

Learning Strategy And Academic Achievement Of Student: An Exploratory Study

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Abstract: This study is aimed at exploring information about learning strategy implemented by students in pursuing their academic achievement. This research carried out at Faculty of Economics and Business, Udayana University. This study used qualitative descriptive design. The population was all active students at Accounting, Management, and Development Economic study programs. The informant were the three department heads, whereas the participants were 63 students from the three study programs. Data collection methods were questionnaire for collecting participant's profile, in-depth interview with department heads and focus group discussion with the student as participants. This study implemented content analysis for analyzing the data. The findings show there are 12 categories of learning conception reported by student. Additionally, there are different learning strategy taxonomy among the three main activities in student learning process. The results of focus group discussion also reflect that learning context which closely related to learning strategy are teaching method and assessment system apply by the lecturer.

Keywords- academic achievement, deep approach, learning strategy, surface approach, strategic approach

Date of Submission: 04-11-2018

Date of acceptance: 18-11-2018

I. Introduction

Progress rate of a nation is determined by educational quality of the citizen. Nowadays, an institution uses more intangible assets rather than tangible assets in endeavor to gain its competitive advantage (Noe et al., 2012: 20). It is also explained that human capital as one element of intangible asset, besides social and intellectual capitals, has higher value than financial and physical assets. It is because human capital is very difficult to be imitated and duplicated. Therefore, Erosa et al. (2010) argue that human capital become the key component which determine aggregate welfare of a country.

The history of world-wide countries shows that defining factor of their economic development is human resource, not natural resource possessed by the country. It is not surprising if many countries which "poor" in natural resource availability emerge as rich countries and included in developed countries cluster like Singapore and Japan. This is due to human resource or human capital quality of the countries (Sudibia et al., 2015).

United Nation Development Program measure human resource quality by Human Development Index (HDI). Based on this measurement, it is reflected that the higher the HDI of the country, the higher the achievement of its human development. The data in 2015 showed that out of 188 countries, Indonesia ranks 110th with HDI 0.684, included in middle cluster. This index is far lower than HDI of other countries in ASEAN region like Singapore, Brunei Darussalam, and Malaysia with index of 0.912; 0.856; and 0.779 and ranks 11th; 31th; and 62th respectively. Specifically, in terms of educational quality, as one element of HDI, Indonesia also just rank 110th out of 188 countries. This condition reflects that Indonesia's HDI is relatively low in comparison with other countries.

Education is included in economic goods that have to be shared because it is difficult to be obtained. According to Dessler dan Tan (2006:9), education is become development machine and key element of community development in knowledge-based economy. Means that, high quality education is needed in order to increase economic growth and create high quality graduates. Therefore, higher education institution has to be optimally managed in order to create high quality graduates through increasing of teaching-learning process quality.

Quality of education is reflected in academic achievement of the graduates (Duggal and Mehta, 2015). It is argued that in knowledge-based society, quality of education and student performance has prominent roles in economic and social development of a country. Higher education institution is supposed to be able to create high quality graduates through optimal academic achievement. Students reserve the right of obtaining security

for achieving highest academic achievement in accordance to the shifting of view from “student” to “client” (Flavell et al., 2008).

Conceptually, academic achievement is academic performance showed by student as a result of his/her learning activity in college which is further determines education quality of such a college (Majorbank, 1978). In production function of education, academic acts as output, whereas the predictors become the input (Grave, 2011). Lubienski dan Weitzel (2008) states that most widely way to measure quality of education is through its effectiveness in consummating student academic achievement. Therefore, it is logic that student’s choice of a college more and less is determined by its graduate’s academic achievement record.

Measurement of academic achievement generally used is grade point average (GPA) as representative of student’s academic output (Britt et al., 2016; Hamzah et al., 2015; Mamede et al., 2015; Wei-Wen & Yi-Lee, 2014; Wei-Wen & Hsui-Zu, 2012). Academic achievement can be also measured by student’s perception like used in Khan’s study (2012).

According to Vilkinas and Ladyshevsky (2011), in the last ten years, accountability of higher education institution charged by the government especially related to improvement of learning quality for creating graduates who are ready to plunge into the labor market. Therefore, it is logic if Flavell et al. (2008) state that in the era of the shifting view from “student” to “client”, learning process is supposed to be focused on an effort to produce high quality graduates through high quality learning process.

Learning process is student’s interpretation about teaching context in their own preconception and motivation directed to metacognitive activities which is focused on the learning itself, not on the content of learning (Abhayawansa & Fonseca, 2010). Learning approach (learning strategy) is an important variant of learning process (Alkhateeb and Nasser, 2014). Based on results of empirical studies, there are several learning strategies which can be implemented by student. Biggs (1979) (in Abhayawansa & Fonseca, 2010), state that there are three types of learning strategy namely utilizing, internalizing, and achieving which contain cognitive and affective components. It is argued that in utilizing strategy, student has intrinsic motivation to obtain qualification and avoid failure, and their strategy is only for passing the test. In internalizing strategy, the student possesses intrinsic motivation to comprehend the subject under study. In contrast, in achieving strategy, student has achievement motivation for gaining high grade. Therefore, the last learning strategy is become higher level approach in comparison to the other two.

Gender is also contributes to student’s academic achievement. Several study show that there is differences in academic achievement between male and female student. This condition shows that there is different cognitive function between male and female. Female shows bigger variant proportion in comparison with male in terms of academic performance (Hortascu et al., 2001). Male students show lower academic performance rather than female students, maybe because they allocate shorter time for learning activities than their female counterparts (Grave, 2011). Refer to Coleman’s study, Dumais (2008) express that male student prefer be remembered as “athlete star” to brilliant student, whereas female student is expected to be remembered as “leader” in academic field. The difference of this academic achievement may be as a result of different learning strategy between male and female as stated by Soares et al. (2009) and Duff (2004).

Strategy or learning approach is also affect student’s academic achievement. Proper learning strategy tends to be related to better academic achievement than improper one. So far, student’s learning strategy is rarely considered in association with student’s academic achievement. Therefore, it is urgent to do exploratory study to investigate strategy or learning approach used by students in their learning process.

Based on above discussion, research question proposed in this study are as follows.

- 1) How perception of student about learning conception?
- 2) What dimension contain in student’s learning strategy?
- 3) Is there a relationship between learning strategy and learning context?
- 4) Is there a relationship between learning strategy and academic achievement?
- 5) Is there any differences in learning strategy implemented among group of student in three study programs and between quantitative and non-quantitative subjects?

1.1. Concept, conception, and taxonomy of learning strategy

Learning is activity in which a person or a group of person gaining and processing knowledge (Insead, 2012). Kok (2013) states that learning is a process in which individual obtains new knowledge and skill for improving his/her performance. One key factor in learning is learning strategy. According to Holman et al. (2012), individual learning consists of several element including motive, learning strategy, and outcome (knowledge). Learning approach or strategy is unquestionable emerges as the key concept in teaching-learning process (Ramsden, 1992:39 in Sharma, 1997).

Studies about learning strategy become critical because it is determine and contribute to student’s academic achievement (Areepattamannil, 2014). The results of empirical studies show that there are several dimension of learning strategy implemented by student in pursuing their academic performance. Learning

strategy (also called learning approach) is an important variant of learning process (Alkhateeb and Nasser, 2014). Students may not implement an effective learning strategy (McCabe , 2011), even though strategy is important because it can be said as a blue print of action for creating expected performance (Patrizi et al. , 2013). Strategy implemented in learning a subject or doing assignment will enable the student to achieve skill status in complex knowledge domain (Weistein and Palmer, 2002) in Alkhateeb and Nasser (2014). Therefore, it can be concluded that learning strategy is closely associated with academic grade of particular subject and academic achievement in general.

Learning strategy is defined as behavior and thought applied by learners which tend to affect their encoding (Arrepatmannil, 2014). Learning strategy is tends to be neglected in studies about education output, even though according to Soares et al. (2009), behavior and way of learning become an important factor which determine the student's success in university. These researchers found that learning strategy applied by students has a big contribution to their academic achievement. Additionally, Alkhateeb and Nasser (2014) also found that learning strategy emerges as an important factor in the learning process because it provides foundation in dealing with material of subject and become cognitive and emotional variables which rounds learning process.

Saljo (1979) and Van Rossum (1985) (in Sharma,1997) argue that student's learning conception can be classified become 5 groups namely 1) remembering, 2) gaining knowledge, 3) applying knowledge, 4) making interrelationship among parts of the subject and among subjects, and 5) interpreting and comprehending reality.

The first, the second, and the third conceptions are student's external factors, whereas the fourth and the fifth are internal factors that include in personal aspect of learning.

Duff (2004), specifically investigates the relationship between academic performance and learning strategy argues that there are three approaches or taxonomies of strategy can be used to identify learning strategy of higher education students namely 1) deep approach, 2) surface approach, and 3) strategic approach. The first approach related to searching of basic meaning of subject under study. The second approach associated with memorization of subject, whereas the third approach is in respect of searching of key element of subject under study. The third approach is said to be the most effective way to achieve maximum academic performance.

On the other hand, Abhayawansa et al. (2012) argue that in general, there are three taxonomies of learning strategy i.e. surface, deep, and achieving approaches. It is further explained that group of student who apply surface approach intrinsically motivated to obtain qualification or just for pass the exam. Meanwhile, those who apply deep approach intrinsically have willingness to pursuit knowledge. Different from the other two approaches, achieving approach has very high dependency context. Students who apply this kind of approach intrinsically motivated toward the needs of achievement and try to achieve maximum outcome.

The learning approach discussed before based on review of results of empirical studies in Western Countries. It is need to be confirmed through further exploration of learning strategy in developing country like Indonesia. As reported by Soares et al. (2009), if the success of student become the main objective, then education institution has to be focus on intervention directed to learning strategy, so relevant program development policy can be arrange properly. It is expected that such an intervention can be utilized as guidance for evaluating lecturing method and evaluation method in teaching-learning process.

1.2. Sectoral differences in learning strategy

From time to time, students implement various learning strategies in endeavor to improve the depth of knowledge, to fulfill requirement of learning environment, and to improve their learning output quality (Samms and Friedel, 2012). The searching of empirical studies shows that there is basic difference about learning strategy among higher education sector. Students studying in Colleges of Advance Education with vocational orientation and focused on applied study, show higher score in surface and achieving learning strategy rather than deep strategy (Abhayawansa et al., 2012). Meanwhile, their counterparts who study at Technical and Further Education (TAFE) tend to implement surface strategy more than the other two. These results implicitly show that there is a sectoral difference of learning strategy implemented by students in pursuit of their academic achievement. Consistent with that, research finding of Areepattamannil (2014) also shows that student take different subject, in this case reading, math, and natural science, will also apply different learning strategy.

1.3. Learning context

According to Ramsden (1992) (in Sharma, 1997), learning strategy implemented by student in university is related to the context i.e. assessment method, teaching method, and discipline (study program). It is argued that certain assessment method may has detrimental effect on learning strategy implemented by the student because tend to push the student for only pass the exam rather than gain comprehension about the subject. On the other side, good teaching method will motivate student for applying deep approach. Additionally, student who take different course, for instance accounting and finance, tend to apply different

learning strategy. Learning strategy that fit to one student in certain learning situation may not fit to the other situation (Weinstein & Mayer, 1986 in Quible, 2006).

II. method

This study use qualitative design which applied to answer aims of study through exploring information and data collection about learning strategy implemented by higher education student. The research was carried out at Faculty of Economics and Business, Udayana University, Denpasar-Bali. In General there are two types of variables in this study. Firstly, variables related to characteristic of respondent namely age, sex, place of residence, and name of study program. Secondly, main variables in this study are learning strategy and academic achievement.

Data of graduates in the last five years (February 2012-February 2016) is available in Table 1. It can be seen from the table that female students tend to show higher academic achievement than their male counterparts. Female students dominantly appear as the best student at the graduation. Out of 19 times graduation occasion, 13 times achieved by female students, only 6 times male students become the winner. In addition, the data in Table 1 implicitly shows that there is also academic achievement difference by study program. Students take accounting dominantly emerge as the best student in comparison with those who take Management and Economic Development study programs.

Table 1. Data of Graduation

No.	Month/year	Graduation	Name of the best student *	Program studi	Sex	Grade point Average
1	February/2012	98 th	A	Management	L	3.74
2	May/2012	99 th	B	Accounting	L	3.53
3	Agust/2012	100 th	C	Accounting	P	3.97
4	November/2012	101 th	D	Accounting	L	3.67
5	January/2013	102 nd	E	Accounting	L	3.57
6	March/2013	103 rd	F	Accounting	P	3.91
7	Mei/2013	104 th	G	Accounting	P	3.76
8	Agust/2013	105 th	H	Accounting	L	3.89
9	November/2013	106 th	I	Accounting	P	3.91
10	January/2014	107 th	J	Accounting	P	3.83
11	March/2014	108 th	K	Development Economic	P	3.93
12	May/2014	109 th	L	Development Economic	L	3.74
13	Agust/2014	110 th	M	Development Economic	P	3.79
14	November/2014	111 st	N	Accounting	P	3.90
15	Fabruary/2015	112 nd	O	DE	P	3.88
16	May/2015	113 rd	P	Management	P	3.70
17	September/2015	114 th	Q	Accounting	P	3.96
18	November/2015	115 th	R	Accounting	P	3.86
19	February/2016	116 th	S	Accounting	P	3.85

Source: Academic division of Faculty of Economics, Udayana University (2016)

* Name of student available

There is a possibility that the difference in academic achievement is due to difference of learning strategy applied by the students as Areepattamannil (2014) said that grade point average is closely related to learning strategy implemented by the student. The more effective the learning strategy, the higher the academic achievement will be gained by students in their teaching-learning process.

The population of this research is all active undergraduate students at the three study programs. Target participant is 60 students who are in the second year (fourth semester) with consideration that these students have comprehended and familiar with teaching-learning process at the faculty. The participants are classified into 6 groups (2 subjects in each study programs: 1 quantitative subject and 1 qualitative subject). The number of participant in each study program is 20 students and for each subject is 10 students. Identification of these two kinds of subject was based on in-depth interview with the three coordinators of study programs (as key informants in this study). The classification of the subject is due to indication that according to Dhuey (2013) and Carlson et al. (2008), there is a difference of student's academic achievement between Math (quantitative subject) and reading (qualitative subject). Target participant according to study program and subject can be seen in Table 2.

Table 2. Number of Target Participant by Study Program and Subject

Student's group number	Name of study program	Name of subject*	Number of student
1	Accounting	Corporate Governance	10
2	Accounting	Banking accountancy and village financial institution	10
3	Management	Strategic management	10
4	Management	Management seminar	10
5	Development Economic	Human resource economic	10
6	Development Economic	Indonesian economy	10
Total			60

*Name of quantitative and qualitative subject is determined through *in-depth interview* with the three coordinator of study program

At the process of data collection, 2 students of Management Study Program could not attend the focus group discussion session because of sickness. The target of student of Accounting study program according list are also 20 students. Yet at the focus group discussion session, 27 students attend the occasion. There two students of Economic Development study program who could not participated at the discussion. One of them was sick and the other student was attended student conference in Jakarta. Data of participant by study program available at Table 3.

Table 3. Data of Participant by Study Program

No.	Study program	Number of student	Percentage
1	Accounting	27	42.8
2	Management	18	28.6
3	Development Economic	18	28.6
Total		63	100.0

This research used three data collection methods namely questionnaire (characteristic of participant), in-depth interview (identification of quantitative and qualitative subject), and focused group discussion (exploration of learning strategy). Content analysis is used to analyze the data. Specifically, information collected was analyzed through textual approach developed by Grepert, 1993 (in Perlow & Weeks, 2002). By this approach, records and notes obtained based on focused group discussion converted in a transcript and treated as texts and then analyzed through integrated combination by coding and expansion analysis. In this case, Neuman (2000: 292) said that content analysis is an analysis technique to collect and analyze the content of a text.

III. Result And Discussion

1.4. Characteristic of respondent

In terms of age, most participants are 20 years old (more than 30%) (Table 4). They are dominantly in the fifth semester when this study is carried out. The data is logic as generally student was graduated from high school when they were 18 years old. There is one student reports that he is 24 years old. He is in the ninth semester and taking the subject for remedial and when the study carried out he is arranging research proposal for final report. In addition, most of participants are female (about 67%). The rest (about 33%) are male (see Table 4).

Table 4. Data of Participant by Age

No.	Age (year)	Number of student	Percentage
1	19	6	9.5
2	20	43	68.3
3	21	9	14.3
4	22	2	3.2
5	23	2	3.2
6	24	1	1.6
Total		63	100.0

Table 5. Data of Partisipant by Sex

No.	Sex	Number of student	Percentage
1	Female	42	66.7
2	Male	21	33.3
Total		63	100.0

According to the data, most of students from Management study program chose Human Resource Management concentration (10 students or 55.6%) (see Table 6). The rest are from Marketing Management and Financial Management concentrations, 33.3 percent and 9.1 percent respectively. Most (44.4%) participants from Economic Development study program take concentration of Economic of Regional Development and about 39 percent take Demography. Only 17 percent of them take International Trade Economic concentrations.

Distribution of participant by grade point average can be seen at Table 7. The data at Tabel 7 show that no participant has score less than 2.76 (satisfying). About 25 percent achieve grade point average of 2.76-3.50 (very satisfying). It is interesting to note that most participant in this study (32 students or almost 75%) achieved grade point average more than 3.50. Even though most of them are in the fifth semester when the study is carried out, this condition can become an indication this group of student will be graduates with predicate of “cum laude”.

Table 6. Detail of Participant by Study Program and Concentration

No.	Name of Study Program/Concentration	Number of student	Percentage
1	Accounting	27	100
2	Management	18	100
	- Human Resource Management	10	55.6
	- Marketing Management	6	33.3
	- Financial Management	2	9.1
3	Development Economic	18	100
	- Demography	7	38.9
	- Economic of Regional Development	8	44.4
	- Ekonomik of Internasional Trade	3	16.7

Table 7. Grade Point Average of Student

No.	Grade point average	Number of student	Percentage
1	2,00 – 2,75	0	0
2	2,76 – 3,50	16	25,4
3	3,51 – 4,00	47	74,6
Total		63	100

1.5. Learning Concept and Conception

Learning concept can also be called student conception of learning (SCL) (Abhayawansa and Fonseca, 2010). Insead (2012) defines learning concept as activities in which individual or group of person gain/process knowledge which enable them to be advanced. Kok (2012), defines learning concept as a process in which individual gain knowledge/skill for improving performance. In this study, students were asked for propose their perception about learning concept. In sum, definition of learning concept in this study is a process by which individual or group gain, comprehend, practice, and develop a new thing for obtain something beneficial in the future.

Learning conception originated from learning concept which is sorted become its dimensions. According to Abhayawansa and Fonseca (2010), learning conception refer to qualitative view of student toward his/her learning. Learning conception is divided into five groups in accordance with cognitive sphere from the lowest to the highest level namely 1) remembering, 2) gaining knowledge, 3) applying knowledge, 4) making interconnection among parts of the learning subject and between subjects, and 5) interpreting and comprehending reality (Saljo, 1979) and van Rossum (1985) in Sharma (1997). Based on focus group discussion, there are 12 dimensions of learning conception as follows.

1. Gaining knowledge
2. Gaining hard skill and soft skill
3. Adding insight
4. Comprehending
5. Remembering
6. Permeating
7. Fulfilling curiosity
8. Developing experience in social life
9. Developing mindset
10. Applying knowledge
11. Making interrelationship among elements of subject and among subjects
12. Interpreting and comprehending reality

1.6. Learning Strategy and the taxonomy

Learning strategy or student approaches to learning (SCL) defined as the way student learn a subject or an assignment (Abhayawansa and Fonseca, 2010). Arrepatmannil (2014) states that learning strategy is behavior and thought implemented by the learners in their learning process which tend to affect his/her encoding process.

Based on focused group discussion, student perceived strategy as the way implemented for learning both from positive and negative experiences. Other students argue that learning strategy is self-preparing way to lead learning process from “do not know become know”. They said that strategy is beneficial for simplifying learning process. The statement is as follows:

“.....like being overlay of high seas.....strategy give us direction to attain a certain goal.....”.

Several opinion stated by participants about concept of learning strategy are as follows.

1. The way to achieve learning objective efficiently and effectively.
2. The way to comprehend subject easier.
3. The way to simplify subject.
4. Method or step taken to achieve learning objective.
5. The way implemented in learning process.

Several students report that learning strategy is beneficial to ease learning objective achievement, to comprehend material of the subject, and to direct learning plan. In sum, learning strategy is beneficial for accelerating the arrest of information, for optimizing learning process, and for streamlining time of study.

Some researchers proposed several categories of learning strategy. Biggs (1979) in Abhayawansa and Fonseca (2010) argue that there are three categories of learning strategy. Firstly, utilizing-learner possesses extrinsic motivation for gaining qualification and avoiding failure. In other words, the learner applies this strategy in order to just passing the exam. Secondly, internalizing-learner possesses intrinsic motivation for comprehending the subject. Thirdly, achieving- high level learning strategy in which learner is motivated to achieve maximum grade.

Abhayawansa et al. (2012) proposed three classification of learning strategy namely surface, deep, dan achieving strategies. Compared to Biggs’s classification, definition of surface strategy is similar to utilizing strategy and deep strategy is similar to internalizing strategy. Duff (2004) complements this categorization by adding strategic approach conceptualized as searching of key element of subject learned, so it is said to be the most effective strategy in order to achieve maximum performance.

Related to three main learning activities which is consists of 1) daily learning, 2) doing assignment or home-work, and 3) mid semester test and final test, all participants report that they use different strategy for the three. One male student said that for daily learning he tends to apply surface approach by memorizing subject material. For doing assignment or home-work, such a student implements *deep approach* in order to find the meaning of subject under study. In addition, the student argues that by doing assignment or home-work, subject material learned in the class can be deepened both conceptually and empirically. Conceptually, theories in the subject can be better comprehended. Exploration of data and information needed in doing assignment or home-work are carried out by searching and comprehending empirical studies done by previous researchers. Meanwhile, for mid-term and final exam, participant report that they doing more review or embrace course material for searching key element of the subject under study. Therefore, it can be said that in this case, student implements strategic approach.

The statement about such a matter as follows:

“.....for doing assignment we charged to study by steeped teaching material transferred by the lecturer in the class”.

Most of the students said that they were not allocate too much time for daily learning, yet some student report that they sometimes do preparation by reading previously subject material which will be the day after.

It can be said that the students view that such an activity is not contribute much to their academic achievement. This is consistent with research finding of Irandoust and Karlsson (2002) which shows that preparation by reading subject material before lecturing is not emerges as an important determinant of student’s academic achievement. One student report as follows:

“...for daily learning I generally prepare by reading the material or the topic before lecturing, so when my classmates doing presentation or the lecturer transfer the topic in the class, I can listen and comprehend them fully”.

The implementation of surface strategy for daily learning reflected by following statement:

“...for daily learning, I focus on explanation of the lecturer...., so I could actively involve in the discussion session...not just be quiet”.

Paulsen dan Gentry (1995) state that student's assessment toward assignment or home-work depend on the objective orientation namely intrinsic and extrinsic objectives and rewards. On one hand, student who has intrinsic objective orientation is motivated by challenge and curiosity, so the achievement of objective is closely associated with high academic achievement. On the other hand, student with extrinsic objective orientation are motivated by approval of the lecturer, good grade, or relatively easy assignment.

A participant which can be included into one that has intrinsic objective orientation express following statement:

“....by doing assignment we are required to study harder through steeped subject material given by the lecturer in the class”.

Participants of this study report that for mid semester and final test they generally reviewed and summarized the material in order to search key elements of the subject. Therefore, it can be said that for this matter, students apply strategic approach. Such a strategy is important in searching key element of the subject in endeavor to achieve maximum grade (Duff, 2004). This condition is logic since most students in this study report that mid-semester and final test become the main element which determine the final grade of a certain subject.

The implementation of learning strategy is also depending on weight of assessment element listed in the lecturing contract. One student said that higher level of strategy (deep approach and strategic approach) are generally apply for higher weight of assessment. In other words, for higher learning elements, students apply learning strategy that enable them to achieve maximum grade. In contrast, for learning elements that have lower assessment weight, students tend to implement surface strategy as a reflection of extrinsic motive for pursuing expected qualification.

It is important to be noted that students report that learning strategy is closely related to student's day cycle. Some students argue that there is the most effective time for learning. Some of them report that the day dawning (above 1 am) is perceived as the most effective learning time. The other stated that they like to study above 10 pm. This group of student stated that they generally take a rest and sleep after doing activities at campus, then collect energy for studying after midnight. There are two reasons for this opinion. First, at the day time or at the afternoon, most of their time is allocated for lecturing and participate in student's activities. Second, evening is a period of time which is free from noises, so they can comprehend the material of the subject easier and faster rather than in the day time. This is generally prevailed for daily learning and doing assignment or home-work. There are also participants who report that the most effective time for studying is at the early morning, as stated below:

“...I like to study at early morning around 3 o'clock because it will be easier for me to catch the material rather than at the evening when it difficult for me to comprehend it”.

Especially for mid-semester and final test, the participants make a preparation far day before the occasion and then refresh it again close to the time of examination”.

“For me, learning time is importantI usually study at 4 or 5 o'clock in the morning especially at the exam”.

1.7. The relationship between learning strategy and learning context

Learning context in this case consists of three elements namely teaching method, assessment method, and physical learning environment. Based on results of empirical studies, learning strategy apply by students in their learning process related to learning context. Ramsden (1992) in Sharma (1997) said that teaching method implemented by the lecturer will motivate student for using a certain learning strategy. This is consistent with result of focus group discussion in this study. Most students expect that the lecturer not just transfer concept and theory of a subject in the class, but also give case study. By case study students will easier to comprehend subject material because it is related to real example, not just a hypothetical one. With such a method students will motivated to actively discuss in the class and express argument about the case. In addition, the lecturer is expected to give acknowledgement to the students who actively participate in the discussion by “noting” or “record” their name, so students will try to apply deep approach for searching the meaning of the subject under study.

“.... lecturer need to give real examples in the field so that students know the benefit of the material both in the real life and in the work life. Besides that, lecturer is also need to give opportunity to the student for proposing examples and experience in the real world. This condition will turn on class condition. Therefore, lecturer has to able to inspire the students by actively involves them”.

Other student gave following argumentation:

“In my opinion, in a good teaching method lecturer give real case in the field and business world, not only at the end of the session but also at the most of lecturing session...For example, give real case about expatriate in Indonesia, so we understand and get a real picture about the subject material thought...the cases discussed will be more cling in students mind rather than just discussing about concept and theory”.

The interesting matter revealed from focus group discussion is comprehension about attitude and behavior of the lecturer is perceived as one of learning strategy applied by students for achieving their academic performance. They called this as “recognition of lecturer character”. For instance, there is a lecturer who likes his/her students gave shorter answer and concise, yet they often found lecturer who prefer the students provide long sentences to answer the question. Information about the attitude and behavior of the lecturer is generally obtain both from the statement of the lecturer and also from the senior students.

Teaching method implement by the lecturer is also associated with learning strategy

Assessment method is also associated with learning strategy as argues by Ramsden (1992) in Sharma (1997). Almost all student report that assessment method has already proper, but the implementation is often unfair. For example, one student said that many lecturers give not transparent assessment toward their assignment. In other words, lecturer did not give feedback properly to the assignment given. This condition may make students demotivation for applying proper strategy in doing assignment or homework. They eventually only implement surface strategy or submit the assignment or homework to the lecturer with prediction that it will not be corrected. The students perceived that feedback given by the lecturer to the assignment or homework is very important because it is a basis of improvement both in terms of editorial and substantial.

“...there are lecturer that do unfair assessment ...I feel that I have done the assignment with my best. Yet, I got grade not as expected. I complain to the lecturer but he did not want to give an explanation.... then I found that all of my classmates get 80...in my point of view it is impossible...”.

There is a student who said that she often experiences unfair assessment because of her “free-rider” classmates (group members). She investigates that especially for group assignment, “social loafing” generally exist. It is very often that students who did social loafing get a good mark. They only “catch a name” in the group assignment submitted to the lecturer. It means that such a student got a good grade even though did not contribute or participate in making the group assignment because he/she present satisfying argument in the group presentation session. This condition may give detrimental effect for the implementation of learning strategy. Those who apply deep strategy in doing group assignment will be demotivated and then using lower level of learning strategy in order to just passing the exam.

Most of the student report that they do not affected much by physical environment in their learning process or in applying learning strategy. Improper hot spots condition in the campus for instance, can be overcome by using their internet quota. In student opinion, learning context associated with the lecturer has a most prominent role in the choice of their learning strategy. A student reports that the capacity of the class can also influence the choice of learning strategy. Small class capacity will affect most his learning concentration.

“...I often disturbed by small size of class but with big number of student. For instance, in subject of Accounting Information System, the size of the class is small, but there were 30 students in it. I often get rear seat, adjoining with friends who like to chat each other....after presentation session the lecturer often asked me to sit down in the front, ...sometimes I experienced eye contact with my lecturer because the class size is so small”.

The statement implicitly shows that he cannot apply expected learning strategy because condition of the class is not conducive. Therefore, such a condition is also may have detrimental effect on student’s learning strategy. Unlike discussion-oriented small class, big class will give small opportunity for students in interacting with lecturer and classmate (Paulsen and Gentry, 1995). Such a condition tends to cause learning objective will not be achieved and create routine learning environment. Additionally, according to Raina (2015), high student-lecturer ratio will cause difficulties to carry out fruitful group discussion session.

3.6. The relationship between learning strategy and academic achievement

Almost all students argue that learning strategy applied so far is closely related or contribute much to their academic achievement. As stated before by the participants, learning strategy in their opinion is the way implemented in order to achieve structured, effective, and efficient learning process. So, strategy is the way used for simplifying the learner to comprehend and steeped learning material. All participants report that they need to implement a certain learning strategy in their learning process in endeavor to gain a good academic achievement for a certain subject and also for achieving good average grade point. One student proposes following statement:

“...in my opinion, learning strategy is very important because it is closely associated with my academic success. Although some people said that the process is more important than the outcome, I believe that outcome is also important and for achieve a good outcome (grade) a certain learning strategy is needed”.

A contrast condition was stated by other student who has been working at one company for two years. The student said that learning strategy is implemented not for gaining average grade point, but for knowing his strength and weaknesses.

“...I do not concern about average grade point because I have worked. Learning strategy is important for me because it can be used to understand my strength and weaknesses, especially in the workplace”.

Learning strategy conceptually is the way or step chosen to achieve determined objective or target. Objective or target of student is to achieve maximum grade for a certain subject which eventually end at maximum average grade point. Average grade point is considered to be important because aside as success symbol and pride, it is also has a prominent role when they apply for job after graduating. Nowadays, companies generally put grade point average as one important element in the selection process.

The participants stated that learning strategy has short-term and long-term benefits. In the short-term, strategy is needed in learning process to achieve the best grade both for a certain subject and also for cumulative grade measured by average grade point. In the long-term, learning strategy is perceived to be beneficial when students have graduated from the university and in gaining good job in the future.

The relationship between learning strategy and academic achievement reflected by student's statement that learning strategy is needed in order to achieve optimal, structured, efficient, and effective learning process. On the contrary, according to Paulsen dan Gentry (1995), although it is acknowledged that learning strategy is related directly to academic performance, the used of different strategy may positively or negatively associated with student's academic achievement. There is an indication that surface strategy will negatively related to academic achievement, but deep strategy is found to be positively associated with the final achievement. The reason is, students who use the second strategy tend to allocate more study time and effort which is in turn direct to higher academic achievement.

3.7. Learning strategy and the field of knowledge

Empirical studies about learning strategy show two views of cognitive style (Samms & Friedel, 2012). Firstly, cognitive style is an important factor which determines academic success of student. Secondly, learning strategy is a method in which students understand about their preference in processing information or the way lecturer help them learning. Field of knowledge will affect learning strategy used by students (Biggs, 1982) in Abhayawansa et al. (2012). This is consistent with the result of focus group discussion. Unlike the other two group, almost all students in accounting study program, focus more on higher level of learning strategy for quantitative subject group than non-quantitative one because perceived that the first subject group is more important than the latter. This is contrast with Eide's et al. (2004) argument which refer to Davidson's (2002) point of view that there is an indication that student in accounting field more apply surface strategy that other strategy because they adopt process which is more focused on facts than argument and memorization of information. The focus on quantitative subject reflected from following statement:

“...quantitative subject is related more to numerical material....it is very important in our work place. Why so? We know that we will be an accountant. Therefore, such a type of subject is very important...like making financial report, estimating cost....Whether we want it or not, topic in quantitative subject will be faced and practiced in our work place. So, in my point of view, quantitative subject is the main subject in accounting study program...non-quantitative subjects only support quantitative subject”.

Some students argue that nowadays there are massive applications and programs, which can be easy learned especially for estimations in accounting subject. Students in all study programs can learn them easily, yet only accounting students can optimally utilized the programs.

“...in this modern era. There are programming for almost all quantitative subject materials like accounting. So, not only accounting can utilize the programs student, other students also... yet only accounting people can handle and justify the error of numerical data”.

Accounting students tend to perceive that non-quantitative subject can be self-learned, for instance through individual or group presentation. If there are terminologies cannot be understood by student, then lecturer has a role to explain. At the moment, learning system is more focused on *student-centered learning* (SCL), yet participants mind if all quantitative subject materials transferred via student presentation. It is expected that the lecturer able to act as facilitator and take more role than the student itself for explaining the material and give examples through exercises. Therefore, student will be more comprehend about the topic.

Students are supposed to be active participants in learning process and lecturer's role is become facilitator, not instructor (Raina, 2015).

Participants also concern that for quantitative subject it is better for the lecturer to give *post-test* as an evaluation of student's comprehension level toward the subject material. It is become lecturer obligation to

make repetition of material discussed if many students have not comprehended. In student-centered learning paradigm, students have to be pushed for taking bigger responsibility toward learning outcome (Raina, 2015). The following student's statement shows the objection of material transfer which is focused on individual or group presentation.

"...there is indifferent lecturer ...it is leave to the students to be understand or not....though the lecture implement student-centered learning system, the lecturer is not supposed to ask students for searching and interpreting the substance by themselves. The lecturer has to facilitate, explain, and give examples..."

Other student gives following argument:

"...Student-centered learning system is good, student make a presentation and discuss trending topics or hot issues....but it is not prevail for all subjects....There is a tendency for senior lecturer...attends the class, asks student to present the material, without effort to make a conducive class and motivate the students actively participate at the discussion. We are expecting that lecturer explains the material and give actual cases, so we think actively and try to find the answer of the case, so psychologically, student will be interested in the topic. Eventually, we will try to study and make a preparation before the lecturer transfer the topic".

Both statements reflect that students often face class situation in which the lecturer do not support their cognitive style and do not concern to the implication of student's cognitive style in the class as stated by Evans and Waring (2009) in Samms and Friedel (2012). Focus group discussion finding shows that especially for management group, most students do not like quantitative subject. Some students report that they feel burdened every time they attend quantitative subject class. Only one participant says that he like quantitative subject. He further states that for this kind of subject, he make an effort to understand the key points, especially related to formulas. Then, this pattern is implemented to other formula derivation. It can be said that such a student apply deep approach-searching of meaning of subject learned.

Almost all participants say that assignment for all subject is very important because by that they automatically charged to study hard.

"...an assignment push us to study.... ..comprehend and steeped subject material obtained in the class and can be used as evaluation about the level of student's understanding".

The participants also state objection to hand writing assignment. Based on student's report, there are two reasons stated by lecturer related to this kind of assignment. First, by hand writing, students are expected to fully comprehend about the assignment. Second, students cannot "copy-paste" the other student's assignment. Students perceived that such kinds of lecturer do not support them to utilize technology. As stated by Greenberg and Wilner (2011), we have to accept and utilize technology when it is available.

"In doing assignment we charged to study hard...but it is not good if we asked to submit it by hand-writing...this is mean that we do not utilize the technology. It is silly because sometimes I did the assignment by using computer first, and then copy it by hand writing...it is inefficient".

3.8. Learning strategy according to subject characteristic

Focus group discussion finding shows that there is learning strategy differences between quantitative and non-quantitative subjects apply by students. Most of participants report that they study harder for quantitative than non-quantitative one, so they allocate more time for the first one. This is because they have to memorize formulas, do exercise and try out the test items given in the previous semesters. It can be said that students apply deep strategy for quantitative subject.

On the contrary, for non-quantitative subject, students report that it is enough for just listen the lecturer's explanation in the class, jotting them down, and make a sort of review before exam. Therefore, it can be concluded that students use surface approach for studying non-quantitative subject. In the student's perception, for non-quantitative subject, it is important for them to comprehend the theory and concept. Then, it is much depending on the perception of the student because there is no right or wrong answer.

Students also focus on learning in association with assessment weight for these two types of subject listed in the lecturing contract.

"...in my point of view, quantitative subject is included in natural science....for it I focus on doing assignment, whereas for non-quantitative subject I focus on discussion in order to achieve good grade in the class".

Most of the students report that the role of social media technology is very important in facilitating their learning process. As mentioned by Imran and Ali (2014), nowadays, it is impossible to transfer knowledge in education world without implementation of sophisticate information and communication technology. According to some students, implementation of information and communication technology is prevailed for both quantitative and non-quantitative subject. However, there is a difference in the type application used. Students reported that they used Google more as web browser for non-quantitative subject, especially related to presentation and case study materials. In contrast, for quantitative subject, student argues that they used *Youtube*

more because from this application they can directly practice application of formula and doing statistic calculation, for instance.

It is interesting to note that students also report that stress take a prominent role in their learning strategy. System of racing overnight is much applied by students because the shorter the time of study or doing assignment, the higher the motivation for fulfilling them. The participants report that although lecturer give long period of time to finish or submit the assignment, usually they wait relatively closer time with assignment submission time or exam time because ideas are immediately emerge at that moment.

IV. Conclusion

Learning concept proposed in this study is a process in which individual or a group of persons obtain, comprehend, practice, and develop something new for gaining benefit in the future. Based on focus group discussion, there are twelve classification of learning concept according to the cognitive level of student namely gaining knowledge, gaining hard skill and soft skill, improving insight, comprehend, memorize, impregnate, meet the curiosity, develop experience in social life, develop mindset, apply knowledge, make interrelationship among subject parts and among subject, and comprehend reality. There are differences in learning strategy taxonomy among the three learning activities and among students at the three study programs. Students apply surface strategy for daily learning, deep strategy for doing assignment or homework, and strategic approach for mid-term and final test. Deep strategy is tend to be used more by student from accounting study program, whereas surface and deep strategy are applied more by student from management and economic development study programs.

Learning context which is closely related to learning strategy are teaching method and assessment system. In other words, key factors that determine student's learning strategy located on the lecturer itself. Additionally, physical environment as one factor of learning context was not considered much by the students in determination of their learning strategy. Last but not least, learning strategy apply by students is beneficial not only for the short time but also for the long run. For the short time, students utilize or choose certain strategy in their learning process in order to achieve good grade both for a certain subject and average grade point. In the long run, learning strategy is beneficial for gaining good job in the workplace.

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Gusti Ayu Manuati Dewi. "Learning Strategy And Academic Achievement Of Student: An Exploratory Study." *IOSR Journal of Research & Method in Education (IOSR-JRME)* , vol. 8, no. 6, 2018, pp. 45-57.