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ACHIEVEMENT MOTIVATION AMONG ISLAMIC STUDIES STUDENTS AND ITS CORRELATION WITH PROBLEM-BASED LEARNING AND SELF-EFFICACY

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ABSTRACT

Background and Purpose: Achievement Motivation is defined as a concept that forecasts the behavioural inclination to strive for success and performance based on a person's urge for achievement. This study aimed to examine the link between academic self-efficacy, problem-based learning (PBL), and achievement motivation among students of Islamic studies.

Methodology: This explanatory investigation used a quantitative research design. 578 undergraduate students from three institutions in Malaysia—UM, IIUM, and USIM—were chosen randomly to take part in the study. The data set was analysed using descriptive statistics and regression analysis. Additionally, an intergroup comparison analysis and the independent sample t-test were performed.

Results: The results of an independent sample t-test showed a significant difference in the mean achievement motivation scores between students of applied Islamic studies (M = 3.31, SD =.41) and those of non-applied Islamic studies (M = 3.04, SD =.38). This difference is statistically significant at t (575) = -7.94, p =.00. When ASE was controlled, PBL's influence on AchM diminished (Sobel z= 3.83, p=0.00), indicating that ASE was the mediator of the relationship between PBL and AchM. F (7, 570) = 22.42, p .0005, adj. R2 =.206, multiple regression substantially predicted ASE. The outcome

demonstrates that the method used to solve problems and the kind of programs used may be effective predictors of students' academic self-efficacy in Islamic studies.

Contribution: This study concludes that achievement significantly impacts student motivation. The findings provide valuable insights for Islamic Studies departments and the Ministry of Higher Education Malaysia (MoHE) in addressing the current challenges related to achievement motivation, aligning with the ministry's objective of enhancing students' self-efficacy. The study offers practical implications for fostering motivation among Islamic Studies students in higher education institutions.

Keywords: Achievement Motivation, Islamic studies, Problem-Based Learning (PBL), self-efficacy.

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1.0 INTRODUCTION

The achievement motivation hypothesis has been extensively studied across various disciplines, including entrepreneurship, business, and education. While a substantial body of research has explored achievement motivation in the educational domain, there remains a notable scarcity of studies examining the achievement motivation of students specializing in Islamic studies. In particular, the Malaysian context has received limited scholarly attention. Given Malaysia's national aspirations to enhance the quality of education and cultivate a highly competent workforce in the field of Islamic studies, addressing this research gap is both timely and imperative.

At the secondary and higher secondary levels, the Malaysian government has implemented an integrated approach to Islamic religious education, aligning it with contemporary educational frameworks. More recently, several public institutions, including the University of Malaya (UM) and Universiti Sains Islam Malaysia (USIM), have pioneered interdisciplinary academic programs that merge Islamic studies with non-Islamic disciplines under the banner of 'applied Islamic studies.' This initiative reflects a strategic effort to broaden the scope and relevance of Islamic education within a modern academic landscape. Existing research underscores the pivotal role of achievement motivation (AchM) as a determinant of academic performance and student success. Various intrinsic, extrinsic, socioeconomic, personal, and behavioral factors influence AchM (Breen & Lindsay, 2002). Against this backdrop, the present study investigates the impact of problem-based learning

(PBL) on the achievement motivation of Islamic studies students enrolled in Malaysia's premier institutions, namely UM, the International Islamic University Malaysia (IIUM), and USIM. Furthermore, this research examines the mediating role of self-efficacy in the relationship between PBL and AchM, offering deeper insights into the pedagogical and psychological dimensions of student motivation within Islamic studies education.

2.0 LITERATURE REVIEW

2.1 Problem-Based Learning (PBL)

Since its debut in 1969 at McMaster University's medical school in Hamilton, Canada, problem-based learning (PBL) has grown in popularity (Moust, Bouhuijs, & Schmidt, 2021). PBL needs certain components to function as a teaching strategy, including the following: (1) A problem description, which invites further active deliberation; (2) Prior knowledge that is activated by the process of thinking through the problem; (3) Questions raised by the problem, and (4) The need for motivation to look for further information relevant to the problem at hand (Moust et al., 2021). It would be helpful to have a basic understanding of learning and how problem-based learning functions. As a result, we explain four concepts in this paragraph that are essential to comprehending what learning is all about: (1) Learning as the construction of meaning, (2) Elaboration, (3) Learning in Context, and (4) Intuitive Motivation as a Learning Motor (Moust et al., 2021). As a self-directed learning mindset, PBL requires students to use active learning techniques. The following is a list of the principles: (1) independent, Self-directed learning; (2) Group learning occurs, and the facilitator is the instructor; (3) Participation from all groups must be equitable; (4) The lessons that students are learning about engagement, motivation, cooperation, and problem-solving, and (5) Informational materials, including data, images, and articles, can be used to address the issue (Ali, 2019).

Some more teaching strategies are virtually identical to or comparable to PBL strategies. However, PBL is one classroom activity that incorporates students' involvement and reflection on learning activities (Chng, Yew, & Schmidt, 2011). PBL may thus only be used for collaborative, cooperative, and self-directed learning (Wang, 2012). It may alternatively be seen as an inquiry-based or student-centred paradigm (Wang & Zhang, 2014). In addition, Kumar and Refaei described learner-centred instructional activities as providing students with the tools to research, combine theory and practice, and use their knowledge to solve specific problems (Kumar & Refaei, 2013).

PBL activities boosted students' learning success and encouraged their favorable attitudes towards physics courses, according to the findings of an experimental investigation

(Fidan & Tuncel, 2019). Islamic studies investigated how to teach Islamic morals (*akhlaq*) using a PBL method. The outcome demonstrated its ability to organically mold students' thought processes and address the morality-related learning challenge. The researchers offered a PBL approach that incorporates the following to help students in the *akhlaq* course improve their manners - finding problems, defining the problem, gathering facts, preparing the hypothesis, investigating, completing the defined problems, summing up alternative solutions collaboratively, evaluating the results (Baharun & Ummah, 2018).

PBL, however, helps to increase student involvement (Chng et al., 2011). It helps with overall success and gives the chance for increased information acquisition (Grave, Schmidt, & Boshuizen, 2001). PBL helps students succeed by facilitating the review of previously taught material and facilitating the learning of new knowledge. The three PBL phases of issue analysis, self-directed learning, and reporting significantly impact students' academic achievement levels (Chng et al., 2011). Wang and Zhang (2014) claimed that PBL might enhance female college students' drive for achievement. According to Kumar and Refaei, the constructivist model, which contends that knowledge between teacher and student is co-created, is the proper theory to serve as the foundation for PBL (Kumar & Refaei, 2013). Thus, the process of creating knowledge involves both teachers and students (Hmelo-Silver, 2004).

According to the findings of a recent study, the PBL teaching methodology provides advantages for student learning since it encourages the fusion of theory and practice, heightening interest in learning. The students thought the PBL lessons' practical focus, emphasis on cooperation, and inclusion of an entrepreneur or manager were positive learning components (Da Silva et al., 2018).

2.2 Academic Self-Efficacy (ASE)

Self-efficacy is the belief in one's capability of doing or achieving a particular goal (Hussain, Mkpojiogu, & Ezekwudo, 2021). It refers to one's perceived capability and confidence to perform given academic tasks at the desired level (Ferla, Valcke, & Schuyten, 2010). However, traditionally those who have accepted the theorization and conceptualization of self-efficacy given by Albert Bandura have measured ASE based on the general belief of respondents on their potency aspects. In contrast, this study defines ASE as the comprehensive belief of individuals on their skill in academic matters. ASE includes skill, ability to behave, and end-product. There is a disagreement with this idea of efficacy, as it cannot judge what skills and abilities individuals possess; rather, it considers what beliefs individuals have (Bong & Skaalvik, 2003).

ASE is used in educational psychology as an influential factor to enhance academic performance. According to the findings of a structural equation modelling, a student's self-efficacy affects their learning-related emotions and metacognitive learning techniques, influencing how well they perform academically. Additionally, emotions associated with learning affect metacognitive learning techniques, mediating the impact of emotions on academic achievement (Hayat et al., 2020). Through four processes and the two primary routes of cognition and motivation, emotions can affect students' academic performance. Through three processes in the cognitive pathway, mood-dependent memory, cognitive and metacognitive learning techniques, and the utilization of cognitive sources, emotions can affect one's performance (Hayat et al., 2020).

2.3 Achievement Motivation

Achievement Motivation Theory explains and predicts behavior and performance based on a person's need for achievement, power, and affiliation" (Lussier & Achua, 2006, p. 42). The Achievement Motivation Theory is also called the Acquired Needs Theory of McClelland or the Learned Needs Theory (Moore, Grabsch, & Rotter, 2010). In essence, this theory postulates that people are motivated in varying degrees by their need for Achievement, Power, and Affiliation and that these needs are acquired or learned during an individual's lifetime (Lussier & Achua, 2006). Achievement motivation only focuses on the behaviors related to achievement. It is concerned with explaining students' learning approaches (Axler, 2008).

Apart from PBL and ASE, this AchM has also motivated us to investigate the motivation of Islamic studies students to achieve. Elias, Rafael, and Rahman found significant differences in student achievement motivation based on faculty (Elias, Rafael, & Rahman, 1995). This study is among the few studies conducted in the Malaysian context, as many studies investigated students' motivation for achievement from Western educational institutions.

Results in a study conducted by Lee et al. (2010) imply that the investigation of achievement motivation from the students reveals to the researcher the inherent achievement motivation in the participant. What can be inferred from this is that the early study of students' achievement motivation could reveal the traits in the children. Khan and Haider assert that males and females are equal in achievement motivation (Khan & Haider, 2011). This shows that equal importance should be given in terms of achievement motivation. It was also discovered from the study of Jegede, Jegede, and Ugodulunwa that achievement motivation enhanced, to a greater extent, student performance in English (Jegede, Jegede, & Ugodulunwa, 1997). All these assertions highlight the importance of investigating achievement motivation.

According to a study, achievement motivation is one of the motivations for growth and nation-building (Elias et al., 1995). The social-economic and educational aspects may benefit from this in the long run. Additionally, the socioeconomic condition of students may have a big impact on how motivated they are to succeed (Rahman et al., 2010). Even more so, persons with diverse cultural origins might have distinct motivator concerns for accomplishment. Tripathi and Cervone provided evidence for this claim by examining whether persons from two different cultural backgrounds—Indians and Americans—might have a general degree of success drive while having diverse life experiences and modes of expression (Tripathi & Cervone, 2008). The study found that the two countries differed in their achievement motivation (Thijs & Verkuyten, 2009).

2.4 PBL, ASE, and AchM

Repeatedly completing hard or difficult activities impacts high achievement motivation (Durik & Harackiewicz, 2003). AchM may rise or decrease according to the environment, circumstances, internal, or external change. As a result, the degree of AchM inside a person fluctuates between low and high. Therefore, achievement motivation could not be static; it should either be low or high. For instance, McClelland's theory of achievement motivation proposed that those with economic growth are known to have high levels of achievement motivation (Elias et al., 1995).

Hancock, Bray, and Nason (2002) proposed that professors could improve their student achievement and motivation by changing their instructional procedure to align with students' interests. With this perspective, we discovered that PBL is a freshly established teaching-learning technique that helps students have higher learning outcomes. It could be a more effective, unconventional teaching method. Dochy, Segers, and Buehl (1999) found in a 'complex causal model of educational achievement' that the quality of instruction was related to achievement. PBL is a process where instruction quality differs from traditional instruction. In that, it shifts the emphasis of learning to the student. PBL is comparable to cooperative learning (CL). Conceptual learning has curricular, structural, and complicated instruction techniques. On the contrary, PBL puts students in situations where they are more exposed to facts and subject matter. According to a study, the various learning and study techniques used by students significantly impact their academic success (Yip, 2012). Perhaps this enhanced teaching-learning approach affects both the desire for achievement and academic self-efficacy.

An experimental study was conducted by Sungur, Tekkaya, and Geban (2006) to ascertain the impact of PBL on students' academic attainment and performance abilities. They discovered that PBL might improve students' comprehension of scientific ideas and how well they organize and apply relevant data to create new knowledge and draw more accurate conclusions. Higher academic achievement is often attained by students who score well in self-concept-related domains such as general, academic, particular, and specific self-concept (Choi, 2005). In this triadic approach, students, their environment, and their behavior continually interact and support students' sense of self-efficacy (Bandura, 1991). Finally, in this study, we looked at how PBL affected AchM rather than just focusing on the AchM of the Islamic studies students. We also assumed that ASE may have mediated this association. Consequently, the following are the hypotheses:

H1: Problem-based learning, mediated by self-efficacy, boosts Achievement Motivation (figure-1).
H2: Achievement motivation among the students of applied Islamic Studies is higher than the students in non-applied Islamic Studies.

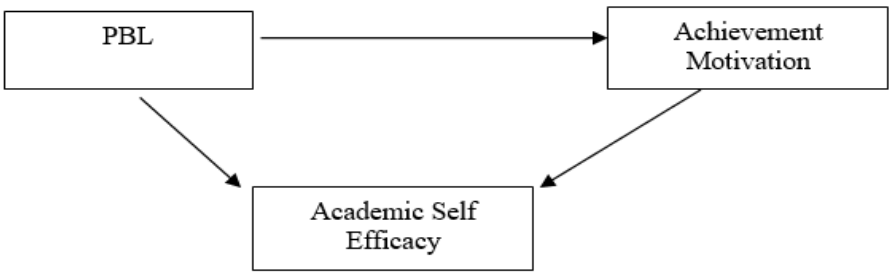

Figure 1: A hypothesized model for the mediating effect of ASE on AchM

2.5 Islamic Studies Disciplines in Malaysian Universities

Samples from the University of Malaya, the International Islamic University of Malaysia, and the University of Sains Islam Malaysia were utilized in this study. An Islamic studies department is present at these three universities (see Appendix A for details). These colleges teach Islamic studies using two distinct methods - a classical orientation and an applied orientation (Table 1). The Malaysian Qualification Agency establishes the following fundamental requirements for graduates in each orientation:

Table 1: Comparison between Islamic studies as classical orientation and applied orientation

Islamic Studies: Classical Orientation	Islamic Studies: Applied Orientation
Understanding, skills, and expertise in the area of study followed, and in addition, they also have good background knowledge of other areas of Islamic studies. Core competencies include: i) The ability to refer to classical texts related to the area of study; ii). The ability to relate what is learned to contemporary settings, and iii). The ability to articulate the teachings of Islam to a contemporary audience.	Understanding, skills, and expertise in the practical aspects of the implementation of Islamic principles and teachings in a particular job sector such as education, management, counseling, judiciary, banking, finance, and so on. Therefore, apart from understanding the Islamic principles and ethical practices in theory, they are expected to have industry-related skills and competencies.

Source: Programme Standards: Islamic Studies, p. 6)

3.0 METHODOLOGY

This explanatory study employed the correlation research design, employing a quantitative research approach to gather data, including the quantifiable variables, conventional research tools, a normal population distribution, data presented in tables, graphs, or figures, and a repeatable process. The study population comprises undergraduate students of Islamic Studies departments from three universities in Malaysia: the University of Malaya, the University of the International Islamic University of Malaysia (IIUM), and the Islamic Science University of Malaysia (USIM). Primarily, the consent to survey among the students was obtained from instructors of Islamic Studies departments at the aforesaid universities. We selected the last two weeks of the semester to conduct the survey to pool full class attendance. To ensure a sampling that includes students from all batches and years (i.e., first year to fourth year), we chose 28 courses at UM, 20 at IIUM, and 15 at USIM. We also avoided responses from overlapping groups of students or batches. Then, we distributed the questionnaire to 50% of the students seated on the front benches and 50% on the rear seats. It was suggested to the students that they complete the form at home in 15 minutes and bring it back to the following class. Nearly 58 per cent (n=578) of the replies were useful.

The probability sampling techniques were used to generalize the study's results. Therefore, 578 undergraduate students (M=277, F=301) were randomly selected, and they participated in the survey. The respondents were from three East Malaysian institutions that specialized in Islamic studies – the University of Malaya (UM), the International Islamic University Malaysia (IIUM), and the University of Sains Islam Malaysia (USIM). On average, the participants were 22 years old (min 19 years, max 34, SD 1.65). Of the 578 students, 152 attended UM, 243 attended IIUM, and 183 attended USIM.

3.1 Research Instruments

Participants' demographic information, such as gender, age, year of study, and department name, was asked. The questionnaire was divided into three subsets to cover the scope of the hypotheses, namely the environment of problem-based learning, academic self-efficacy, and achievement motivation.

3.1.1 Environment of Problem-Based Learning

To assess the students' practice of their PBL, a questionnaire was developed based on the PBL environment as the effective learning environment (Dochy et al., 2005). This scale was broken down into four subscales, focusing on the key characteristics and elements of the PBL environment, including practices linked to the problem-solving process, the role of tutors, students' individual practice, group practice, and interpersonal practice. These four aspects of learning can enhance student learning. Twenty-three statements were mentioned in the *environment of the problem-based learning scale.* The scale has a high level of internal consistency based on Cronbach's alpha of .89. Reliability of the four sub-scales mentioned above were respectively: *a* =.82, .78, .80, .85. Participants assessed each item according to how frequently they engage in PBL: never, seldom, occasionally, frequently, or always.

3.1.2 Academic Self Efficacy (ASE)

The ASE scale was adopted from previous studies (Fan & Williams, 2010) and modified accordingly. The items covered both expectancies for academic success and belief in successful accomplishment of academic tasks and activities. The scale comprised eight items with high internal consistency levels (*a* = .86). Items were measured on a 4-point scale ranging from strongly disagree to strongly agree.

3.1.3 Achievement Motivation

This scale was adapted from the study of Lang and Fries (Lang & Fries, 2006). It has 10 elements with internal consistency, as developed by a Cronbach's alpha of.82. A 4-point scale from strongly disagree to strongly agree was used to rate each statement.

3.2 Method of Data Analysis

3.2.1 Coding

Each participant's affiliation with a department (within the field of Islamic studies) that uses a curriculum and applied and practical courses was coded (Appendix A). Participants were coded

by either 1 (for applied Islamic studies) or 0 (for traditional/ non-applied Islamic studies). The code was determined by the list mentioned in Appendix A. We read the descriptions of each department's undergraduate programmes before beginning to code. 45 per cent (n=257) were in applied Islamic studies departments, whereas 55 per cent (n=321) were in non-applied Islamic studies departments.

3.2.2 Preliminary Analysis

First, we examined the means and standard deviations of students' perceptions of problem-based learning, academic self-efficacy, and achievement motivation. Descriptive statistics were computed separately for men and women in the cases of the kind of academic department (i.e., applied or non-applied), the academic year of study, and the university.

3.2.3 Achievement Motivation

To ascertain the differences in achievement motivation between male and female students in the Department of Islamic Studies, we used an independent sample t-test analysis. Additionally, disparities between students of applied Islamic studies and non-applied Islamic studies were investigated using the same research method. Analysis of variance (ANOVA) was employed to determine the difference between students of the three sample universities and students of several academic years ranging from the 1st to the 4th year. Lastly, the mediating effect of ASE on achievement motivation was also analyzed.

3.2.4 Academic Self-Efficacy (ASE)

Multiple regression analysis was used to evaluate four components of the perceived PBL environment: age of the students, year of study, and kind of academic programme to determine how much each factor contributed to predicting ASE.

4.0 RESULTS

4.1 Descriptive

The ratings on academic self-efficacy, achievement motivation, and problem-based learning as perceived by students are shown in Table 2 below. The table accounts for four academic years of study, university type, applied and non-applied Islamic studies students, and males and females separately.

Table 2: (Means of PBL, ASE, AchM)

Constructs*	Applied	Non-Applied	Male	Female	UM	IIUM	USIM	1st Yr	2nd Yr	3rd Yr	4th Yr
	n257 (45%)	n321 (55%)	n277 (48%)	n301 (52%)	n 152 (26%)	n 243 (42%)	n 183 (32%)	n 7 (20%)	n 9 (22%)	n 171 (29%)	n 170 (29%)
PBL Overall	3.90	3.76	3.8	3.85	3.88	3.75	3.88	3.85	3.75	3.83	3.87
PSP	4.2	3.8	3.94	4	4	3.95	4	4	3.88	3.95	3.98
RL	3.73	3.7	3.7	3.75	3.81	3.6	3.8	3.7	3.62	3.74	3.79
SIP	3.97	3.97	3.95	4	4	3.88	4	3.9	3.88	4	4
GIP	3.71	3.57	3.6	3.68	3.75	3.6	3.61	3.7	3.6	3.6	3.68
ASE	3.37	3	3.15	3.17	3.29	3.09	3.15	3.25	3.16	3.11	3.15
AchM Overall	3.12	3.11	3.13	3.10	3.13	3.15	3.07	3.17	3.16	3.11	3.05
AchM (Approach)	3.46	3.15	3.28	3.29	3.44	3.25	3.22	3.34	3.31	3.27	3.26
AchM (Avoidance)	3.17	2.94	3.09	3	3.06	3.01	3.07	3.31	3.11	2.96	2.9

** PBL Overall - Overall problem-based learning environment, PSP- problem-solving process, RL - the role of lecturer, SIP - students' practice, GIP - group and interpersonal practice, ASE - academic self-efficacy, AchM Overall- overall achievement motivation, AchM (Approach)- Achievement Motivation (approach), AchM (Avoidance)- Achievement Motivation (avoidance)*

4.2 Correlations Among Variables

Table 3 provides correlations among the research variables. These connections only have a few notable characteristics. First, there are no negative associations between anyone and anyone else. Additionally, there is a correlation between each of the PBL aspects. Third, ASE and AchM are more closely connected than PBL.

Table 3: Correlations among the variables of this study

	Correlations (n=578)					
	PSP	RL	SIP	GIP	ASE	AchM
PSP	-	.331**	.286**	.314**	.340**	.150**
RL		-	.515**	.546**	.148**	.086*
SIP			-	.548**	.155**	.093*
GIP				-	.176**	.095*
ASE					-	.221**
AchM						-

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

**. Correlation is significant at the 0.05 level (2-tailed).*

4.3 Achievement Motivation

The independent sample t-test did not yield a significant difference in achievement motivation between male and female students of Islamic studies. Interestingly, a significant difference is found in the mean scores of achievement motivation between the students of applied Islamic studies *(M* = 3.31, *SD* = .41*)* and those of non-applied Islamic studies *(M*= 3.04, *SD*= .38*)*. The difference is statistically significant too, at *t* (575) = -7.94, *p*= .00. Besides, the analysis of variance (ANOVA) indicates that the students of UM have the highest achievement motivation than those of IIUM and USIM. In this case, the difference between the students of UM and IIUM is statistically significant (Table 4).

Table 4: Difference in AchM between students of UM, IIUM and USIM

	USIM			UM		
	Mean Dif	SE	Sig	Mean Dif	SE	Sig
IIUM	-.009	.040	1.00	-.119*	.043	.019
UM	.108	.046	.055			

**. The mean difference is significant at the 0.05 level*

Table 5 indicates that the time spent in university influences decreased motivation for achievement. First-year students have higher achievement motivation, while 4th-year students have less motivation.

Table 5: Difference in AchM between students of different academic years

	2nd Year			3rd Year			4th Year		
	Mean Dif	SE	Sig	Mean Dif	SE	Sig	Mean Dif	SE	Sig
1st Yr	.117	.053	.168	.211	.049	.000*	.243	.049	.000*
2nd Yr				.093	.049	.340	.125	.049	.068
3rd Yr							.031	.044	1.000

**. The mean difference is significant at the 0.05 level*

4.4 Mediating Effect of ASE

We examined our hypothesis on the effects of PBL on achievement motivation as possibly mediated by academic self-efficacy. To assess this possible mediation, the following conditions had to be met: (Baron & Kenny, 1986) (a) problem-based learning must significantly predict achievement motivation; (b) problem-based learning must significantly predict academic self-efficacy; (c) academic self-efficacy must significantly predict achievement motivation, and (d)

the effect of problem-based learning must significantly decline after controlling for academic self-efficacy. We used the Sobel test to determine if this decline was significant. The analyses revealed that ASE mediated the relation between PBL and AchM. Even though the effect of PBL on AchM decreased when ASE was controlled for (Sobel z= 3.83, p=0.00), a significant effect remained. Hence, practising PBL at university predicted higher levels of academic self-efficacy among students and, in turn, higher levels of achievement motivation among students (Figure 2).

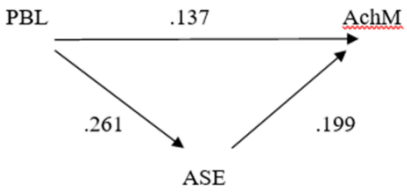

Figure 2: Standardized coefficients

4.5 Regressing ASE on PBL and Demographic Variables

ASE is predicted from several practices of PBL i.e., problem-solving process (PSP), the role of tutors or lecturers (RL), students' practice (SIP), group and interpersonal practice (GIP) and other demographic variables such as age, year of study, type of program (i.e., applied and non-applied). Multiple regression was run to predict ASE. These variables statistically significantly predicted ASE, F (7, 570) = 22.42, p<.0005, adj. R^2 = .206. Regression coefficients and standard errors can be found in Table 6. The result shows that the problem-solving process and type of program can be a good predictor of academic self-efficacy for the students of Islamic studies.

Table 6: Summary of multiple regression analysis

	B	*SE*	*β*
Intercept	2.176	.291	
PSP	.162	.037	.190*
RL	.017	.033	.025
SIP	.050	.033	.070
GIP	.022	.034	.031
Year of Study	.005	.020	.012
Age	-.007	.013	-.024
Type of program	.306	.038	.328*

*The dependent variable is Academic self-efficacy. *p < .05; B = unstandardized regression coefficient; SE= standard of error of coefficient; β = standardized coefficient.*

4.6 Perceived PBL Environment

Table 7 shows that in the case of the overall PBL environment, students of applied Islamic studies are significantly different from those of non-applied. Still, among the several aspects of PBL, only PSP is significantly different from how students perceive it. Other aspects, such as RL, SIP, and GIP, are almost equally practised in both programs.

Table 7: T-test results of perceived PBL environment

	Applied	Non-Applied	t	P
PSP	4.18	3.80	-8.840	.000
RL	3.73	3.70	-.553	.581
SIP	3.97	3.97	-.065	.948
GIP	3.71	3.57	-2.468	.014
Overall PBL	3.90	3.76	-3.446	.001

PSP- problem-solving process, RL- role of lecturer, SIP-students' individual practice, GIP - group and interpersonal practice, PBL Overall - Overall problem-based learning environment.

5.0 DISCUSSION

Based on the findings, the first-year students had greater AchM levels than fourth-year students. Since AchM and students' academic achievement are closely connected, both might support students' autonomous and mastery-focused learning (Axler, 2008). Therefore, if student achievement motivation is low, the student's academic performance could be affected. This could later negatively influence students' autonomous and mastery-oriented learning. Equally, students' achievement motivation can be reduced or become low due to their perception of the object of studying. For example, Randler, Hummel, and Wüst-Ackermann discovered through their study that perceived disgust could influence AchM (Randler, Hummel, & Wüst-Ackermann, 2013). This has practical ramifications for disciplines like biology, where experiments are required. For instance, students who are sensitive to seeing blood may grow to detest such a course, lowering the degree of student accomplishment in that course and their level of knowledge. Similarly, something is concealed in Islamic studies students that contributes to their declining AchM.

Since its inception, problem-based learning (PBL) has gained widespread recognition and has proven to be more than just a transient trend in education (Savery, 2006). Its adoption spans various educational settings, including elementary, middle, and high schools, universities, and professional institutions (Torp & Sage, 2002). Numerous academic

institutions have integrated PBL into various undergraduate programs, particularly within the Schools of Arts and Sciences, Business, Education, Nursing, and Pharmacy (Savery, 2006).

Despite its expansion and acceptance across multiple disciplines, the effective implementation of PBL necessitates careful planning and execution. Failure to address certain critical factors can undermine its success. Key considerations include adequate faculty training—as PBL fundamentally differs from traditional teaching methods—careful selection of problem types, continuous renewal of learning resources, appropriate assessment strategies, and a focus on essential learning objectives. Without proper attention to these elements, the effectiveness of PBL may be compromised. One of the primary challenges associated with problem-based learning (PBL) is the transition from passive learning to active knowledge construction, which can be particularly difficult for students accustomed to conventional instructional methods. This shift demands substantial adaptation and engagement, which may not occur seamlessly. Additionally, PBL is significantly more time-intensive than traditional learning models, presenting a potential limitation in time-constrained academic settings (Williamson & Gregory, 2010).

While PBL is widely implemented in academic contexts, its suitability varies across disciplines. Some subjects inherently align with the problem-solving and critical-thinking framework of PBL, whereas others may not. For instance, Williamson and Gregory (2010) proposed that PBL is particularly well-suited for political science education, as the discipline requires critical thinking and real-world problem-solving. Similarly, Altshuler and Bosch (2003)explored the applicability of PBL in social work education and found that the model effectively facilitates practical learning by enabling students to navigate the complexities of cultural diversity in family and child welfare contexts. However, despite its advantages, PBL presents several challenges. Kumar and Refaei (2013) noted that some students hesitate to take control of their learning, struggling with the autonomy and self-direction required in PBL settings. In some cases, students fail to fully grasp the problem at hand, leading to confusion that can ultimately diminish their engagement and interest in the learning process. Another notable challenge is assessment and evaluation within PBL. Some students express concerns that their grades may be negatively impacted by the underperformance of weaker group members, as PBL often involves collaborative assessments (Kumar & Refaei, 2013).

This study highlights that only the problem-solving process (PSP) and program type significantly predict academic self-efficacy (ASE) among Islamic studies students. Other aspects of PBL, such as resource learning (RL), student-instructor participation (SIP), and group interaction processes (GIP), do not exhibit a significant predictive relationship with ASE.

Additionally, no substantial differences were observed in students' perceptions of the PBL environment between those enrolled in applied Islamic studies programs and those in non-applied Islamic studies programs, except in PSP. This finding suggests that PBL is not fully implemented within the Islamic studies curriculum, potentially leading to a decline in achievement motivation (AchM) among final-year students.

To enhance the effectiveness of PBL, Choi (2005) emphasized the importance of fostering self-efficacy and self-concept by structuring course activities with increasing levels of difficulty. However, achieving this requires university instructors to critically assess and refine their teaching strategies to ensure that students receive adequate support. Research by Bakar et al. (2010) underscores the importance of a caring and supportive learning environment, which has been shown to positively influence student achievement. Notably, academic self-efficacy (ASE) is hierarchical in nature, meaning that greater learning experiences typically lead to higher ASE. However, this correlation was not observed among Islamic studies students in this study. The analysis further indicates that ASE mediates the relationship between the PBL environment and AchM, suggesting that in Islamic studies disciplines, PBL should be reinforced through enhanced teacher education, targeted training programs, and curriculum development. The findings imply that PBL is currently implemented in Islamic studies in a loosely structured manner, necessitating further pedagogical refinement to optimize its impact.

6.0 CONCLUSION

The findings of this study indicate that the integration of problem-based learning (PBL) in higher education serves as a significant predictor of academic self-efficacy (ASE) among students, which, in turn, enhances their achievement motivation (AchM). The primary objective of this research was to examine achievement motivation among Islamic studies students, with a specific focus on the impact of PBL implementation. The results reveal that the University of Malaya (UM) demonstrated relatively higher achievement motivation scoresamong its Islamic studies students. This outcome may be attributed to the applied nature of its undergraduate Islamic studies programs, which align more closely with PBL principles. Conversely, students at the International Islamic University Malaysia (IIUM) and Universiti Sains Islam Malaysia (USIM) exhibited lower levels of achievement motivation. In the case of IIUM, this lower motivation level appears to be partially linked to the theoretical orientation of its Islamic studies programs and a less conducive PBL environment.

This study recommends further research into lecturers' acceptance, readiness, and willingness to integrate and sustain PBL strategies aimed at enhancing students' achievement motivation. Understanding faculty perspectives and institutional preparedness will be crucial in ensuring the long-term effectiveness and sustainability of PBL practices in Islamic studies education.

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APPENDIX A

Participants were coded by either 1 (for applied Islamic studies) or 0 (for traditional/ non-applied Islamic studies). The code was determined by the following list. Prior to coding, we studied undergraduate program descriptions of all departments.

University	Faculty	Department	Code
UM		Al-Quran and Al-Hadith	0
		Aqidah and Islamic thought	0
		Da'wah & Human Development	1
		Fiqh & Usul al Fiqh	1
		Islamic History and Civilization	0
		Siasah Syar'iyyah	1
		Syariah& Economics	1
		Syariah& Law	1
		Syariah& Management	1
		Applied Sciences with Islamic Studies	1
		Islamic Education Program	1
IIUM	Islamic Revealed Knowledge	Department Quran &Sunnah	0
		Department of Fiqh and Usul al Fiqh	0
		Department of Comparative Religion and Usuluddin	0
USIM	Faculty of Leadership and Management (FKP)	Da'wah and Islamic Management with Honours	1
		Akidah and Religion Studies with Honours	0
	Faculty of Quranic and Sunnah Studies	Quranic and Sunnah Studies with Honours	0
		Quranic Studies with Multimedia with Honours	1
		Sunnah Studies with Information Management with Honours	1
	Faculty of Syariah and Law	Syariah and Law with Honours	1
		Fiqh and Fatwa with Honours	0