



The Analysis of Students' Learning Outcomes Majoring in Natural Science and Social Science at Accounting Education Study Program

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Abstract

This research aims to determine the differences of students' learning outcomes majoring in natural and social sciences at Accounting Education Department in the Faculty of Economics, Makassar State University. Population of research was students of Accounting Education Department in the year of 2011 to 2012. Samples were 50 undergraduate students who graduated from natural science and 50 undergraduate students who graduated from social science. It used purposive sampling with the certain criteria. Data were collected by using questionnaires and data on students' study backgrounds was taken from simpadu. Then, data were analyzed by descriptive statistical analysis. Findings show that the averages of students' learning outcomes on both Introduction to Accounting 1 and Introduction to Accounting 2 Subjects were 2.89 for students who graduated from natural science and 2.81 for students who graduated from social science. Then; students' learning outcomes who graduated from natural science on Introduction to Accounting 1 subject was 2.80 and 2.98 for Introduction to Accounting 2. Whereas; students' learning outcomes who graduated from social science for Introduction to Accounting 1 was 2.95 and Introduction to Accounting 2 was only 2.68. It can be concluded that students' learning outcomes on Introduction to Accounting 1 and Introduction to Accounting 2 who graduated from Social science got the lower scores than students who graduated from natural science. It happened because the learning method which used by Natural science graduates more practical and the Social science graduates usually had discussions because they thought they already had the basic knowledge of accounting.

How to Cite

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INTRODUCTION

Department for accounting education is one of the most wanted study programs at economic faculty. Its vision is "as the centre of education, research, accounting development and science with entrepreneurship conception". The missions are (1) preparing professional human resources having moral principles in education and non-education accounting; (2) creating conducive academic climate and culture; (3) providing services for society in accounting education and accounting; and (4) Trying to develop the department through teaching and research in accounting education and accounting. The accounting department of UNM aims to create graduates having skills to (1) create and assist education professionals in accounting education; (2) create graduates that can devote its social science of accounting for society; (3) develop accounting and accounting education as the basis for education, teaching, research, and community service; (4) improve the program study of accounting education to be more competitive.

The result of the research conducted by Basuki (Ariani, 2004) reveals that on average, students choosing accounting department is triggered by their willingness to be professionals at accounting. Besides, they are also motivated by the market demand for accountants at organizations or companies, especially in Indonesia. Apparently, from the evolution of accounting education, the knowledge required by accountants are general knowledge, organization, business, and accounting. So that, the learning process for accounting at higher education is supposed to transform the learners into better quality graduates.

Career is a series of attitude and behaviour related to experience and working activities during one's life and it is also sustainable working activities (Gibson & Mitchell, 1995). Students at bachelor degree is categorized at exploration stage with tentative characteristics in which they limit their preference, yet it is not final (Zunker, 2002). The main obligation at exploration stage is to explore the post and try the roles to obtain appropriateness between self-concept and education and environment factors preparing them for certain posts at their workplace.

Social Cognitive Career Theory (SCCT) which is based on sociocognitive from Albert Bandura (1986), is a theory explaining the process of career decision making. To some extent, it is similar with Krumboltz (Brown, 2007) that identifies factors influencing career preference; they are (1) genes and certain skills; (2) certain

condition and environment; (3) learning experience; and (4) skills for certain work. The learning experiences such as the taken courses from science (or *Ilmu Pengeahuan Alam/IPA*) or social (or *Ilmu Pengetahuan Sosial/IPS*) classes at senior high school can influence the decision to choose certain department at universities which is then, it can affect the learning achievement.

Purwanto (2007) says that a learning process is a change of something becoming something else. Things influencing the process are called inputs, while things related to the result of the process are called outputs. Learning process can be called to have high quality if the coordination among inputs (lecturers, students, curriculums, and other elements) are conducted in a harmonious way so that it can create exciting learning and can motivate students to learn and empower them. It is expected that students will not only acquire knowledge, but they are also able to implement it in daily life, and become lifelong learners by developing themselves. Then, if it happens, higher education or specifically, the department, can be called a quality department due to students' achievement.

Learning process in accountancy grows as the development of information and technology also improves. This also leads to the development of characteristics of the students and material and environment (Latifah & Susilowati, 2011). There is one of parameters used to measure the level of learning success that is the learning result (Permana & Latifah, 2015). The success of learning is influenced by many factors involving internal and external factors (Slameto, 2003). Internal factors include health and physical condition such as intellectual, emotional and social capability as well as the capability to adapt with environment. While the external factors include elements related to surrounding environment of the learners such as variation and the level of difficulty of the learning material, the place for learning, learning climate, and social and culture nuance. However, in fact, many researches review the learning result, but there is a few of research discusses the background of the study towards the learning result. It is undeniable that each higher education expects comprehension and achievement from their students because it is the form of learning success gained from learners that they can also be proud of. Such learning success can be seen clearly starting from the time they begin studying in the first term to the end of the term.

To be successful in the learning at higher education requires the basic capability in accordance with the expected competence. The basic

competence means that the aptitude on the learning experience students have acquired at the earlier time. There is a need of adjustment to succeed in the learning at higher education. Students who have basic knowledge means those who already have perception, knowledge, and skill in accounting. Then, the other most important thing is learning motivation intensity to help the students gain high achievement index or GPA as the indicator of learning success.

The learning background means the experiences the learners have during their high school time (Tjandra & Soekamto, 2004). The learning experience in the high school can prove students' ability and development. Students taking certain subjects at university come from various background of study. For example those taking accounting major could be those studying social or science major. Having said this, these two backgrounds of studies have offered students different curriculum making them having different capacity. In higher education, accounting subject is begun with basic accountancy which is required to take advance one. However, it is found that students at university find it difficult even though they have had previous knowledge during the high school.

The learning achievement at higher education is the result of learning measurement involving cognitive, affective, and psychomotoric factors after joining learning process measured by the use of test or relevant instrument. Therefore, the learning achievement is the result of learning assessment in the form of symbol, letter, or sentence representing the result gained by every student in certain period of time. Cognitive, affective, and psychomotoric factors are involved while measuring the achievement after assessed by certain relevant test instrument.

Gagne (1985) mentions five kinds of learning result: 1) Intellectual skill is an ability to conduct certain assignment and is an access to connect with environment through certain symbols; 2) Verbal Information is an ability to express ideas in either spoken or written form; 3) Cognitive strategy is the ability to organize physical capability so that one can do the assignment well; 4) motor skill is the ability to organize physical capability so that one can do the assignment well; and 5) Attitude is an act or behaviour as a response to the learning result.

Learning achievement can be seen from the learning evaluation. Evaluation on learning involves three steps: 1) planning, 2) implementation, and 3) evaluation. The learning success is seen from the score result. It means that it is seen from the cognitive perspective. This is most-

ly used by educators including lecturers by giving students exams to assess students' achievement (Sudjana, 1995). Mostly, the instrument used to measure achievement is the use of a test.

Dalyono (1997) and Slameto (2003) explain that there are two factors influencing learning achievement that is 1) internal factor as a factor of an individual involving; a) physical, disability and b) psychological one that is intelligence, interest, motivation, talent, maturity, solitude, and c) exhaustion in physical and spiritual condition. Then, 2) external factors include: a) family, b) school, and c) society.

Anderson in Mardapu (2004) says that the characteristics of human being involves how to think, act, and feel. Dimiyati (1994) says that the learning achievement is an important thing for one's learning process. The quantity and the quality of the learning experience in accountancy or the basic knowledge the students have are diverse while the accountancy material in higher education is similar.

The first data related to learning achievement of accounting students (accounting subject) between students having background of social and scientific science are provided in Table 1.

Table 1. Learning Result from Different Background of Study in High School- IPA and IPS students.

GPA	IPA (%)	IPS (%)
1.75 – 2.75	2	4
2.76 – 3.51	20	23
3.52 – 3.99	18	13
	40	40
	100	100

Source: System of Academic Information UNM, Accounting Education Department of UNM, 2014

Table 1 shows that there are two students from IPA can achieve GPA of 1.75-2.75 (5%), while there are 4 students of IPS (10%). Then, those having GPA of 2.76-3.51 are 20 students from IPA (50%), and 23 students from IPS (58%). Next, the GPA of 3.52-3.99 (45%) owned by students from IPA, and 13 students (32%) from IPS. This data trigger the researchers to investigate further the factors making the result different.

METHODS

This research is conducted to find out the different results of students coming from IPA and IPS major background at accounting education

department for the subject of Introduction to Accounting 1 and 2. The population of this study is students batch 2011 and 2012 involving 50 students from IPA and 50 students from IPS subject so that it is 100 students in total. The source of the data is the students learning result on Introduction to Accounting 1 and 2. The primary data are related to observation and direct interview with the respondents, while the secondary data involve the existing learning results gathered from Accounting Education department available in SIA/SIMPADU UNM. There are 100 questionnaires distributed. And there are 15 questionnaires which are not returned- only 85 questionnaires answered and returned. Then, there are five questionnaires which are not answered completely so that they are denied. Hence, in total, there are 20 questionnaires denied to be the source of data. To conclude, the response rate is 85% and there are 80 answered questionnaires that can be used as the samples. The data are analyzed using descriptive quantitative approach (Sugiyono, 2013).

RESULTS AND DISCUSSION

This study measures the students' comprehension on accounting coming from their education background of various department. Due to different educational background, it is assumed that they have different comprehension on accounting. The objects of the study are students taking science and social subjects at their senior high school. Their different comprehension on accounting is various due to : 1) students coming from social subjects having accounting class less than one sixth of the total subjects during three years of study. The accounting subjects are started at the first term, but it is only learnt once each term. 2). Students coming from science subjects have no accounting lessons at senior high school. Therefore, the students coming from social science subjects at senior high school are definitely having better comprehension on accounting compared to those science students. Hence, this study aims to prove whether the different background of education influences their learning comprehension on accounting at higher education.

The indicator of learning success is seen from the learning result. The learning achievement is what one achieves from having knowledge, skill, and behaviour shown by the score given by lecturers. In fact, there are many factors influencing learning achievement. Those factors are classified into two- internal and external factors. Internal factors come from the students themselves, while external factor comes from environ-

ment. The improvement of students' study result becomes the main goal for any educational organization and it becomes teachers' priority. Some empirical researches mention that several factors influencing the result of the study as claimed by Hijazi and Naqvi (2006) that the learning outcomes are products of socio economy, psychology, and environmental factors.

The result reveals that the learning result from students coming from IPA major are; 5 students having GPA 1.00-2.75 (13%), 20 students with GPA 2.75-3.36 (50%), and 4 students with GPA 3.83-4.00 (9%). Meanwhile, from IPS, there are 10 students with GPA 1.00-2.75 (25%), 20 students with GPA 2.75-3.36 (45%), 9 students with GPA 3.37-3.82 (23%), and 3 students with GPA 3.83-4.00 (7%).

The data show that students from IPA major at higher students obtain better GPA at university compared to those from IPS. The difference is quite significant as there are 11 students from IPA (28%) achieving GPA 3.37 – 3.82, while there are only 9 students from IPS (23%). Then, the GPA of IPS students for Introduction to Accountancy 1 is 2.95, while for Introduction to Accountancy 2 is 2.68. Meanwhile, IPA students can get the GPA for Introduction to Accountancy 1 is 2.81 which is less than those from IPS, and while for Introduction to Accountancy 2 for IPA students is higher- 2.96. Seeing from the learning result of Introduction to Accountancy 1 and 2, there are different results from students from IPA and IPAs.

From the result of the questionnaires, it is found that IPS students prefer to have discussion as the learning method and other non-formal activities. Meanwhile, for IPA students prefer to have practices and other non-formal activities such as taking accounting course. Apparently, students at higher education are active learners implying that even though they accept instructions, they will still have their own method for studying. Therefore, we need to emphasize the significance of internal condition of the learners. IPA students are getting used to learning math, chemistry, and physics with many counting exercises and practices. They get used to use the drill learning type. However, those from IPS get used to discussion on social problems so that they prefer to have discussion learning style.

Academic achievement at universities can be seen as a product from two factors: first, the factor from each student involving elements of social, economy, and their ability, then, the second, the factor coming from relationship between education system and learning process at university.

One influencing factor is the background of study at senior high school. This study finds out that the study background and student's characteristics influence students' achievement. Nugroho (2014) also confirms that the learning motivation based on the study background influences the students' achievement.

There are different curriculum for IPA and IPS at senior high school. IPA focuses on chemistry, physics, and biology, while IPS offers social science such as geography, history, etc, in which it has been divided since class X. Having such different curriculum, students have different experiences. This will lead to readiness level in taking subjects at universities.

Ausebel (2000) introduces theory of acquisition and the use of knowledge based on identical elements similar to association of stimulus-response. In this case, it means that it is related to what students have learnt previously. This will ease the process of transfer of learning positively in the learning process. This theory emphasizes on the influence of the previous background of knowledge as learning is an interaction between knowledge, feel, and action.

Besides, Seifert & Reilly in Tjandra and Soekamto (2004) also emphasize that students should be able to generalize what they have learnt so that they will be able to solve problems in the future. When one learns something, there is an assimilation with new knowledge so that there will be differences due to adaptation on cognitive structures. According to Turner and Tjandra and Soekamto (2004), assimilation happens where students acquiring certain level of cognitive level, they will be able to do any actions equal to the cognitive level they could acquire (horizontal emphasis).

Next, the deeper level at learning is accommodation. It is a process where the new schemata are formed in each individual to learn new things. The formation of new schemata is continuously made and covers the old cognitive structure, even though there is a need of certain new elements. It means that if students have no relevant schemata, there will be the formation of new changes to make accommodation happen.

Apparently, learning is a process involving permanent and continues changes happening at one's attitude through practices and experiences. Students will acquire knowledge, skill, and attitude towards what they learn. In normal condition, one having healthy physic and psychology is able to learn, but everyone has different ability to learn fast or less (Topuz & Karamustafaoğlu, 2013).

During the learning process, students are trying to adapt new information to their existing cognitive structures. Factors influencing the learning success is factors from the students themselves that are cognitive, motivation, talent, physical and emotional condition, etc. Other influencing external factors are environment, curriculum, infrastructure, learning facilities, lecturers, etc. To understand the capability and behavioural changes, there is a need to evaluate the learning. This can be seen from the GPA (Gagne & Briggs, 1979). The higher the GPA means the higher the learning result is.

This study is in line with the research conducted by Almunaes et al (2014) saying that first, the major taken by students at higher education has positive and significant correlation with the learning result at accounting department. The study shows that the students taking IPA major has significant influence on the learning result because they get used to practice their skill in math better so that they are good at and prepare their skill on counting leading to better practice for accountancy subject at university. The previous study confirms that the skill at math significantly supports the students learning result. Second, this study finds out that students who participate actively in the classroom and are involved in the interaction during the learning process have better learning result. The consequence is active interaction between instructors and students can improve participation in the classroom.

CONCLUSION

In the learning process, input and output differentiate the learning output of students coming from social and science subjects. The differences are 1) the learning result from two subjects of Introduction to Accountancy 1 and 2 coming from IPS and IPA is different- those graduate from IPS has less achievement with GPA 2.81, while those from IPA are 2.89; 2) the learning result of students from IPA for Introduction to Accountancy 1 is 2.80, while IPS is 2.98, meanwhile for Introduction to Accountancy 2 is 2.95 for IPS students, and 2.68 for IPA students. 3) Based on the data, it can be seen that Introduction to Accountancy 2 of students coming from IPS subject has less GPA compared to IPA students. This is due to different method of learning; discussion and practice, while non-formal education is taken by students coming from IPA background such as taking accountancy course and involve in other activities or other regional organization or Organda; 4) students coming from IPA back-

round prefer to use practice method of learning to solve accountancy problems by making use of tutorial from their peers or their seniors in solving problems in their assignment. Further, they also join accounting course because they realize that they do not have accounting background previously. 5) Students coming from IPS subject prefer to choose discussion or self-study to finish their assignment because it is easier for them to comprehend the lesson. However, IPS students are not interested to take non formal education such as taking accountancy course because they already have previous knowledge. In this case, actually, students do not fully realize that learning accountancy is not enough only by having comprehension on accounting but also there is a need to analyze in solving certain problems in the assignment. 6) The students coming from IPS does not guarantee to make them easily having better GPA compared to those having no previous knowledge on accounting. Therefore, the main factor influencing the optimum result is the learning method used by the students.

It is expected that students either coming from IPA or IPS subjects understand that learning Accounting at Accounting Education department does not only need to comprehend the subject but also the analysis. Therefore, there is a need to select appropriate technique and method especially for joining non-formal education such as taking accounting course, not only having too much involved for organization either internal or external ones in local level (ORGANDA) to optimize the learning result.

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