

Developing “Pro-Environmental” Accounting Education through Pentaple Bottom Line Concept

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Abstract. The issue of sustainability that bring changes in accounting profession, also has an impact on the world of higher education which is the place to proceed for prospective accountants. But the phenomenon of accounting education in higher education tends to focus on achieving accountants' technical competencies. This condition creates accountants who have a good understanding of green accounting techniques but are lacking in instilling ethical values and awareness for pro-environmental behavior. Then the study aims to propose a framework for the concept of green accounting education that is pro-environmental in supporting the achievement of sustainable development. In this study a systematic review method is used to review the literature to find research maps and propose concepts to bridge the gap that occurs based on the review in green accounting education. Furthermore, the result tries to introduce the concept of pentaple bottom line (5P) in accounting education process. The pentaple bottom line concept covers the following aspects namely people, planet, profit, phenotechnology and prophet. Internalization of this concept into accounting curriculum is expected to contribute in realizing a holistic green accounting education and adequate of delivering pro-environmental behavior students.

Keywords: *accounting education, curriculum, green accounting, higher education, sustainability*

1. INTRODUCTION

Higher education held the University is one of the leading edge that can evoke change in society and contribute to the creation of knowledge and the new paradigm [1]–[3]. Various government agencies, countries, industries and universities around the world have suggested that by the time a student graduated from university, they must have the knowledge, values and skills to contribute to society and to behave environmentally friendly through their personal and professional actions [1]. This obligation then ushers the university became one of the places to the beginning an education and awareness of related issues about environment and sustainability.

These obligations are also on the shoulders of higher education accounting in the field of accounting, with an increasingly great pressure on accounting and professional accountants to

further integrate sustainability into the company's decision-making system for directing their behavior towards sustainable development [4]. The role of accounting is becoming increasingly important, especially at this time when insufficiency of natural resources and social problems for present and future generations are increasing. Furthermore, responding to the increasing attention to this phenomenon, in accounting science began the presence of the concept of both social and environmental accounting (or green accounting) which inspired the initial foundation in defining social responsibility for the obligation of business people to set business goals in harmony with objectives and community values [5]. Even though at this time, not only business organizations are obliged to pay attention to their social and environmental responsibilities but also the form of not for profit organizations.

However, with regard to social and environmental issues, as well as sustainability issues, said that accounting education running currently lacking in promoting ethical awareness [6]. This condition is then perceived impact on ethical and intellectual insensitivity among accounting practitioners who indirectly support the implementation of business activities that can cause environmental and social degradation [7]. Responsibility for the failures put at the door of the accounting education [8], [9]. These studies provide evidence that accounting education to develop students' intellectual failure when associated with immaturity possessed ethics. It is also because the essence of accounting science does have characteristics associated with superficial learning strategies and moral ethical position that inadequate [9].

Moreover, the presence of green accounting education is expected to minimize the ethical insensitivity and instill environmentally friendly behavior to accounting students. Education is an effort to change the perspective, understanding and behavior of humans towards nature so that they can think, feel, to choose and take decisions and act in full consideration and responsibility in the harness, manage or solve the problem of the environment his life later [10]. Through this education pathway, accounting educators play a role in "greening" the next accountants and accountant professions in the future. The focus of this study is concerned to the concept of holistic green accounting education so that the goal of accounting education that is in line with the concept of sustainability can be achieved. Then the objective of this study is to propose a framework for the concept of green accounting education that is pro-environmental in supporting the achievement of sustainable development. Therefore, a literature review was conducted to find research maps and gaps, and then propose the concept of education based on these reviews in green accounting education.

2. METHOD

This study uses systematic review. The method is based on non-statistical techniques, which integrate, evaluate and interpret findings from several previous studies. Systematic review aims to comprehensively find and synthesize research that produces specific questions, uses questions that are organized, transparent, and can be replicated procedures at each step in the process [11]. The steps taken in the process of this research are determining the research questions used in guiding the review, then selecting bibliographic or article databases, websites, and other sources. The third step selects keywords to conduct literature searches (in this paper used the terms accounting education, green accounting, social and environmental accounting, and environmental education). Then, do a screening over the data obtained, as well as do a review and synthesis of results [12].

3. RESULT AND DISCUSSION

This section is conducted based on the steps of systematic review method, then it provides the view from previous literature about the phenomena which exist in green accounting education. Moreover, it leads to explicate the gaps in the world of accounting education. So that, the result can be used to propose the concept of green accounting education in order to fill those gaps.

3.1 The View over Green Accounting Education

The reality of the present accounting education is an idea of how a form of accounting that exist today, and vice versa. Accounting focuses itself on economic rationality would certainly effect also on the development of accounting education, as well as in the design in such a way is intended to meet the needs of a growing business [13]. When the business world started paying attention over the issue of sustainability, the development of accounting education world remains focused on the monetary aspect (economy), technical and professional skills in the field of green accounting. The other hand, even the ethical aspek of spiritual nature has not been highlighted much by its integration. This condition is reinforced by another phenomena, there are not many accounting curricula in higher education which tried to internalize the elements of spirituality into every accounting course [14]. As a result, green accounting education is only interpreted as part of technical skills or supporting the status quo [14], [15]. Whereas accounting education is needed the learning process which can educate prospective accountants to have a positive character, compassion, ethics and conscience, inclusiveness and wisdom rather than mere professional-technical skills [14]. The spiritual element which can then build awareness for pro-environmental behaves both as individuals and professionals.

Furthermore, one concerns of green accounting education phenomenon are related to the failure of environmental accounting education to transform the parties involved in order to behave pro-environmental [16]. For instance, there is disappointment reflected in the results of the research that it turns out that learning in business ethics and CSR courses does not play a relevant role in raising student awareness regarding ethical business / CSR activities [16]. These conditions are by other study which highlights the existing literature primarily concentrating on accounting education "about" sustainability, not accounting education "for" sustainability, which is the accounting education that includes and meet the challenges and conflicts posed by sustainability [17].

3.2 What is Pentaple Bottom Line?

Since the enterprise management paradigm shift, from "shareholders-oriented" to "stakeholder-oriented" and concern over damage to nature, so preservation of environmental and social concern is elevated into a central issue. The idea in the triple bottom line (also known as the 3P) which was conceived by Elkington tried to put the effort into the central point of the company's strategies [18]. If the previous stance of the accountability of companies based only on financial aspects only (single bottom line) then this concept has long been replaced by the triple bottom line, which is based on the financial aspects of the (profit), social (people), and the environment (planet).

However, at this time, the science of accountancy have entered a new phenomenon called "beyond materiality" where this gives a meaning other than that expressed by the concept of the 3P [5]. In this phase introduced aspects of 'spirituality' is understood as the existence of responsibility for every individual and organization to build the events economic, social and environment in their organization who reffered with the "holy spirit." Further it reveals that

social and environmental accounting (green accounting)) is present to respond to current and future challenges to the sustainability of social, economic, environment and spirituality [19].

Furthermore, in recent developments, to face The Forth Industrial Revolution (Industrial 4.0), four dimensions to become a foothold where there is still the last accountability is lacking. Industrial 4.0 is a general term used to describe a group of connected technological advances that provide a foundation for increased digitization of business environment [20]. Then the concept of the Pentaple Bottom Line (5P) was presented, which was an expansive thought from the Triple Bottom Line (3P) that previously existed. In order for organizations to maintain their survival, the following five aspects must be balanced: People, Profit, Planet, Phenotechnology, and Prophet [19].

3.3 Integrating 5P in Green Accounting Education

Education for sustainability involves the objective at this time and in the future. The presence of green accounting education is a way to realize these goals. This education is about learning to design and implement actions for the time being, with the knowledge that the effects of these actions will be experienced in the future. Those perspectives will lead students to develop their overall capacity to contribute to "a more sustainable future in terms of environmental integrity, economic feasibility, and a just society for present and future generations" [21].

In other words, the education leads to the formation of pro-environmental behavior for those involved in the process. Pro environmental behavior can be interpreted as behavior that consciously seeks to minimize the negative impact of one's actions on nature and the environment (e.g. minimizing resources and energy consumption, using toxic substances, reducing waste production) [22]. One way to integrate these goals into green accounting education is through a curriculum which built by higher education [23]–[25].

The term of curriculum has various meanings, a variety of literature provide definitions ranging from narrow to broad meanings [26]. As a result, the summary of those various conceptions are curricula as a set of objectives, as courses of study or content, as plans, as documents and experiences [26]–[28]. Although higher education can refer to the same major curriculum concept, in its implementation the practice can differ according to the policies of educational institutions and educators, this is also known as the hidden curriculum. When using a cultural point of view, the curriculum also covers the culture of educating us to pay attention to belief systems, values, behavior, language, artistic expression, the environment in which education takes place, the relationship of strength, and most importantly, norms that influence views about what is right or proper [26]. Linear alignment of various definitions will help understand the meaning of the term curriculum in the broadest sense, as shown in Figure 1 [26]. Based on this description, the “curricula as experience” is the broadest definition of a curriculum that includes all the elements in other definitions, namely content, goals, methods, assessment, learning environment, hidden curriculum, and cultures [26].

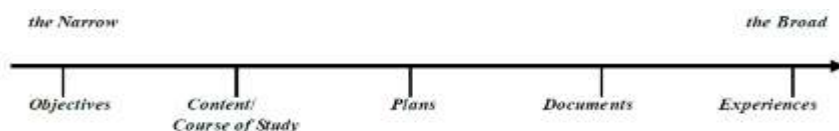


Fig 1. Linear Alignment of Curriculum Definitions

Integrating the concept of pentaple bottom line (5P) can be done into the curriculum if it refers to the broad meaning of the curriculum itself, so that it can provide the learning

experiences that contain sustainability concepts to accounting students. This 5P concept is more specifically explained as follows: People give the meaning that the balance with the welfare of people (internal and external corporations) or the community is important to be contributed by the corporation. Proportion in providing justice in community welfare is an effort to be balanced; Profit is an effort that is now dominant in achieving organizational performance must be balanced. Profit or welfare in economic aspects is important, but must be balanced with other P's; Planet is the preservation of the natural environment must be championed by the corporation to be balanced. The natural environment makes humans must be protected and preserved, utilization and management must be balanced in the process and for future generations; Phenotechnology is the fact that the existence or symptoms of the corporation; and Prophet is a spiritual, mental, or spiritual balance in the process of preserving life [19].

The Figure 2 shows the framework of integrated pentaple bottom line (5P) into green accounting education the outcomes that try to achieve from this process:

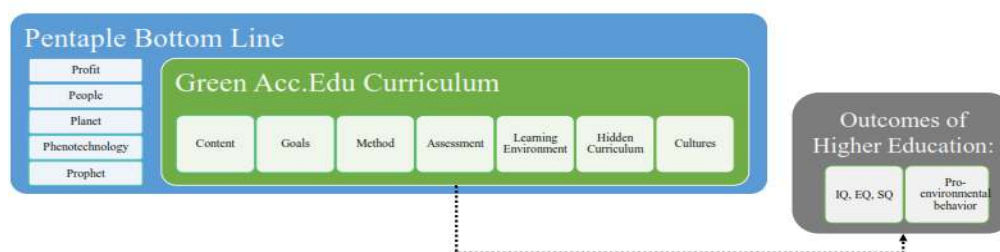


Fig 2. Integrating Pentaple Bottom Line Concept into Curriculum

The interrelated concepts of 5P can be relied upon in establishing the green accounting education curriculum, every aspect of 5P can be integrated in each course which is offered by higher education in the process of teaching accounting. In order to obtain a form of accounting education whose overall aspects (holistic) lead to the realization of competent accountants, as well as ethics and good spiritual awareness related to sustainability issues and ultimately will lead accountants who have pro-environmental behavior both as personal and professional (see Figure 2).

4. CONCLUSION

Accounting science is identical to the monetary aspect so that it cannot be separated from the discussion and mastery of competencies regarding the economic aspects of business entity. This is a challenge and opportunity to accounting education to find the way to integrate accounting science (which can take into account of the profit aspects) along with people and the planet. And realize that accounting science have sensitivety toward changes, so that rapid technological development must also be taken into account the impact on the entity and the surrounding environment. In addressing these changes and various challenges, of course, accountants need their own wisdom in behaving, especially those that can then lead to pro-environmental behavior. That is known as a spiritual aspect, in the pentaple bottom line concept symbolized by prophets. When these aspects can be integrated into accounting education, outcomes in the form of accounting graduates who have the competence, ethics and spirituality (IQ, EQ and SQ) to realize sustainable development can be achieved.

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