuity and human being welfare and other living creatures. In 1994 was introduced company Performance Assessment Program at Clean River Program by the Ministry of Environment. The purpose of this program is to understand the level of business community obedience toward various regulations in the re-structuring and environmental management program. The appraisal criteria are categorized in five levels. Black rank, given to companies that do not do at all efforts to control the environmental impacts, Red rank, awarded to companies that have made efforts to control environmental impact, but cannot reach the specified quality standards yet, Blue rank, awarded to companies that have made efforts to control environmental impact and have met the minimum requirements of quality standards, Green rank, given to companies that have met the waste quality standards and has made other efforts in environmental management and Gold rank, given to companies that have met all criteria of the green level, but with the advantage of having serious committed efforts to control air pollution, recycle waste that lead to a zero discharge including apply cleaner production in their business activities.

Sustainable development is continued establishment which is the prosperity level of next generation should be better than the current generation(Mohd Suparmoko, 2014; M Suparmoko & Suparmoko, 2000). Evaluation to monitor the implementation of institutional responsibility to the environment and social had been done. This evaluation became representation on how companies generating both positive and negative externalities care for the environment.

Environment Minister Balthasar Kambuaya stated that the environmental damage level in cities and a district of Indonesia is getting worse, reaching 40%-50%, while the quality standards in the range of 80% -90%. The research showed that the condition of environmental damage in Indonesia was ranked 74 of 132 countries surveyed(Djawahir, 2014).

An increase in environmental damage along with regional autonomy era, whereas the authority of environmental management is controlled by local government. The environment Minister advised businesses to pay attention to the following: 1). Protection of water resources, 2). Prevention of water pollution, 3). Recovery of water pollution in water sources, 4) Prevention of air pollution, 5). Prevention and mitigation of the environmental impact of waste and follow-up service toward public reports due to the pollution / environmental damage.

The implementation of Indonesia's Green Region Award each year becomes particularly relevant as increasing regions in Indonesia have experienced chronic environmental problems. One aspect that was assessed at the district or city level in Indonesia involves the management of environmental and spatial planning, waste management, land, forests, plantations, agriculture, regional transportation, water catchment, watershed, clean water, air quality, including energy and climate change adaptation (Djawahir, 2014).

The basic concept of corporate's role for social and environmental responsibility is concession and agency theory. In the concession theory, a company exists because of concessions or privileges granted by the state. So, the interests of individuals or groups are under public interest. Hence, the responsibility of the company is not only to the owners and creditors but also

to the public. According to the Agency theory, the company is a drove of contracts between various interested parties. The company cannot be viewed as a separate entity with various interested parties. So a company is responsible for the interested parties of the company's existence.

Environmental management accounting is used to monitor and evaluate the efficiency of resource used, reduce the environmental impact of the company's operations. Stakeholder theory has been described by Ikhsan (2008) that these theories identify the benefits of environmental management for companies, governments, and society(Ikhsan, 2008). Environmental Management Accounting (EMA) is part of accounting science that helps the effort of business managers to improve financial and environmental performance as well (Pentiana, 2013). The first function of EMA is to integrate a company's environmental aspects into management accounting and process of decision-making. Second, to help businesses people or managers to collect, analyze and relate between environmental aspects and monetary and physical information. EMA coverage in accordance with the framework of EMA that presented by IFAC (IFAC, 2005), which is focus on short and long-term monetary and physical environmental information. The coverage of EMA monetary forms such as expenditures and revenues due to net to production and finality because violating environmental regulations. Meanwhile, the physical form such as all material and energy expressed in units of kilograms for example, issued in the past, now and future that affect ecological systems.

EMA as learning material in Management Accounting in the undergraduate accounting study program is relatively new as part of integrated material with others material in management accounting. Therefore, it is necessary to prepare a good learning model in other order that the expecting competence could be achieved. The learning model of management accounting subjects to date is predominantly centered on the role of lecturer, hence, creative learning experiences of students is not maximized yet. Consequently, it is necessary to clarify the formulation of competency courses, therefore, an active learning model is also necessary for students. Conventional learning model with face-to-face interaction has not provided experience yet for students to optimize the use of information technology as an effective learning resource.

Blended learning is a combination of the learning model between face-to-face learning and internet such as electronic learning (E-Learning) through media applications such Moodle or also via Blog. This model was given a significant influence on motivation to learn and learning outcomes (Sjukur, 2013). Kusairi (2013) added that blended learning could improve the mastery of concepts and higher reasoning compare to conventional learning(Kusairi, 2013).

Qualification profile for graduates according to the National Qualification Framework at level 6 or scholar stated that graduates are able to apply accounting knowledge required, competence to utilize the analysis of accounting information in decision-making responsibility for job and achievement of organization's work. Learning environmental management accounting is expected as an effort to strengthen accounting graduate qualification in accordance with the development of environmental accounting knowledge and the practices need. Information such as sustainability reporting and public company's annual report on the web are one of the sources of learning. Blended learning through blogs is expected to motivate students to use internet as a learning resource that could also useful to increase the understanding of accounting. Presently and in the future, internet access is becoming a culture of utilization technology and students have the flexibility of time to explore and learn material and task in management accounting.

One of the Management Accounting lecturer problem is students have low mastery on concept and its application in accordance with the company's case in management accounting

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model. These due to learning model is not optimal yet encourage student creativity. This condition is evidenced by unvaried assignment was given to each student. The less varied assignment then causes low students opportunity to explore the case. Students tend to receive the same assignment that could have potentially cheat or duplicate friends, beside, it reduce student self-sufficient. Easy in corrections and time efficient are one of the lecturer consideration to give assignment in the same variation model. Another trend is the faculties assign students to find their own case independently, but the guidance and evaluation guidelines remains unclear particularly about the consideration components for grading. Further, students also gain less constructive discussions experience with lecturer's organized evaluation instruments.

A lot of research in Blended learning model were done regarding with the effectiveness, effect on learning motivation and learning outcomes, as well as the ability of mastery in this learning model(Kusairi, 2013; Sjukur, 2013). The study has proven to enrich the learning experience of high school students. While the application of blended learning in college was found the effectivity of this model(Pribadi, 2009). Blended learning model especially in English course showed that the student motivation level was significantly higher than face to face learning(Monteiro, Leite, & Lurdes, 2013; Sucaromana, 2013).

The development of internet-based technology is the key to build a learning society and have an impact to improve higher education quality including better effectivity of learning outcomes.

To prepare students' for mastering ability in concepts, reasoning, and independence and better learn motivation with blended learning model of environmental management accounting. A dominant aspect in identifying the needs for development of blended learning environmental management accounting is formulated. The study aimed to identify the needs of development in learning management accounting being blended learning in environmental management accounting. A blended learning model was designed through combination of conventional learning models such as face-to-face and learning through blogs. The most consideration blog was utilized in blended learning due to its free of charge, easy to access everywhere as long as there is an internet connection, secure from hacker, use google server that is known reliable, stable and the biggest memory ever. Urgency of this study is to provide a learning experience with more innovative methods to motivate students to use information technology as a learning resource in order to achieve competencies in environmental management accounting. Students are not timely restricted to access blog as a source and medium of learning anywhere and anytime, so the process of literacy to understand the material and task can be freely done. On the other hand, lecturer is also motivated to improve the material, task and evaluation more freely as well.

## **LITERATURE REVIEW**

Knowledge of learning according to Degeng (2013) was declared as a relatively young discipline, concerned with efforts to increase understanding and improve learning process(Degeng, 2013). This knowledge has main goal to construct strategy for optimal learning, promote initiatives and facilitate learning for learners. Means, learning knowledge has a role to bridge learning theories and practices. Learning has three variables, namely the conditions of learning, teaching methods and learning outcomes. Learning conditions is a factor that affects the impact of methods to improve learning outcomes, meanwhile, method of learning are different ways to achieve the outcomes of varies learning under different conditions. Learning outcomes are all impacts that can be used as value indicator toward utilization of learning method under different conditions.

Learning design is a procedure to develop education and training programs in consistently and reliably(Reiser & Dempsey, 2011). Learning is a creative, active and iterative complex

process. The learning characteristics are centered to the learner, goal-oriented or competencies defined, focusing more on real performance, focus on outcomes that can be measured in a valid way and reliable, can be proven empirically and do in team learning.

To achieve the goals or competencies courses are required learning strategy i.e. a plan of action or a series of activities involving the use of learning methods and the use of various resources around environmental learning (Lestari, 2013). In learning process, the first determination is learning approach. This approach is viewpoint oriented whether learner oriented or teacher/lecturer oriented. Second, learning strategy which is planning in conceptual trait about decisions that will be taken in the implementation of learning. Strategic learning constituted of two groups, namely. 1). Exposition-discovery learning, 2). Group-individual learning. This group is differentiated into inductive and deductive strategy. The ways to implement plan that has been prepared in a real and practical activities to achieve the goals or competencies called learning methods. Learning methods consist of 1). Lecture, 2). Demonstration, 3). Discussion, 4). Simulation, 5). Experiments, 6). Drill and practice, 7). Brainstorming. Techniques and tactics of learning are more focusing on alternative specific, individual and unique, such as in the active or passive class that need different learning technique or ways are done differently. Learning tactics is ones style to carry out a method or a certain techniques learning are individual trait, such as in the person presentation tends interspersed with humor while others are not tends to have a sense of humor. The learning model is a form of learning that is reflected from start to finish typically presented by a lecturer, so a wrap or frame of the application of an approach, strategies, methods, and techniques of learning. The learning model is a form of learning that is reflected from start to finish typically presented by a lecturer. So, it is a frame in application of an approach, strategies, methods, and learning techniques.

### **Learning Model**

To achieve optimal learning for learners or students, lecturers should realize that in practice there is no most appropriate learning model for all situations and conditions. Amri (2013) revealed that some considerations are needed when choosing a learning model viz. 1). Pay attention to student's condition, 2). The nature of teaching materials, 3). The availability of facilities or media and the last is the condition of teachers themselves (Amri, 2013). A research conducted by Sandi (2012) assigned that the outcomes of learning significantly improve through several conditions such as learning process needs to be arranged in interactive condition, inspiring, innovative, fun, challenging, motivating learners to participate actively (Sandi, 2012). The function of lecturer or teacher in this case becomes a facilitator while the learners or students more be raised their willingness to independence. The student willingness to independence must be built strongly, therefore, the conventional face-to-face learning model is not adequately successful to strengthen the independence of student.

The combination of conventional learning models with models that use information technology through internet is expected to encourage students to have learning experiences responsibly and independently, managing time wisely and choose learning resources that add knowledge value. Blended learning on research of Sandi (2012) was combined between direct learning and Moodle application media (Sandi, 2012). Moodle is a learning management system application by entering text, graphics, animations, simulations, audio and video. The study was pseudo-experimental with posttest only control group design, tenth grade of SMAN 5 Denpasar Bali was used as population, the sample was selected in the class that has equivalent capability in chemistry and English, hence, totally four classes were used. In this experiment two classes were

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treated as an experimental group with blended learning methods and two other classes as the control group which was applied with direct learning model. The result showed that experimental groups of student were treated by blended learning achieve higher grade compare to group of student were treated by direct learning only.

Blended learning methods in web-based learning or media site in this research is the process of unifying various methods of learning that can be achieved by merging virtual and physical sources. Combination of learning based on web-based learning and conventional method was performed simultaneously (Rusman & Cepi, 2012). Furthermore, another term of blended learning is a hybrid learning and mixed learning. Previously, blended learning is known as integration of online learning program with a conventional class but in fact it is more widely. Another understanding of blended learning is material integration in a different format. Furthermore Rusman exemplified that combined learning in blended learning is a conventional classes with e-learning, two types of e-learning, two or more kinds of off-line learning. Application of blended learning models provides equal opportunities between learners and teachers or lecturers to do continue interaction. Therefore, an efforts for coaching appropriate behaviors and attitudes for societal norms soft skill still could be implanted.

Innovative design instruction in a relevant blended learning model is "Student Teams Achievement Divisions (STAD), Jigsaw and Problem Based Introduction. According to Amri (2013) on the model of STAD heterogeneous steps take. First, the students are grouped whose members are four (4), second, teachers are presented lessons, third, tasks are given by teacher's group that must be done by each member of the group, the members of which are already understood must explain to other members until all of them understand. Fourth, a quiz or question is given by teacher to all students that must be done independently. Fifth, evaluation must be given by teacher and the last is conclusion.

**Jigsaw models** are widely adopted as a learning model, the first step in this model are students grouped into four members of the team, each person in the team is given a different part of the materials and parts assigned material. At different team members who have studied same section or sub-section should meet a new group (group of experts) to discuss their section. After discussion with an experts team, each member returns to the original group and take turns teaching their teammates about the section they have mastered and each other members listen intently. In the end, each experts team should present the results of discussion, and finally the teacher gives evaluation.

**Model Problem Based Introduction (PBI).** In this model, firstly teacher explain the competence to be achieved, tools or supporting devices that will be used and how learners are motivated to do activities to solve the problem. Teachers instructed in the setting of topics, tasks, and so on related to the issue. Teachers motivated learners to get information to solve problems. In the end, teachers help learners to compile a report and discussion including evaluation toward all processes have done.

Web-based learning principles include an interaction, usability and relevance (Rusman & Cepi, 2012). The interaction between lecturers and students who may not be at the same time and even location, so the emphasis in communication is an attempt to understand the material content. Therefore, to achieve learning in the area of students cognitive to self-reconstruct based on studied teaching materials that available on the web. Meanwhile, the function of face-to-face classes is delivering the course content also evaluate students understanding after learning from the web. The principle of this model is how the student is using the web, based on the consistency and simplicity. This learning model principle is an easiness for student to use web, based on the consistency and simplicity. The purpose of this model is learning atmosphere convey in a

consistent and simple, therefore, students do not have difficulties both i.e. learning process as well as materials are given and other learning activities.

### **Blended Learning Model**

Stacker and Horn (2012) defines blended learning is a formal education program in which learner doing the learning content of the materials and instruction through online learning and then supervised in a classroom. Perspective of learners are stated if a college or a school does not offer online learning model or blended courses, the learners are still able to obtain a blended experience when they enter into online formal learning program on the certain subject(Staker & Horn, 2012). According to Marsh (2012), pedagogic value on occasion provides blended learning has gained significant attention and encourage environmental enrichment and learning approaches. Blended learning can be a combination of different learning methods, learning environments and learning styles(Marsh, 2012). In the short term, implementation of blended learning is essentially all about utilizing of learning opportunities and available tools to achieve optimal learning environment

There are four models of blended learning: 1). Rotation model2), Flex Model, 3). Self-Blend models, and 4). Enriched virtual models (Staker & Horn, 2012). Rotation model is a course that is determined by learners, rotates on a predetermined schedule or at the teacher's discretion at least one of which is online learning.

Flex Model is a program content and learning instruction primarily delivered via internet, then the learner moves individually, with an already exists schedule among supposedly learning and teachers noted in a certain place. Teachers provide face to face support to the flexible activities and adaptive such as establish small groups, project-based groups and give tutorials individually.

Self-Blend models with scenario the learners choose to take one or more online courses to supplement traditional lectures trait and the teacher's notes in form of online. The learner can do online lectures on campus or off-campus. Enriched Virtual Model is a comprehensive experience of study in which learners maintain their time between in campus learning and learning with material and instruction available online.

In direct blended learning lead to the development of students' personality principle namely, reform process, provisioning and self-determination principle for students(Husamah, 2015). The student learning is learning andragogy, so, the characteristic of mature learners having more independence learning trait (self-directed learning). In independence learning for adult learners (students) are having challenges curiosity, understanding in formulating questions, explore and manage needs data and communicate the analysis results of the question which has been answered.

### **Material Subjects**

To explore material course, the first thing need to do is identification of course competence that can be achieved. Therefore, it must be determined whether the competencies that must be mastered by learner including cognitive, psychomotor or affective(Amri, 2013). Competence characteristics of each field as follows: cognitive domains include knowledge, comprehension, application, analysis, synthesis and assessment, while psychomotor field is assigned includes initial motion, semi-routine and routine. In the affective sphere competence is set involve response provision, appreciation, assessment, and internalization.

In developing course material, there are three principles that need to be given an attention i.e. relevance or appropriateness, consistency and constancy and adequacy or sufficiency(Amri,

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2013). Relevance of material subject is directed to the competency standards to be achieved or in terms of National Qualifications Framework are the learning outcomes to be achieved. In consideration of material consistency presented or studied in lectures in accordance with the diverse types of competency courses that will be achieved. It is considered that adequate material sufficiency in helping learners or students to master competencies. It means that the material should not be too few because it will inflict in less help to achieve competency courses, and should not be too much because it will cause a delay in curriculum achievement or learning outcomes in overall.

The material that has been determined about scope and depth can be sorted through two approaches, procedural and hierarchical approach (Amri, 2013). Material procedural approach is taught in sequence step by step and cannot be taught carelessly or no sequence. In order to be successful, this material is taught sequentially. Material hierarchical approach is taught in stages trait from the bottom level to the top or vice versa from the top to the bottom level. The special feature of this approach is material must be studied in advance first as a prerequisite for the next material study.

There are some steps to develop material learning i.e. first, identifying aspects of learning outcomes contained in the reference or reference material development. Second, the identification of material type. Three, selecting appropriate material learning or relevant to the provision of competence or learning outcomes that have been set. Fourth, selecting learning resources. Identification aspect of learning outcomes contained in cognitive, psychomotor, and affective with considering each domain requires different materials learning to achieve it.

Identification of material types are distinguished in cognitive, psychomotor and affective, particularly in material cognitive aspects can be divided in detail involve facts, concepts, principles and procedures. Choosing relevant material type with the achievement of learning is done by asking questions about kind of competencies that must be mastered by the students. Referring to the competence has been determined it will be known whether the material should be taught in form of facts, principles, procedures, and concepts. Fact material contains studying knowledge area that is easily seen, such as mentioning name, number and section. Principle material contain knowledge zone on application of argumentation, laws, formulas, and materials content on procedures with regard to the flow chart, while on the concept is more in explanation of definition, identification, classification, and special features.

To support the understanding of learning materials in accordance with the competence to be achieved, then the source of learning materials or learning resources should be expanded. Therefore lecturers should not only depend on the type of learning resources since learning resources is referral, teachers should conduct an analysis and gather appropriate materials to be developed in the form of teaching material. So, learning is not a process to complete the entire contents of a book, but to lead the student achieving competence or learning outcomes. By utilizing a variety of learning resources that widespread available such as textbooks, research reports, scientific journals, expert opinions in the field of study, professional, periodicals, internet, audiovisual media, the environment (natural, social, cultural arts, engineering, industrial, economic).

### **Management Accounting**

Management accounting as accounting knowledge has been becomes one of the references in learning achievement of graduates accounting. The qualification demands for graduates on knowledge of management accounting are able to present accounting information management for the benefit of internal company. Internal interests are including planning, control and decision making, all of which require management accounting information. The principle of presenting

such information is different needs require distinct management accounting information as well. It is based on company provision needs and presentation of accounting information management is different from one company to the other types of companies. Management accounting information is not regulated like the presentation of financial accounting information that must comply with financial accounting standards, but the principle of management accounting in accordance with the conditions and company provisions.

The development of management accounting relevant to the development of competition in business and technology in several aspect such as planning, controlling and appraisal work. Management of reserve just in time to be a paradigm in accordance with activity based accounting system. In the sharp business competition with various assertion types of product or high quality service, relatively achievable price or even cheap with efficient production process, therefor, application of activity based costing is the most consideration to determine representative price with better profit margin. Therefore, it is not reliable anymore if controlling of resources is done in traditional way. Controlling action must consider activity management that is giving added value to the consumer widely.

Utilization of management accounting information for performance assessment can be done in each individual, unit or whole company in monetary or non-monetary aspect. Balanced scorecard is measurement system of performance that is done in four perspective in individual or group involve, monetary, consumer, internal business process including learning and growth (Kaplan & Norton, 1996).

The relationship of management accounting and environment mostly focused on environmental cost. Hansen and Mowen (2009) define environmental cost by adopted quality model total environment, so ideal condition for environmental cost if there is no environmental damage or in accordance with zero disability in Total Quality Management(Hansen & Mowen, 2009).

Environmental cost is one among many types of cost during the operation of company. Environmental cost need to be noted by management due to several reason namely a). High environmental cost could be reduced through changes in business activity and decision such as activity to minimize material waste. b). Environmental cost usually is allocated to company overhead account. c). Better environmental cost management will improve environmental performance, health and security. d). Understanding source and how much environmental cost will lead determination basic cost and determination of accurate goods and service cost including unprofitable activity that need to be noted. e). Understanding environmental cost will help company to determine its products and services superiority that need to be developed. This environmental cost awareness will usually reduce cost especially in product and service cycles. f). Environmental cost accounting in detail will support the development and management system in corporate (Conway-Schempf, 1998)

Environmental Protection Agency (EPA) has collected six observations about the definition of environmental cost, first, it part of operational business cost. Second, environmental cost as environmental externality is internalized as a new cost. Third, the number of environmental cost is ignored and the effect in product and service cost often blurred to put in overhead accounting. Fourth, the information of environmental cost such others cost will only useful during decision making that is helped by knowing that information. Fifth, Many environment projects are not potently identified as environmental cost due to its operations has good impact, for example project to overcome pollution. Mean, in proactive environmental management, because non environment cost higher and environmental cost lower. Sixth, there is a point of view that

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environmental cost information is not useful compare to monetary, participated company encounter difficulties in preparing environmental cost data that related with many types of environmental activities(Shields, Beloff, & Heller, 1997).

Environmental Protection Agency (EPA) is federal government institution in Unites State that was established with objective to protect health of human being and environment through hold up roles based on legislation that approved by congress. EPA headquarters in Washington DC and regional offices are available in ten states and having 27 lab. Establishment of the EPA was suggested by President Richard Nixon and started to operate in 2 December 1970, EPA was approved by council committee in Legislative and Senate.

In detail EPA has mentioned the environmental cost in relation with product process, system or important facility for management decision. Consideration to stated environmental cost depends on how company will apply information environmental cost. Besides, there is unclear in cost whether will be put in environment or non-environment cost due to some cost is laid in grey zone or perhaps some parts classified in environmental cost and some others in non-environmental cost. Regardless with those definition of environmental cost, to make sure that relevant cost must have exact handling is the most critical attention of those objective.

In identification of environmental cost, EPA (1995) has classified several in company i.e. 1). Potentially Hidden Costs, 2). Contingent Costs, 3). Image and Relationship Costs. Potentially hidden costs is a groups of some types environmental cost that could be potentially hidden from managers. This cost consists of upfront environmental costs, regulatory and voluntary environmental costs and back-end environmental costs. This Environmental and back-end cost cannot exactly be put in management accounting system. This cost is environmental cost during operational of company prospective. Mean, this cost will accrue in the future(EPA, 1995). For example, future cost of decommissioning laboratories that used licensed nuclear material, changing storage tank that is used to store oil or dangerous material and in accordance with role that not release yet but it has already announced. This back-end environmental cost could be ignored if undocumented well or it was gotten in system accounting.

Contingent costs are a cost that could or could not be happened in the future or cost that is expected it value in the future. These cost is not cost that need to be admired in presently, therefor, this cost is usually not given adequate attention in the system management accounting forward-looking decisions. Example for this cost such handling and compensation cost for publication in the future in regard with possibilities of environmental contamination due to spill of oil, cost that is happened due to finality of disobedience of law in the future. Image and relationship costs are some environmental costs that is not really real. This cost is happened to influence perception in subjective management, consumer, employee, society and role makers or government. This cost also called as corporate image and relationship costs. This cost is categorized in yearly environmental report cost and costs of annual environmental reports and community relations activities, planting trees cost, cost that is given related to environmental award. So, this cost is not real, however, potently there is direct positive impact resulted from sacrifice of company to create relationship and company image.

### **Learning Outcomes Environmental Management Accounting**

Learning outcomes environmental management accounting is a minimum capability of student that must be mastered after taking environmental management accounting subject. In order for the student to have adequate knowledge as a basis to reach competency in environmental management accounting, the student must have knowledge from some subjects such as Cost Accounting, Basic Natural Science, Production and Sociology Management. Beside, to implement measured learning outcomes with good result of study, so, in the learning process must be

supported by wide and enjoyable source of learning. This source of learning is explored to enrich the knowledge of student that can be gained through printed book or online.

Blended learning is an approach to give student widely chance to be independent and responsible in utilization relevant sources of learning in scientific nuance. Lecturer directionally efforts in teaching management accounting are expected to give satisfy impact outcomes learning in environmental management accounting. Syllabi, Planning, Semester Learning Plan and learning material in environmental management accounting, evaluation and various assignment is a directionally effort of lecturer to carry out process of good learning.

Learning outcomes management accounting in practice has already been noticed about the development of strategy in management, competition and technology. To give appraisal in accordance with the latest environment issue, contribution of management accounting is a key especially relate with on how presenting different cost information for different objective that associate with environment. Hence, the end learning in management accounting in the future is management accounting that associate with environment or environmental management accounting. Learning outcomes environmental management accounting in it formula very relate to competence of graduates or learning outcomes of accounting graduates were formulated with refer to vision and mission of each accounting study program. Mean, if the development of attention toward environment is inevitable need, therefor, the competence of environmental management accounting could become as competence characters of accounting program study, especially in the regions where as many companies are doing economic activity by utilization of natural resources.

## **METHODOLOGY**

A Survey was carried out to lecturer and student in management accounting subject in private university. Samples were selected based on purposive sampling. Eighty samples were collected (17 lectures and 63 active students in management accounting subject). To obtain respondent opinion, a questionnaire was given. The questions or questionnaire was spread out through directly meet the respondent and electronic mail. Identification of need aspect of blended learning management accounting involve, confirmation competency aspect or learning outcomes, material coverage in management accounting, learning strategy and learning evaluation. Test was done toward instrument reliability and validity including descriptive statistical analysis based on high value of mean.

## **RESULT**

Outcome of this research are involve: first, analysis on how the implementation of learning management accounting subject has been done. Second, create plan of course and syllabus.

### **First Outcome: Learning Analysis of Management Accounting**

Survey was done to management accounting lecturer and accounting student that had been taken management accounting course. Amount of 10 lecturers were sent questioner through email and direct contact via phone or what Sapp. Meanwhile, seven lecturers were fulfilled the questionnaire directly. Sixty three management accounting student respondents were filled the questionnaire directly. Two types of send back was applied i.e. direct send back (87.5%) and through email (12.5%).

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The need instrument of learning management was constructed to assess some aspects such as confirmation competency or learning outcome, coverage material in management accounting, learning strategy was applied and learning evaluation was carried out.

The result of learning need management accounting analysis was presented as follows:

Reliability instrument test questioner showed that 0.754 Cronbach alpha values were gained in this test. The gained value was higher than minimal limit of Cronbach alpha viz. 0.70. Hence, it could be concluded that measurement scale of learning need management accounting that was measured on aspect of formula competency subject, learning process, learning source, matching of learning outcome, active learning method, learning strategy, result and evaluation of learning, were reached a good reliability.

The aspect of learning value from the highest to lowest was sequenced as follows: Learning Evaluation (0.764), Learning Strategy (0.693), Competency (0.682), Learning Method (.641), Learning Result (0.622), Learning Outcome (0.575), Learning Source (0.512) and the last Learning Process (0.502).

The result of correlation showed that all of the learning aspects were given significant linear correlation toward total answer of each respondent. All of learning aspects were presented as measurement need of learning significantly, especially management accounting subject. Based on frequency analysis showed that most of the respondents were replied often (3) on the need of learning in management accounting subject, whereas, the questioner answers were graded in four levels namely: not often (1), sometimes (2), often (3) and very often (4).

Statistic descriptive analysis showed that learning process, matching of learning outcome and learning method were given high mean value. Means, those three aspects as performer in the need of learning in management accounting were gained often chose score. Meanwhile, competency aspect, learning source, learning strategy, learning outcome and learning evaluation were reached sometimes score in applied practice of learning process. A complete statistic descriptive analysis and mean value of each aspects of learning were presented in Table 2. The result of descriptive analysis informed that the development of learning in environmental management accounting could be done through learning improvement in some aspects such as learning process, matching of learning outcome and learning method. Learning method that was conducted in one semester learning plan constitute of speech, group discussion and case study in accordance with environmental management accounting practice or relevant source of learning.

Blended learning in environmental management accounting is a combination between conventional learning in the class and interaction through blog environmental management accounting. The effort that must have high important attention is judgment aspect about delivering subject competency, variation in utilization learning sources such as internet, book and company environmental. Aspect of learning strategy by use of blog is intended to provide an easiness and speed-up the interaction between lecturer and student including between student and student in discussing environmental management accounting. The result and discussion of learning were developed more complex due to learning strategy and various tasks were given to student also complex. Therefore, *portfolio* assessment which is a student activity record during taking subject of environmental management accounting must be fulfilled accordingly as part of lecturer duty.

### **Second Outcome: Design of Learning Plan and Syllabus Environmental Management Accounting**

The arrangement of learning plan and syllabe are following the ministry role no. 44, 2015 about national standard higher education that involve material learning, expected end capability, material assessment, learning method, time allocation, student learn experience, appraisal indicator, weight value and reference. Learning material in environmental management accounting

constitute of environmental issue in global competition, economical policy direction, social and environmental, green economy, environmental accounting, environmental management accounting and social responsibility accounting. Learning method was chosen i.e. speech, discussion, cases study and exercise. Discussion and conclusion were contributed by student in cooperative learning model. Meanwhile, lecturer was contributed in design, monitor, preparing task and case that need to be solved by student in class group discussion.

## **CONCLUSION**

A description need about the important of combination in learning method in form of class conventional and blog was given based on result this research identification. Reliability and validity test in instrument learning management accounting were reliable and valid as a need measurement for learning. The need of learning was measured in aspect of subject competence, learning process, learning method, matching of learning outcome, learning source, learning strategy, learning result and learning evaluation.

Learning process, matching of learning outcome and learning method are learning aspect that was gained average score categorize as often. That aspect in learning management accounting had been obtained high response. Meanwhile, competence statement aspect, learning source, learning strategy, learning outcome and learning evaluation were reached score categorized as sometimes in application practice of learning process.

To develop blended learning, an aspect that was obtained score categorized as sometimes, suggested to the next researcher to do more instrument development in accordance with blended learning condition. Therefore, learning plan with blended learning model is inevitably need to develop. This learning model needs to be socialized to student. The student will obtain a knowledge on how learn blended model. To give a motivation to student, it is suggested that environmental management accounting could be firstly determined as topic in seminar. The Seminar should be attended by student and expected to open student point of view about the important of environmental management accounting knowledge. After joining the seminar, the student was expected having willingness to program and taking environmental management accounting subject.

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