

Outcome-based learning and modified problem-based learning for accounting education

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Abstract - The objective of the paper is to propose a new method in teaching management and accounting related papers to the students. A popular outcome based method is blended together with modified problem based method by a respondent that teaches professional accounting paper. As compared to a traditional method of teaching, it is found that outcome based learning and modified problem based learning offer a new and exciting climate of understanding business and accounting knowledge while at the same time offer some benefits to the students, educator and also learning institution. Step by step approaches to adopt these two methods together are highlighted while its challenges are revealed with some recommendations to overcome the weaknesses.

Keywords: *outcome based learning; problem based learning; accounting education; professional qualification*

I. INTRODUCTION

The review of literature in accounting education indicates that there are limited studies conducted on the techniques and method of teaching professional accounting courses. Arguably, teaching professional accounting qualification requires different set of skills, method and strategy in delivering the content of the subject. The professional qualifications are far tougher than normal undergraduate qualifications offered by universities and colleges as the statistics shows that the passing rate is normally around 50% as compared to undergraduate program of more than 80%.

The objective of the study is to propose a new way of teaching accounting by manipulating the existing techniques used by the teacher or instructor. The next chapters discuss the review of prior research, details explanation on the proposed methods and its implementation. The final chapter discusses the findings with some recommendations for future research.

II. LITERATURE REVIEW

Scholars in the academic field have conducted many studies on the factors that influenced the performance of the students that enroll in accounting and accounting related program. Factors such as aptitude and previous academic results can be used to predict students' performance in accounting courses, as shown in example [1] and [2] although the exposure in high school accounting education

provided mix results. Earlier studies conducted by [3] and [4] found no association in performance of the student with prior accounting knowledge. However the later study studies had the opposite results [5],[6].

The literature also couldn't find firm results in the effort and demographic influence. [7] and [8] found that effort significantly contributed to a better performance but the opposite result was presented by [9] and [10]. Similarly, age is not a significant determinant for excellent result in management accounting and auditing courses [11], [12]. There is also no difference in results whether the student is male or female [13],[14].

It is noted that researchers took less effort to concentrate on the methodology of learning and its implication to the performance of the students. This study therefore is conducted to contribute to the lack of studies in existing literature. The arguably popular method adopted in higher learning education that become the interest of this paper are outcome based learning and problem based learning.

A. Outcome based learning

In the academic world, there are many theories, techniques, approaches and models created by the scholars to improve the efficiency and effectiveness of teaching and learning. However, not all are suitable for everybody especially to the educator and learner. In addition techniques and theories also depend on many factors such as environment, available resources, students, educator and the subject itself. All these to a certain extent provide an opportunity for the educators to explore, try and then choose any method of learning that is suitable with their belief, philosophy and style of teaching.

Outcome based learning is created to focus on empirically measuring students' performance. This performance is called outcome. The objective of this method is to ensure the students have the ability to understand the outcome determined by the educator. For example, in learning strategic management, one of the outcomes is the ability of the student to apply the management theory in the real world. Therefore, the objective of the learning is achieved when the students do not only understand and able to explain merely in general the theories in management but also capable to give recommendation and solution to the business problems given by the lecturer. They can accurately

refer and properly apply the management theories that determine their recommendation.

The outcome based learning is the mirror of the traditional method of learning. In traditional education, the institutions such as universities and the lecturer focus on the resources available to the students. These resources include learning hours, notes, reading materials, text book etc. All these resources are called input. The objective will be achieved if the educator and university can provide more resources or input to the students.

This traditional method however do not guarantee the student will learn efficiently and most important, effectively. With so much information available, the students need more time to read, analyze and understand the information before they can reach the level of knowledge required by the subject matter. On top of that, the students may get "lost" in their discovery of new information and are overwhelmed by materials that are irrelevant with the paper. Therefore, outcome based learning was introduced to overcome this inefficiency and non-effective learning, in which this method emphasizes on what student should know rather than what is available for student to know.

Some educators choose this method because outcome based learning provides the flexibility of to the educators to choose their resources. Therefore, it provides ample opportunity to educators to use their own approach rather than specified approach as long as the students are able to demonstrate their understanding of the subject matter. This will bring another benefit to the educational institution. The organization can use cheaper materials such as newspaper cutting, information from website rather than buying expensive text books and journal publications. Ultimately, this method is adheres to what the industry requires from the students when they graduate. This means they are able to get a good kick start in their career path by demonstrating specific skills and knowledge that are really required by the employer.

This method also emphasis on relevancy to the content, thus provide clear framework and guide to the education planning, student evaluation and encourage both learner and educator to shared responsibility and accountability in learning [15].

Outcome-based education is a model of education that rejects the traditional focus on what the educators provides to students, in favor of making students demonstrate that they "know and are able to do" whatever the required outcomes are. It is widely applied in developed countries such as in the US, Australia and New Zealand. [16] reported that OBE enhances the average students but the downside is it will give disadvantages to the high achiever students

B. Problem based learning

Problem based learning is a method of learning in which the students need to solve problems that they have not learned formally before. Thus, the students need to think and their experience outside the classrooms such as family, work, co curricular activities and extensive reading will help in their learning activities. It is one of student-centered instructional strategies in which the students will control the

situation and learning environment. One of the characteristics of problem based learning is learning is driven by challenging and open-ended problems. It is more effective if the students are working in small groups and the educators take on the role as "facilitators" instead of just being a teacher.

[17] defined the student centered learning as a process in which the learner independently or collaboratively understand their learning need, then after that set the learning goals or objectives. To achieve this objective, learner will determine the learning resources, select and implement right learning strategies and finally, evaluate the outcome of his learning. In short, the student will be solely responsible for his behaviour, participation, learning [18] and action in the process. It is argued that the student will learn faster and better when they take control and become self-responsible in their learning process such as fully utilising the opportunity available for the maximum return [19].

Instead of waiting for the action and instruction of the teacher, students themselves take the initiative and determine the next step in managing their learning [20]. Due to this, it can be observed that different students will manage and learn in a different way and style. But, the similarities of their learning style are that it is an active and dynamic process [21].

Based on original or pure method of problem based learning, the students are encouraged to take responsibility for their group, organize and direct the learning process with support from a facilitator. In short, the facilitator will empower the group to take their own direction of learning. The method is significant to enhance content knowledge of the students and foster the development of communication, problem-solving and self-directed learning skill.

Based on [22], the problem based learning brings several benefits. The students are trained to scan or analyse the problem before further exploration can be made. Although it sounds difficult, the students are working in group and the tasks will be much easier. It is believed that the activation of prior knowledge through small group discussion like brainstorming will provide comprehensive ideas on the possible problem solving later. Besides, this method will benefit the student through their ability to elaborate their prior knowledge and active processing of new information. This will enhance their skill and ability to integrate their current knowledge with new situation.

III. PROPOSED IMPLEMENTATION

The problem based learning method has been slightly changed to suit with the professional paper that students have to sit for. The professional examination paper such as The Association of Chartered Certified Accountant (ACCA), The Chartered Institute Management Accountant (CIMA), The Malaysian Institute of Certified Public Accountant (MICPA) and many others are based on the three hours final exam paper. No carry marks, assignment, quiz or test are given to the student. Therefore, no formal working group is required. Suffice to say that the modified problem based

learning is implemented to single students instead of working in group.

The rationale of this modification is to expose student to the real environment of sitting for final examination. Students need to learn to perform their task, search for information and learn on their own. This is much more effective because a professional paper is evaluated based solely on 3 hours written final exam. Therefore, students have to take in charge of their own learning independently. It is believed that both methods are the best and the most suitable learning methods that are relevant with the professional examination papers.

For the purpose of this paper, I would like to apply the possibility of adopting these both methods of learning to one of the ACCA paper, Professional Accountant. This paper sets the other professional level papers, thus exemption will not be given for any type of entry qualification. Its level of difficulty is equivalent to the master degree or post graduate qualification. The paper is a three-hour examination paper plus 15 minutes of reading and planning time with two sections, Section A and B. Section A is a compulsory section, that comprised one 50-marks case study question while in section B, the students required to answer two out of three 25 marks short case study questions. In term of intellectual levels, approximately 60% of the marks allocated to examine student at the level three of cognitive level that is synthesis and evaluation, while remaining (40% of marks) will be tested at level two, which is application and analysis. The minimum entry level for this paper is degree or intermediate level of the similar qualification. The passing mark for the exam paper is 50%.

The step by step adoption and application of both methods are shown in the Figure 1.

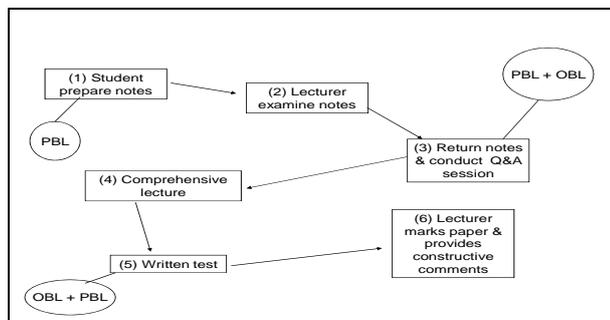


Figure 1. Application of modified problem based learning and outcome based learning in teaching professional paper

First, before the lecturer starts the lecture on the related areas, the students are required to prepare the notes based on the study guide of the professional subject (Appendix 1). The students also need to put example of every issue and element based on the study guide. Here, the element of problem-based learning is adopted because the student need to explore, read and find new knowledge that has not been learned before. At the same time, the application of OBE

will be applied since what is required in the study guide is the skills and knowledge required by the paper.

For example, let's assume that the outcome is defining transparency which is a skill at cognitive level two. Students are required to prepare notes based on the requirements and the notes are required to be submitted. The lecturer will briefly examine the notes prepared. Emphasis will be given on the coverage, suitable example given, appropriate breadth and depth of the notes (Step 2).

After examining the notes, the lecturer will return the notes to the students. During the similar meeting, there will be a question and answer session about the notes prepared by the students. The questions asked started from the lower level i.e. knowledge and comprehension level. The verb such as define and describe are used in this level just to know whether the student able to understand in theory the basic concept. For example, "Please define transparency". Here, the lecturer will gauge the level of the understanding by the students (Step 3).

The level of difficulty will be increased so that the lecturer will be able to determine until what level the understanding of the students – basic, application or advanced level. The questions that are related to application, analysis, synthesis and evaluation level are raised. For example "Does the company exercise its transparency when the information related to the project awarded by the government has not been announced by the directors?"

Both method of outcome based learning and problem based learning are applied here. Students are expected to demonstrate their understanding by answering the question while at the same time the lecturer will incorporate new information such as real world cases application to examine whether the students are able to integrate their existing understanding with new problem introduced.

The comprehensive lecture then are carried out based on the performance of the student during the question and answer session (Step 4). More time is devoted to teach fundamental knowledge if the students are struggling in answering the basic concepts of the subject matter. However, more focus will be given in the higher level of knowledge if students seem to not be having any problems understanding technical terms and basic application of the subject.

To ensure the student really understand the expected outcome as stated in the study guide, regular tests were conducted in the real examination environment (Step 5). These tests are based on the case study questions and contain a level of difficulty equivalent to final examination question. The surprise element will be introduced so that the student will be able to integrate their prior knowledge with the new information and situation given in the question. The level of difficulty also progressively increased from lower level to more difficult level. The time also increased from 45 minutes that comprise of 25-marks question to 90 minutes that comprise of 50 marks of single question or two questions that carry out 25-marks each question. Similar with the question and answer session, the element of outcome based learning and problem based learning will be introduced here.

Finally, the lecturer will thoroughly evaluate the answer given by the students (Step 6). Again, the lecturer will mark the answer scripts by using the final examination standard as proposed by professional examination body. The constructive comments are highlighted in the answer script of the students. The similar comments are also shared with the rest of the students so that similar mistakes are not repeated by the other students.

IV. FINDINGS AND DISCUSSION

The most challenging tasks for this particular method are the time devoted to implement such tasks. First, the time put to examine the notes. Maybe, it is argued that the lecturer does not need to examine the notes privately and comprehensively but just quickly go through it at the beginning of the class. However, it is still recommended to briefly examine the notes prepared so that the lecturer can improve the skill of notes preparation by the students. In addition, short comment or briefing in the class can be conducted to teach students how to prepare high impact and relevant notes. This includes notes presentation, information search strategy, proof reading skill, memorising strategy, etc.

Second, much time is needed to mark the paper and give the constructive comments. The lecturer needs to examine in depth the answer given by the student. Attention should be given on the level of maturity of the answer. For the paper at the professional level, the student should be able to demonstrate the professional argument in their answer. It's not about merely cut and pastes the notes into the answer script. It is about the ability to synthesis, evaluate and application of the relevancy of the knowledge learned before to answer the required questions. The facilitator should prepare a model answer and highlight the critical point that will carry more marks and given credit by marker.

The other problem is the commitment from the student. They need to work hard at the first place to search for information that they do not know before. With the information technology growing very fast, this may be not a big problem for them. In addition, it is expected that the level of information technology literacy by younger generation nowadays is high, thus at least know how best to get information from the internet.

The facilitator also needs to convince and continuously encourage the student to answer the exercise like the final exam answers. The true level of understanding and their cognitive performance must be demonstrated so that the lecturer can take earlier notification and necessary action to improve the performance of the students. In addition, this can be a good training background for the student to nurture themselves with the final exam environment. Praise and rewards to the students may be used to get their commitment.

This method looks impossible if the number of the students under supervision is huge. Therefore, the application of the both methods is appropriate if the number of students under supervision is small. i.e. 20 people or less. The higher the number of the students, the more time is needed to be put while it is hard for the lecturer to give quality comments for the students answer scripts.

V. CONCLUSIONS AND RECOMMENDATIONS

Teaching professional examination paper requires a lecturer to be creative in their approaches to ensure the student able to grasp the knowledge and skill expected from the relevant papers. Mixing of various learning method seem to be the best solution that can fit with the current style of teaching to achieve the objective of the learning.

It is recommended that outcome-based learning and modified problem based learning methods to be applied by the lecturer of the professional examination papers because both methods if it is appropriately implemented, are very powerful to increase the chances of the students to pass and outperform the world pass rates of those papers.

VI. LIMITATION AND SUGGESTION FOR FUTURE RESEARCH

This study is only limited to one lecturer, one group of students and one subject only. The future study can be conducted on a few groups of students and a number of lecturers teaching not only professional subject but also accounting and non-accounting subjects so that more accurate findings and conclusions can be inference. A survey on students' perceptions and opinions also can be gathered. A statistical analysis can be employed to study whether there is any significant impact on the results of the students if the teachers adopt this method in their classroom.

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APPENDIX

Professional Accountant (P1): ACCA Study Guide (2007)

A. GOVERNANCE AND RESPONSIBILITY

1. The scope of governance

- a) Define and explain the meaning of corporate governance. ^[2]
- b) Explain, and analyse the issues raised by the development of the joint stock company as the dominant form of business organisation and the separation of ownership and control over business activity. ^[3]
- c) Analyse the purposes and objectives of corporate governance.^[2]
- d) Explain, and apply in context of corporate governance, the key underpinning concepts of: ^[3]
 - i) fairness
 - ii) openness/transparency
 - iii) independence
 - iv) probity/honesty
 - v) responsibility
 - vi) accountability
 - vii) reputation
 - viii) judgment
 - ix) integrity
- e) Explain and assess the major areas of organisational life affected by issues in corporate governance^[3]
 - i) duties of directors and functions of the board (including performance measurement)
 - ii) the composition and balance of the board (and board committees)
 - iii) reliability of financial reporting and external auditing
 - iv) directors' remuneration and rewards
 - v) responsibility of the board for risk management systems and internal control
 - vi) the rights and responsibilities of shareholders, including institutional investors
 - vii) corporate social responsibility and business ethics

Notes: Number [2] indicates the student need to demonstrate their cognitive level for application and analysis, while [3] synthesis and evaluation.