



Relationship Between Active Learning and Self Efficacy Among Students in Higher Education

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Abstract

Despite the initiatives taken by the government to address the issue, there are still many problems and weaknesses in young graduates. Malaysian young graduates are always associated with the lack of communication skills, higher order thinking skills, low ability to work in a team and self-efficacy. The practice of active learning in higher education is crucial in addressing these weaknesses among our young graduates. Active learning is proven to be effective in enhancing students communication, thinking and social skills. The present study examines the relationship between active learning and self-efficacy among students in higher education. Survey data was collected using a questionnaire from 470 respondents at the Faculty of Education in a public university in Selangor, Malaysia. The findings indicate that students were moderately satisfied with the active learning experienced in their learning and they agreed to achieve a high level of self-efficacy in their course. Overall, the findings also identified a moderate, positive, and significant relationship between active learning and self-efficacy of students in higher education. The regression result indicated that learning obligation and collaboration in learning have contributed significantly to the formation of self-efficacy among the students in higher education. Overall, the study has implications for the improvement of teaching and learning practices in higher education.

INTRODUCTION

Education is seen as a very important tool in the development process of a country. According to Chamhuri & Abdul-Mumin (2011), education serves as a vital foundation in providing and supplying skilful human resources needed to boost the growth and development of a country. Besides that, education also serves as an agent to promote and strengthen national unity, social equality and economic development which are extremely needed in establishing a stable and harmonious country (Molly, 1999). To date there are several strategies that have been undertaken by the government in its effort to improve the quality of our education system (Chamhuri & Abdul-Mumin, 2011). Among the strategies are to continuously revise the curriculum to ensure that the it is in line with the needs of the country and the changes that are taking place in the education system around the world. As stated in the Malaysia Education Blueprint 2013-2025 (MOE, 2012), there are many new approaches that have been introduced to improve the efficacy of teaching and learning strategies. These include the use of inquiry learning, contextual learning, constructivism and mastery learning (MOE, 2005). These learning

activities have the potential to encourage the development of critical and creative thinking skills among students. At the tertiary level, many transformations have also been incorporated into the education system, as highlighted in the National Higher Education Strategic Plan 2020 and National Higher Education Action Plan 2007-2020 (MOHE, 2007). According to Morshidi Sirat (2009), the former director general of the Ministry of Higher Education, these plans consist of the same important goal which is to provide the pathways towards transforming the educational system to be at par with other countries around the world.

Despite the many initiatives that have been taken by the government, there are still many problems and weaknesses faced by our young graduates. Young graduates in Malaysia are often associated with the lack of communication and higher order thinking skills, self-efficacy and poor capacity for team. (Nurita, Ainon & Shaharudin, 2007). An interview conducted by Ambigapathy & Aniswal (2005) among public university lecturers revealed the decreasing qualities of our graduates. The research findings showed that most students are not active participants in the learning process and tend to accept knowledge given without any effort to ask questions or to do further tasks. This has partly contributed to the high unemployment rate among graduates (Suresh, 2006). Unemployment among graduates has become a serious issue not only in Malaysia but also in many other countries (Zaliza and Mohd Safarin, 2014). A survey conducted by the Department of Statistics Malaysia (2011) revealed that the rate of unemployment among graduates was 3.2% in 2007 and but increased to 3.7% in 2009. A census conducted by the Department of Human Manpower had also showed that 59,000 graduates and diploma holders failed to secure employment and as much as 30,000 graduates worked in a field that is different from their higher educational qualifications. According to Zaliza and Mohd Safarin (2014), even though job vacancies are rising every year, the employment rate is still low due to the low quality of the young graduates.

Lack of interpersonal skills such as self-efficacy has also become one of the main factors that contributed to the high unemployment rate among graduates (Kanfer & Hulin, 1985). Self-efficacy, as claimed by Bandura (1986, 1995), is the most immediate factor that influences job seeking activities among graduates. Graduates who possess high self-efficacy are more motivated in their effort to secure a job and achieve greater performance in the workplace (Eden & Aviram, 1993). It can also greatly influence the way people think, feel and act (Rezaei, 2012). In general, self-efficacy is a personal quality that can motivate people to gain success, use their abilities and contributes to the overall individual achievement (Bandura, 1993). Therefore, it is very important to ensure that the education system is able to equip students with not only technical skills but also all the interpersonal skills such as self-efficacy needed to survive in a challenging work environment.

LITERATURE REVIEW

Active learning

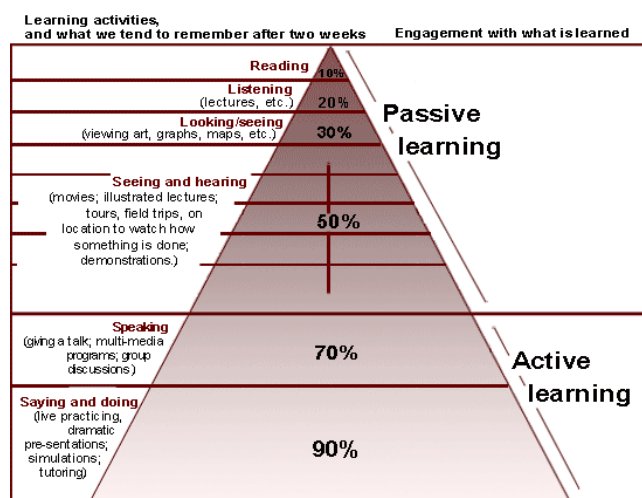
Prince (2004), defined active learning as any instructional method that engages students in the learning process. It requires students to do meaningful learning activities and think about what they are doing. The most important element of active learning is to involve and engage the students with the teaching and learning activities in the classroom. This contradicts the traditional approach where students are subjected to passive transmission of information from teachers. Bonwell and Eison (1991) suggested a few activities for the active learning approach. These activities include role-playing, debate, case study, taking part in cooperative learning and short written exercises. In short, an active learning process occurs when the learners do not just listen to the lecture but they are also actively engaged in the learning process through reading, writing, discussion and hands-on activities. This will not happen in a passive learning environment where students sit and gather information delivered by their teachers.

To date, there are several approaches of active learning which includes collaborative learning, cooperative learning and problem-based learning. Prince (2004) defined collaborative learning as any instructional approach which involves students working in small groups towards achieving a common goal. In a simpler interpretation, collaborative learning means any group-based instructional method including cooperative-learning (Millis & Cattel, 1998). The difference between cooperative and collaborative learning as discussed by many researchers are only in terms of their historical development and philosophical roots (Bruffee, 1995). The most important element of these two approaches is the interaction among students rather than learning as a solitary activity. For example, Feden & Vogel (2003) and Millis & Cattel (1998) have defined cooperative learning as group work, when students working together to achieve a common goal but are individually assessed by the instructor. However, according to Prince (2004), problem-based learning (PBL) is an instructional approach where problems are introduced in the beginning of the learning session as a means of providing context and motivation for the learning sessions that follow. This approach, which is rooted in Dewey's "learning by doing and experiencing" principle, is an active learning approach which encourages students to be aware of their learning

needs and problem-solving ability (Akinoglu & Tandogan, 2006). In this type of learning approach, students are more progressive and take responsibility for their learning. They are also independent and this approach encourages students to be self-directed.

In fact, the benefits of active learning have long been discussed by Edgar Dale (1946) who proposed the Cone of Learning (Figure 1). He emphasises that the active learning approach will help students to remember about 70-90% of what they have learnt, even after two weeks. This active learning approach involves activities such as group discussions, presentations, simulations and tutoring. In contrast, students who are only involved in passive activities such as lectures, viewing arts, graphs and maps can only retain about 10-30% of what they had learnt. This findings show that the learning process will be more effective when students get involved in activities such as writing, reading, discussing and solving problems. The learning effectiveness will also increase when students get involved in higher-order thinking tasks such as analysis, synthesis and evaluation. This is consistent with what has been explained by John Dewey who claimed that learning is “something an individual does when he studies because it is an active, personally conducted affair (1938).

FIGURE 1
CONE OF LEARNING ADAPTED FROM EDGAR DALE (1946)



Self-efficacy

Self-efficacy is defined by Bandura (1982) as a self-judgement of one's ability to complete a task within a specific domain. It is normally known as the belief in one's capabilities to achieve a goal or an outcome. Self-efficacy is a very important factor which can influence people's way of thinking, feeling and acting (Rezaei, 2012). Onyeizugbo (2010) further elaborated that people with high self-efficacy have a better decision making process, task choice, effort and persistence. Another definition given by Torrez and Solberg (2001) has defined self-efficacy as one's judgments about the ability to organize thoughts, feelings, and actions to produce a desired outcome (Bandura, 1986). Academic self-efficacy, in particular, denotes confidence in performing academic tasks such as reading textbooks, asking questions in class and preparing for examinations (Solberg et al., 1993). Zulhamri et al. (2014) highlighted the characteristics of students with high self-efficacy which includes the ability to get involved in challenging tasks and be intrinsically motivated. These kinds of students will strive towards achieving their goals and are not easily affected by external factors. They will recover quickly from failures. In contrast, people with low self-efficacy develop a poor sense of self-confidence about their abilities in pursuing their goals. Therefore, they are less likely to make concerted effort in undertaking any task. They will also tend to avoid challenging tasks and regard the tasks as threats.

Obviously, self-efficacy is crucial as it can affect human behaviour through both cognitive and motivational processes (Bandura, 1994). In terms of cognitive processes, people with greater self-efficacy will set challenging goals and commit themselves to achieving the goals. These groups of people will also be more resilient to failures and possess positive thoughts when they approach the task as well as the problems that might arise. In contrast, people who do not have the efficacy will be easily demotivated by the problems and difficulties that they face. As for the motivational processes, the self-efficacy belief will affect them in several ways. These includes the goals they set for themselves, the effort that they expand, their perseverance in facing difficulties and their resilience to failures.

Relationship between Active Learning and Self Efficacy of Students in Learning

In educational settings, many studies show that self-efficacy can influence students' academic achievement. For example, Ayotola and Adedeji (2009), Pajares (1996) and Schunk (1984) investigated the relationship between students' self-efficacy and their academic performance. The results obtained showed that self-efficacy has a positive effect on the students' academic performance. In other areas such as reading, writing and computing science, Carmichael & Taylor (2005), Lane et al. (2004), Pajares & Miller (1994) and Schunk & Zimmerman (2003) found that self-efficacy can affect the students' performance in those areas. Many researchers have also studied the influence of self-efficacy on students' motivation and learning (Linnenbrink & Pintrich, 2003; Schunk & Zimmerman, 2003; Zimmerman, Bandura & Martinez-Pons, 1992). The findings revealed that self-efficacy affects the students' interest, the commitment to accomplish the task, the goals they set, the choices they make and their use of thinking strategies which in turn influence their motivations. In short, the findings of the earlier studies show that self-efficacy plays very significant role in determining the students' achievement, motivation and learning. In fact, Zulhamri et al. (2014), suggest that the self-efficacy as a key determinant factor that affects peoples' performance and their competencies in gaining skills and knowledge. Therefore, it is important to have educational strategies that will support the development of self-efficacy among students in higher education.

The transformations that are taking place in the education system in Malaysia show marked improvements in teaching and learning strategies. Active learning approaches such as inquiry learning, problem-based learning, collaborative learning and mastery learning have been introduced into the curriculum (MOE, 2005). The transformation to an active learning environment is due to the realization that this approach has proven to be an effective way for students' learning (Bonwell, Charles & Eison, 1991; Springer, Stanne & Donovan, 1999). Bonwell and Eison (1991), stated that active learning induces significant improvement in students' attitude as well as their thinking and writing skills. This active learning approach has also been proven to be more effective in information retention and is able to motivate students in their learning process (Springer, Stanne & Donovan, 1999). Johnson, Johnson & Smith (1998) based on the findings of their study, state that the active learning approach positively enhances students' skills in academic achievement, interpersonal interactions, self-esteem and perceptions towards learning. These researchers also found a strong relationship between active learning approaches and the enhancement of students' interpersonal skills. They also found that students' social skills improve when they are exposed to group work rather than individual task. The same positive outcomes were also observed in problem-based learning methods. Prince (2004) claimed that problem-based learning is an active approach towards learning, it has the power to get the students engaged with learning and encourage the students to be more self-directed. Norman & Schmidt (1993) reported that students have long-term retention of knowledge as compared to traditional instruction when the active learning approach was employed. Based on Prince (2004)'s findings, it is proven that the active learning method has the capability to improve students' skills in many aspects other than academic skills, such as interpersonal skills and self-efficacy.

RESEARCH METHOD

A descriptive and correlational research design has been employed to analyse the data in this study. The data was collected at the Faculty of Education in a public university in Selangor, Malaysia by using a survey questionnaire. A total of 92 diploma students, 213 undergraduate students and 156 postgraduate students have responded to the questionnaire. All the survey questionnaires were distributed and collected back in the period of one semester. The two variables included in the study were active learning and self-efficacy of students in higher education. The active learning variable consists of three constructs namely learning effort (10 items), learning obligation (10 items) and collaboration in learning (9 items). However, the other variable which comprises of 10 items only represented a single construct of self-efficacy of students in higher education. The statistical reliability of the two variables, active learning and self-efficacy were identified at high levels (.762, .823) respectively. The instrument used a 5-point Likert-scale to gauge the perception of students towards the two variables. Both descriptive and inferential statistics were used to analyse the data. Descriptive statistics such as mean and standard deviation were used to describe the level of active learning and self-efficacy among students in higher education. Pearson Product Moment Correlation and Multiple Regression were used to identify the relationships between the constructs of active learning and self-efficacy, and also to identify the constructs of active learning which contributed to the self-efficacy of students in higher education.

FINDINGS

Table 1 shows that a total of 475 students had responded to the questionnaire. The majority of the students were female students (76.0 %) compared to male students (21.1%), and 14 students (2.9%) failed to respond to this

item. Overall, the average CGPA of the students was identified at a moderate level ($M=3.36$, $SD=.27$). Table 1 further portrays the five disciplines of study enrolled by the students. The demographic factors analysis indicated that most of the respondents were TESL students (57.7%), followed by Mathematics students (14.9%), Educational Management students (8.2%), and other programmes (9.3%). The missing value is 1.9%. Among the 475 (100%) respondents, 92 (19.4%) students were Diploma students, 213 (44.8%) were Bachelor's Degree students and 156 (32.8%) were Master's Degree students. 14 respondents (2.9%) did not respond to this item.

TABLE 1
RESPONDENTS DEMOGRAPHIC FACTORS

Gender	Frequency	Percent
Male	100	21.1
Female	361	76.0
Missing	14	2.9
Total	475	100.0
Discipline of study	Frequency	Percent
TESL	274	57.7
Mathematics	71	14.9
Physical education	38	8.0
Educational management	39	8.2
Others	44	9.3
Missing	9	1.9
Total	475	100.0
Programs of study	Frequency	Percent
Diploma	92	19.4
Bachelor's Degree	213	44.8
Master's Degree	156	32.8
Missing	14	2.9
Total	475	100.0

Table 2 portrays the learning obligations perceived by students at the Faculty of Education in a public university in Malaysia. Overall, students moderately agreed that "they tend to predict examination questions" ($M=3.55$, $SD=1.05$). They also agreed that "they will provide feedback on the learning environment at the faculty" ($M=3.73$, $SD=.88$) and to be "intellectually independent ($M=3.73$, $SD=.84$) in their learning". However, students strongly agreed that "they tend to study content of learning which is only tested in the examination" ($M=4.10$, $SD=.85$), and "to comply with academic conventions" ($M=4.15$, $SD=.77$). They also "preferred to be open minded in learning" ($M=4.17$, $SD=.70$).

TABLE 2
LEARNING OBLIGATION OF STUDENTS

Learning Obligations	Mean	Std. Deviation
I predict examination questions/topics	3.55	1.05
I provide feedback to the university on learning environment	3.73	.88
I am intellectual independent	3.73	.84
I acquire graduate attributes	3.79	.71
I actively participate in discussion	3.81	.86
I provide feedback on my lecturer's teaching quality	3.81	.86
I develop a capacity to deal with complexity and ambiguity	3.83	.72
I study what will be tested in the exams	4.10	.85
I respect and comply with academic conventions	4.15	.77
I am open-minded	4.17	.70

Table 3 presents the students' self-perception of learning effort. In general, students reluctantly agreed that "they only study things that are going to be covered in the assignments" ($M=2.67$, $SD=1.05$), but they moderately agreed "to do the same amount of study each week, regardless of whether an assignment is due" ($M=3.03$, $SD=.10$). Besides that, they also moderately agreed "they like doing assignments which require field work" ($M=3.53$, $SD=1.10$). However, students were strongly agreed that "they put in more effort when assignments are due" ($M=4.07$, $SD=.90$). They also strongly agreed that "they have to study constantly if they want to do well" ($M=4.07$, $SD=.88$) and "they search for relevant and current materials for their assignments" ($M=4.20$, $SD=.72$).

TABLE 3
STUDENTS SELF – PERCEPTION OF LEARNING EFFORT

Learning Effort	Mean	Std. Deviation
I study only things that are going to be covered in the assignments	2.67	1.05
I do the same amount of study each week, regardless of whether the assignment is due	3.03	.10
I like doing assignments that require field work	3.53	1.10
I could do well without studying much in this course	3.57	1.20
I carefully select what I study and learn in the course	3.57	.90
I enjoy doing assignment which demand critical thinking skills	3.63	.94
I use seniors' work for my assignments	3.90	1.19
I put in more effort when assignments are due	4.07	.90
I have to study constantly if I want to do well in this course	4.07	.88
I search for relevant and current materials for my assignments	4.20	.72

Table 4 presents students' self-perception of collaboration in learning among students at an institution of higher education. The students reluctantly agreed that "there are passengers within their study team" ($M=2.90$, $SD=1.22$). Generally, the students were moderately agreed that "they do better in individual assignments than group work" ($M=3.53$, $SD=1.09$) and "use problem solving techniques in their study team" ($M=3.84$, $SD=.80$) and "coordinate with relevant individuals and groups" ($M=3.97$, $SD=.71$). Besides that, the students were also moderately agreed that "My creativity and critical thinking are enhanced in group work" ($M=3.99$, $SD=.82$). However, the students strongly agreed that "they take opportunity to exchange ideas within their study team" ($M=4.00$, $SD=.75$), have spirit of cooperation ($M=4.03$, $SD=.78$) and collaborate with peers ($M=4.11$, $SD=.73$).

TABLE 4
SELF-PERCEPTION OF COLLABORATION IN LEARNING AMONG STUDENTS

Learning Collaboration	Mean	Std. Deviation
There are 'passengers' within my study team	2.90	1.22
I do better in individual assignments than group work	3.53	1.09
I use problem-solving techniques in my study team	3.84	.80
I enjoy working with my peers in completing my group assignments	3.89	.95
I coordinate with relevant individuals and groups	3.97	.71
My creativity and critical thinking are enhanced in group work	3.99	.82
I take opportunity for all ideas to be exchanged ideas within my study team	4.00	.75
There is a spirit of cooperation within my study team	4.03	.78
I collaborate with my peers in doing assignment	4.11	.73

Table 5 portrays the self-efficacy achieved by students in their learning. Students strongly agreed in all statements under self-efficacy. They strongly agreed that active learning has enhanced their confidence ($M=4.71$, $SD=.73$), and learning capability ($M=4.21$, $SD=.70$) to study in an institution of higher education. In addition, the students also agreed that active learning has developed their self-concept ($M=4.19$, $SD=.70$), and also enhanced their self-esteem ($M=4.17$, $SD=.75$) to study. Besides that, the active learning approach has also guided them to control their learning process ($M=4.16$, $SD=.73$) better, increased their motivation ($M=4.16$, $SD=.73$) to learn and enabled a higher self-regulation ($M=4.16$, $SD=.74$) ability among themselves.

TABLE 5
SELF-EFFICACY OF STUDENTS

Active learning approach has	Mean	Std. Deviation
enhanced my confidence	4.17	.73
enhanced my learning capability	4.21	.70
developed my self-concept	4.19	.70
enhanced my self-esteem	4.17	.75
guided me to control my learning progress	4.16	.73
increased my motivation to excel	4.18	.74
enabled me to self-regulate my learning	4.16	.74

The Pearson Product Moment Correlation results as in Table 6 shows a moderate, positive and very significant relationship between “learning obligation” and the “self-efficacy” ($r=.433$, $p<.01$) of the students. Besides that, there was also a moderate, positive and very significant relationship identified between “collaboration in learning” and “self-efficacy” of the students ($r=.496$, $p<.01$). However, there was only a weak, positive and significant relationship identified between “learning effort” and “self-efficacy” of the students ($r=.343$, $p<.01$).

TABLE 6
CORRELATION ANALYSIS BETWEEN THE DIMENSIONS OF ACTIVE LEARNING AND SELF EFFICACY

Correlations					
Variables		Learning Obligation	Learning Effort	Collaboration in Learning	Self Efficacy
Learning Obligation	Pearson Correlation	1	.510**	.587**	.433**
	Sig. (2-tailed)		.000	.000	.000
	N	460	448	452	455
Learning Effort	Pearson Correlation	.510**	1	.508**	.343**
	Sig. (2-tailed)	.000		.000	.000
	N	448	461	452	456
Collaboration in Learning	Pearson Correlation	.587**	.508**	1	.496**
	Sig. (2-tailed)	.000	.000		.000
	N	452	452	465	460
Self Efficacy	Pearson Correlation	.433**	.343**	.496**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	455	456	460	469

** . Correlation is significant at the 0.01 level (2-tailed).

The relationship between the variables in a multiple regression analysis for the study was proposed as follow:

$$y = 1.307 + .202x_1 + .329x_3$$

y= self efficacy

x_1 =Learning Obligation

x_2 =Learning Effort

x_3 =Collaboration in Learning

R-Square (R^2) is the proportion of variance in the dependent variable which can be predicted from the independent variables. Table 7 indicates that the R^2 value of .266 implies that 26.6% of the variance in the “self-efficacy” scores can be predicted from the correlates “learning obligation” and “collaboration in learning”. Between these two constructs, “collaboration in learning” seems to contribute more to the self-efficacy of students in higher education compared to “learning obligation”. The ANOVA result ($F=52.081$, $p<.01$) further confirms the significant contribution of “learning obligation” and “collaboration in learning” towards the

enhancement of “self-efficacy” among students in higher education. From the multiple regression analysis, the result shows that “collaboration in learning” has a bigger contribution towards “self-efficacy” of the students than “learning obligation”. However, “learning effort” did not show any significant contribution to the enhancement of “self-efficacy” of the students in higher education.

TABLE 7
MULTIPLE REGRESSION ANALYSIS OF THE CONTRIBUTION OF THE DIMENSIONS OF ACTIVE LEARNING TO STUDENTS’ SELF EFFICACY

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516 ^a	.266	.261	.544

a. Predictors: (Constant), Collaboration in Learning, Learning Effort, Learning Obligation

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	46.267	3	15.422	52.081	.000 ^b
	Residual	127.627	431	.296		
	Total	173.894	434			

a. Dependent Variable: Self Efficacy
b. Predictors: (Constant), Collaboration in Learning, Learning Effort, Learning Obligation

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.307	.235		5.561	.000
	Learning Obligation	.251	.066	.202	3.778	.000
	Learning Effort	.086	.065	.066	1.321	.187
	Collaboration in Learning	.421	.068	.329	6.213	.000

a. Dependent Variable: Self Efficacy

DISCUSSION

The findings in this study indicate a moderate level of active learning has been practised by the students in higher education. Further analysis indicates that students in this study have exhibited a moderate level of active learning in the three constructs namely, learning obligation, learning effort and collaboration in learning. However, the students involved in this study have indicated a high level of self-efficacy among themselves after they have experienced some sort of active learning in their course. The correlation analysis has shown a positive, very significant and moderate relationship between the three constructs of active learning (learning obligation, learning effort and collaboration in learning) with self-efficacy. Furthermore, the multiple regression analysis has also confirmed that learning obligation, and collaboration in learning have significantly contributed to the enhancement of self-efficacy among the students in higher education. According to Zulhamri et al. (2014), student centred learning can work as a medium to nurture students towards enhancing their self-efficacy. In discussing the impact of active learning on self-efficacy, it is important to look at the factors or sources that can help to develop one’s self-efficacy.

According to Chong & Kong (2012), active learning exposes students to an experiential approach in learning. For example, in collaborative learning, the involvement of group members will help in enhancing their confidence in completing a task. The students will be much clearer about the goals and the ways to achieve it since they work together as groups. The findings of collaboration in learning in this study have supported this argument. Apart from these findings, active learning also provides the students with a hands-on experience which in turn greatly benefits them in terms of developing and practicing new skills and knowledge. The findings on learning obligation and learning effort found in this study shows that students will also gain confidence in posing good questions and applying their critical thinking as well as providing each group member with a supportive environment if they have been actively involved in their learning process. Furthermore, this study also indicates a moderate relationship between collaboration in learning with self-efficacy among the students in higher education. According to Chong & Kong (2012), the collaborative work has significantly reduced the anxiety and fear felt by the participants at the initial stages of solving a problem. When they feel more relaxed about the situation, they are able to produce greater results in their approach to solve the problems posed.

To conclude, the elements associated with active learning such as working in groups, doing activities and hands-on applications are all proven to positively influence the students' self-efficacy (Gaffney et al., 2012). This is supported by the findings obtained by Jungert & Rosander (2010) who had studied the problem-based learning method. They found that students who were involved in problem based activities developed higher self-efficacy because they have the chance to apply their knowledge on authentic and conceptualized problems. They also interact and communicate with their peers. This approach involves both social and cognitive interactions (Greeno, Collins & Resnick, 1996). Apart from that, active learning activities such as tutorials are regarded as valuable for motivation because students can support each other's individual perception when they work together (Gallagher, 1997). Jungert & Rosander (2010) further explained that the cooperative learning method provides a peer supported environment for success. The instructional strategies of authentic activities, collaboration and reflection in problem-based learning approach can all serve as sources of self-efficacy.

CONCLUSION

According to Biggs (2001), the concept of active learning is closely related to a learner-centred pedagogy and outcomes-based learning. Many scholars believe that active learning has a positive influence on student learning outcomes. In fact, improving the quality of education deals a lot with the betterment of the teaching and learning process, well-planned curriculum and effective implementation of the curriculum (Zulhamri et al., 2014). Therefore, a more comprehensive structure of curriculum that emphasizes more on active learning and student-centred approach must be effectively constructed (MOHE, 2007). This objective has been highlighted in the National Higher Education Strategic Plan 2020 and becomes one of the key performance indicators for the implementation of the strategic plan (MOHE, 2007) of higher education. This study has therefore indicated that active learning as an approach, should be built on three basic constructs which are learning obligation, learning effort, and collaboration in learning. Furthermore, the study also indicates that the active learning approach has proven to be effective in improving the self-efficacy of students in higher education.

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