

How Achievement Motivation Shapes Entrepreneurial Attitudes: Evidence from Malaysian Polytechnic Students

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ABSTRACT: Entrepreneurship courses are widely used to encourage students to see entrepreneurship as a realistic career option. Yet students who experience the same curriculum do not necessarily develop the same entrepreneurial outlook. This study examines whether achievement motivation helps explain that difference among students in Malaysian Premier Polytechnics. Critical Factors of Entrepreneurship Curriculum (EC) were treated as the educational input, Students' Entrepreneurial Attitude Tendency (EAT) as the outcome, and High Need for Achievement (nAch) as the mediating mechanism. A quantitative cross-sectional survey yielded 382 usable responses obtained through stratified random sampling. IBM SPSS Statistics 29 was used for preliminary analysis, followed by partial least squares structural equation modelling in SmartPLS 4. The remaining direct effect of EC on EAT was positive but not statistically significant ($\beta=.137$, $t=1.928$, $p=.055$). In contrast, EC strongly predicted nAch ($\beta=.892$, $t=38.393$, $p<.001$), and nAch significantly predicted EAT ($\beta=.655$, $t=9.210$, $p<.001$). The indirect EC $\rightarrow$ nAch $\rightarrow$ EAT pathway was significant ($\beta=.584$, $t=7.561$, $p<.001$, 95% CI [.442,.743]) and accounted for about 81% of the total EC–EAT association. The findings suggest that curriculum may matter less through exposure alone than through the achievement motivation generated by the learning experience. For TVET practice, entrepreneurship learning should therefore combine knowledge and competency development with meaningful responsibility, challenging goals, feedback and opportunities for improvement.

KEYWORDS - entrepreneurship curriculum, entrepreneurial attitudes, need for achievement, polytechnic students, TVET

I. INTRODUCTION

Entrepreneurship has become an important part of higher education and TVET because graduates are entering a labour market in which technical competence alone may not be enough. They are increasingly expected to recognise opportunities, solve unfamiliar problems, adapt to changing conditions and, where appropriate, create value through enterprise. For polytechnic students, this expectation is particularly relevant because applied and technical skills can provide a practical base for entrepreneurial activity.

The difficulty is that entrepreneurship education does not affect every student in the same way. Completing a course may improve knowledge of business concepts, but it does not automatically make entrepreneurship personally attractive. Students who sit in the same classroom can leave with different levels of confidence, persistence and willingness to take responsibility for outcomes. This variation raises a practical question for educators: what happens between curriculum exposure and the development of a favourable entrepreneurial attitude?

Recent work in entrepreneurship education increasingly points to psychological mechanisms as part of the answer. Entrepreneurship education has been associated with changes in entrepreneurial attitudes and intentions among vocational students, while studies in other educational settings have shown that self-efficacy, attitude and related psychological factors can carry part of the effect of entrepreneurship education to later entrepreneurial outcomes [1], [2], [3]. These studies do not test the same mechanism examined here, but they suggest that looking only for a direct education–outcome relationship may miss an important part of the process.

This study focuses on achievement motivation. Critical Factors of Entrepreneurship Curriculum (EC) represent the educational experience through curriculum design, curriculum content, entrepreneurial competency, practical exposure and industry collaboration. High Need for Achievement (nAch) reflects persistence, personal responsibility, challenging but attainable goals, performance feedback and satisfaction from accomplishment. Students' Entrepreneurial Attitude Tendency (EAT) captures a favourable orientation towards entrepreneurship.

The argument is straightforward. A curriculum may provide knowledge and competencies, but its influence may become more meaningful when learning experiences also encourage students to set goals, take ownership of tasks, persist when difficulties arise and improve after feedback. The study therefore tests whether nAch helps explain the relationship between EC and EAT among Malaysian Premier Polytechnic students. In doing so, it shifts attention from whether entrepreneurship education is simply present to how students may respond psychologically to the experience.

II. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Entrepreneurship Curriculum and Entrepreneurial Attitudes

Human Capital Theory provides a useful starting point because education can develop knowledge and productive capability [4]. In entrepreneurship education, curriculum quality matters not only because students need to understand business concepts, but because they need opportunities to apply what they learn. The EC construct used in this study therefore combines curriculum design and content with competency development, practical exposure and industry collaboration.

There are good reasons to expect these experiences to support a favourable entrepreneurial outlook. Practical tasks can make entrepreneurship less abstract, while industry interaction can expose students to real decisions, constraints and opportunities. At the same time, capability should not be confused with attitude. A student may perform well in entrepreneurship-related tasks and still prefer salaried employment. The study therefore retains a direct EC–EAT relationship but does not assume that this is the only pathway.

Within TVET, this distinction between curriculum exposure and students' psychological response is especially important. Entrepreneurship learning can develop knowledge and productive capability, consistent with Human Capital Theory [4], but capability alone does not ensure that students will view entrepreneurship favourably. Evidence from vocational and higher vocational settings also indicates that entrepreneurship education is linked with attitudes and later entrepreneurial outcomes through intervening psychological processes [1]–[3]. This supports examining not only whether students receive entrepreneurship education, but also how the learning experience is translated into motivation and attitude.

H1: Critical Factors of Entrepreneurship Curriculum have a positive and significant influence on Students' Entrepreneurial Attitude Tendency.

Entrepreneurship Curriculum and High Need for Achievement

McClelland [?] described need for achievement as a motivation to meet demanding standards, accept responsibility and obtain feedback on performance. These qualities fit naturally with entrepreneurship, where progress often depends on persistence, personal ownership and the willingness to work towards uncertain outcomes.

A learning environment can provide repeated opportunities to practise these qualities. When students are responsible for a project, have to solve an authentic problem, respond to customer or lecturer feedback, and improve a weak first attempt, the experience is different from merely learning definitions. It requires achievement-oriented behaviour. For this reason, entrepreneurship curriculum may contribute to nAch when its design gives students genuine responsibility and visible standards of accomplishment.

H2: Critical Factors of Entrepreneurship Curriculum have a positive and significant influence on High Need for Achievement.

High Need for Achievement and Entrepreneurial Attitudes

The Theory of Planned Behavior identifies attitude as an important component in the formation of behavioural intention [5]. The present study does not test the complete TPB model, but the theory is useful in treating a favourable entrepreneurial attitude as a meaningful precursor to later behavioural orientation.

Achievement-motivated students may find entrepreneurship attractive because it offers scope for autonomy, challenge, responsibility and accomplishment. Contemporary research likewise shows that psychological factors can help explain why entrepreneurship education is associated with entrepreneurial attitudes, intentions and behaviour. For example, Otache [2] found that self-efficacy and attitude carried indirect effects between entrepreneurship education and entrepreneurial behaviour, while Ying and Yaakob [3] reported a mediating role for entrepreneurial attitude in higher vocational education. The mechanisms differ from nAch, but both studies reinforce the need to examine what occurs psychologically between education and entrepreneurial outcomes.

H3: High Need for Achievement has a positive and significant influence on Students' Entrepreneurial Attitude Tendency.

Mediating Role of High Need for Achievement

Taken together, Human Capital Theory, McClelland's Need for Achievement Theory and the Theory of Planned Behavior provide complementary rather than competing explanations. Human Capital Theory explains the educational development of capability; McClelland's theory provides the achievement-oriented motivational mechanism; and TPB provides an attitudinal perspective on entrepreneurial orientation.

The resulting model can be expressed as an educational stimulus (EC), followed by a motivational response (nAch), and then an entrepreneurial attitudinal outcome (EAT). The mediation proposition is therefore not that curriculum becomes irrelevant, but that much of its relationship with entrepreneurial attitude may be expressed through the motivation generated by the educational experience.

The proposed mediation model therefore connects three levels of explanation. At the educational level, EC represents the quality and applied character of students' curriculum experience. At the motivational level, nAch represents persistence, responsibility, challenge, feedback and accomplishment. At the attitudinal level, EAT reflects students' favourable orientation towards entrepreneurship. This sequence is consistent with the study's premise that curriculum may be most influential when students experience it as an opportunity to achieve rather than as content to be completed.

H4: High Need for Achievement significantly mediates the relationship between Critical Factors of Entrepreneurship Curriculum and Students' Entrepreneurial Attitude Tendency.

III. MATERIALS AND METHODS / METHODOLOGY

Research Design and Sample

A quantitative cross-sectional design was used to test the proposed relationships. Respondents were students from Malaysian Premier Polytechnics. Stratified random sampling was applied so that the study population was represented across the participating institutions. After data screening, all 382 collected responses were retained for analysis. The achieved sample exceeded the minimum requirement established during sample-size planning.

Instrument and Measures

Data were collected using a structured questionnaire with five-point Likert-type response scales adapted from established measures. EC covered curriculum design, curriculum content, entrepreneurial competency, practical exposure and industry collaboration. nAch captured achievement-related qualities including persistence, responsibility, challenge, feedback and accomplishment. EAT measured students' orientation towards entrepreneurship.

Data Analysis

IBM SPSS Statistics 29 was used for data preparation, respondent profiling and descriptive analysis. SmartPLS 4 was then used to assess the measurement and structural models. Indicator reliability, internal consistency, convergent validity and discriminant validity were examined before the structural paths were interpreted. Standardised coefficients, t statistics, p values and bootstrap confidence intervals were used for hypothesis testing. The mediation test used 5,000 bootstrap resamples and evaluated the specific indirect effect directly [6].

IV. RESULTS AND DISCUSSION

Descriptive and Measurement Results

Respondents reported high scores across all three constructs. nAch recorded a mean of 4.577, followed closely by EC at 4.573, while EAT recorded a mean of 4.429. Internal consistency was also high: Cronbach's alpha was .979 for EC, .980 for nAch and .978 for EAT. Retained indicator loadings ranged approximately from .814 to .923, and the average variance extracted for every construct exceeded .50. These results supported indicator reliability, internal consistency and convergent validity.

HTMT was used to examine discriminant validity. The nAch–EAT value was .800 and the EC–EAT value was .743. The EC–nAch value was higher at .910. This value deserves attention because it indicates that students' perceptions of curriculum and their achievement motivation were closely related in this sample. The constructs were therefore interpreted with this conceptual proximity in mind rather than treated as completely independent experiences. The structural model explained 69.9% of the variance in nAch and 73.2% of the variance in EAT.

Hypothesis Testing

Mediation Analysis

The mediation analysis produced the clearest result in the study. The specific indirect effect from EC to EAT through nAch was significant ($\beta=.584$, $SE=.077$, $t=7.561$, $p<.001$), and the 95% bootstrap confidence interval [.442,.743] did not include zero. The total EC–EAT effect was $\beta=.721$ ($t=22.745$, $p<.001$, 95% CI [.659,.783]). The indirect effect therefore represented about 81.0% of the total association.

This pattern is consistent with indirect-only mediation. Put simply, curriculum was strongly related to entrepreneurial attitude mainly when it was accompanied by stronger achievement motivation. Once nAch was included in the model, little independent direct EC–EAT association remained. Because the data are cross-sectional, this pattern should be read as evidence consistent with the proposed mechanism rather than as proof that curriculum causes a later change in motivation or attitude.

V. DISCUSSION

The results suggest that entrepreneurship curriculum is better understood as part of a process than as a direct input that automatically produces entrepreneurial attitudes. The strongest relationship in the model was between EC and nAch. Students who evaluated their entrepreneurship curriculum more positively also tended to report stronger achievement motivation. This finding makes practical sense in a polytechnic setting, where applied learning can place students in situations that require persistence, responsibility and visible accomplishment.

The non-significant remaining EC–EAT path is therefore not evidence that curriculum does not matter. The total EC–EAT association was substantial; what changed was the route through which that association was expressed. Once achievement motivation was considered, the direct route became small and statistically non-significant. This result directs attention to what students experience psychologically while learning rather than simply to whether entrepreneurship content is included in a programme.

This interpretation is consistent with a growing body of research that treats entrepreneurship education as a process involving intervening psychological mechanisms. Bahaw et al. [1], using a two-wave design with vocational students, reported improvements in entrepreneurial intention and attitudes following entrepreneurship education. Otache [2] found that entrepreneurial self-efficacy and attitude mediated the relationship between entrepreneurship education and entrepreneurial behaviour. In Chinese higher vocational institutions, Ying and Yaakob [3] similarly reported that entrepreneurial attitude mediated relationships involving entrepreneurship

education and entrepreneurial intention. Although these studies examine different mediators and outcomes, together they show why a direct education–outcome model may be too simple.

The present study adds achievement motivation to this discussion. nAch was not treated as an incidental personal characteristic but as the mechanism linking students' curriculum experience with entrepreneurial attitude tendency. Students who are encouraged to work towards demanding but achievable targets, take ownership of project outcomes, respond to feedback and persist after setbacks may begin to associate entrepreneurship with forms of accomplishment they value.

For lecturers, the implication is practical. An entrepreneurship course can cover all required topics and still provide limited opportunity for students to experience responsibility or achievement. Authentic assignments, live or simulated business problems, project ownership, interaction with entrepreneurs, iterative feedback and targets that are demanding without being unrealistic can make the learning experience more achievement-oriented. These activities matter not because they make a course appear more innovative, but because they give students reasons to persist, improve and take ownership of performance.

The relatively high HTMT value between EC and nAch also warrants caution. Curriculum experience and achievement motivation were empirically very close in this sample. Future studies should continue to test their distinctiveness and examine whether particular curriculum dimensions—such as practical exposure or industry collaboration—are more strongly associated with achievement motivation than others.

The size of the indirect effect also strengthens this interpretation. The indirect $EC \rightarrow nAch \rightarrow EAT$ coefficient was .584, while the total $EC \rightarrow EAT$ effect was .721; thus, approximately 81% of the total association was represented by the mediated pathway. In practical terms, students who evaluated the curriculum more positively also tended to report stronger achievement motivation, and those with stronger achievement motivation tended to report more favourable entrepreneurial attitudes. Because the design is cross-sectional, these relationships should be interpreted as associations consistent with mediation, not as evidence of temporal causation.

VI. IMPLICATIONS

Theoretical Implications

The study contributes an educational–motivational–attitudinal explanation of entrepreneurship education. Human Capital Theory explains the development of entrepreneurial knowledge and capability, McClelland's theory explains achievement motivation, and the Theory of Planned Behavior provides the attitudinal perspective. The mediation result indicates that research on entrepreneurship education should pay closer attention to the psychological response generated by curriculum rather than assuming that educational exposure translates directly into entrepreneurial orientation.

Educational and Practical Implications

For lecturers and curriculum developers, the findings support learning designs that combine entrepreneurial knowledge with responsibility, challenge and feedback. Students should have opportunities to make decisions, experience the consequences of those decisions, revise weak work and see improvement over time. In a TVET environment, technical projects can also be linked to commercial problem solving, customer needs and value creation so that entrepreneurship is experienced as an applied activity rather than a separate theoretical subject.

Institutional Implications

At institutional level, entrepreneurship development can be evaluated beyond participation counts, event numbers or course completion. These indicators show activity, but they do not reveal whether students are becoming more achievement-oriented or developing more favourable entrepreneurial attitudes. Programme evaluation could therefore include developmental outcomes such as achievement motivation, entrepreneurial confidence, readiness and attitude alongside conventional academic indicators.

These findings also suggest a useful distinction for programme evaluation. Participation counts, event numbers and course completion indicate that entrepreneurship activities have occurred, but they do not show whether students are becoming more achievement-oriented or developing a stronger entrepreneurial attitude. For polytechnic programmes, developmental indicators such as achievement motivation, confidence, readiness and

attitude can therefore complement conventional academic and activity measures when evaluating entrepreneurship education.

VII. LIMITATIONS AND FUTURE RESEARCH

Several limitations should guide interpretation. First, the cross-sectional design cannot establish temporal causation. A longitudinal or intervention-based design would be needed to determine whether specific curriculum experiences lead to subsequent changes in achievement motivation and entrepreneurial attitude. Second, the study relied on self-reported questionnaire data and may therefore be affected by response tendencies or common-method influence.

Third, the sample was drawn from Malaysian Premier Polytechnics. The findings should not automatically be generalised to conventional polytechnics, community colleges, universities or TVET systems in other countries. Fourth, the relatively high EC–nAch HTMT value indicates conceptual proximity and should be re-examined in independent samples.

Future studies could test individual curriculum dimensions separately, follow students across semesters, or evaluate particular interventions such as industry projects and entrepreneurship mentoring. Other psychological mechanisms—including entrepreneurial self-efficacy, resilience, entrepreneurial mindset and perceived behavioural control—could also be examined alongside nAch. Recent mediation research in entrepreneurship education provides a useful basis for such extensions (Otache, 2025; Ying & Yaakob, 2025).

VIII. CONCLUSION

This study examined whether achievement motivation helps explain the relationship between entrepreneurship curriculum and entrepreneurial attitudes among Malaysian Premier Polytechnic students. Analysis of 382 responses showed a clear pattern: EC strongly predicted nAch, nAch predicted EAT, and the indirect EC → nAch → EAT effect was significant. The remaining direct EC–EAT relationship was not statistically significant.

The practical message is not that curriculum content is unimportant. Rather, content and competencies appear to matter most when the learning experience also encourages students to pursue goals, take responsibility, persist and improve. For TVET institutions, entrepreneurship education may therefore be strengthened by treating achievement motivation as a developmental outcome alongside knowledge and competency. This perspective offers a more human explanation of why students exposed to entrepreneurship education can emerge with different entrepreneurial attitudes.

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