



## The Influence of Entrepreneurial Self-Efficacy on Entrepreneurial Learning Behavior - Using Entrepreneurial Intention as the Mediator Variable

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### Abstract

This study examines 448 technical and vocational school students' entrepreneurial learning behavior and its influencing factors to serve as a school reference for the development of entrepreneurship education measures. The results show that students' "entrepreneurial intention (EI)" has a significant direct effect on "entrepreneurial learning behavior (ELB)", and "entrepreneurial self-efficacy (ESE)" has a significant effect on "entrepreneurial learning behavior" through "entrepreneurial self-efficacy." The influence pattern and empirical data of "entrepreneurial self-efficacy" and "entrepreneurial intention" on "entrepreneurial learning behavior" has a good fit.

**Key words:** Entrepreneurial intention; Entrepreneurial learning behavior; Entrepreneurial self-efficacy

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### INTRODUCTION

Entrepreneurship is becoming an important instrument to promote economic growth and development in the economies of Taiwan (Shinnar, Pruett & Toney, 2009). As the domestic unemployment rate climbs, employment-oriented technical and vocational education programs urgently need to find the teaching resources for entrepreneurship education in Taiwan. The difficulty currently faced by students of technological and vocational schools in their learning careers cannot be solved with a confinement to school employment.

Entrepreneurship education plays the role of helping to reduce the unemployment rate in a country. Entrepreneurship learning behavior explores the students' entrepreneurship learning result and entrepreneurship learning attitude on the entrepreneurship and business field and at the same time providing entrepreneurial experiences in the process of learning entrepreneurial ability and belief in the entrepreneurship curriculum (CHEN, GREENE, & CRICK, 1998; FORBES, 2005; WILSON, KICKUL & MARLINO, 2007). Some research found students' experiences of learning entrepreneurial intention and entrepreneurial self-efficacy have provided them with chances to learn new entrepreneurship skills, which may be helpful for their future entrepreneurs (Dyer, Gregersen, & Christnesen, 2008; Haynie & Sepherd, 2009).

From a psychological and educational point of view, the entrepreneurial intention to become an entrepreneur has been depicted as actively self-employment of actual

behavior. The availability of a validated instrument to measure abilities, attitudes and intentions towards entrepreneurship could be of much help (Shinnar, Pruett, & Toney, 2009; Dyer, Gregersen, & Christnesen, 2008). Entrepreneurial intention was define the attitude towards self-employment. Therefore, high entrepreneurial intention has actually indicates towards self-employment than organizational employment. Entrepreneurial learning behavior and given feedback from the entrepreneurship education learning context in which self-employment processing is raised. Research suggests that entrepreneurial self-efficacy is important to affect entrepreneurship learning result (Chen, Greene & Crick, 1998; Forbes, 2005). It is positively related to student belief, ability, and attitude in contexts that can be characterized as complex, dynamic, and inherently uncertain. It is suggested that the concept of entrepreneurial self-efficacy, derived from social learning theory plays an important role in the development of entrepreneurial intentions and actions (Wilson, Kickul, & Marlino, 2007; Dyer, Gregersen, & Christnesen, 2008).

The results showed that the effects of perceived learning from entrepreneurship-related courses, previous entrepreneurial experience, and risk propensity on entrepreneurial intentions were fully mediated by entrepreneurial self-efficacy. Contrary to expectations, gender was not mediated by self-efficacy but had a direct effect such that women reported lower entrepreneurial career intentions. The authors discuss practical implications and directions for future research. The paper, Analysis of factors in technological and vocational school students' perceived entrepreneurial intention and entrepreneurial learning behavior, using entrepreneurial self-efficacy as a mediator variable, discussed the variables which may influence vocational student's entrepreneurial learning behavior and found the relationships among the variables. The purposes of this study are to address the 4 following issues.

(1) There is no significant correlation between technological and vocational school students' entrepreneurial self-efficacy and entrepreneurial learning behavior.

(2) There is no significant correlation between technological and vocational school students' perceived

entrepreneurial self-efficacy and entrepreneurial intention.

(3) There is no significant correlation between technological and vocational school students' entrepreneurial intention and entrepreneurial learning behavior.

(4) Influence models of technological and vocational school students' entrepreneurial self-efficacy, entrepreneurial intention, and entrepreneurial learning behavior fit the data collected by this study.

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## 1. METHODOLOGY

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### 1.1 Subjects

This study treats 448 students from technological and vocational schools as the population, and adopts random sampling and cluster sampling for survey.

### 1.2 Research Tools

The research tool is a "Questionnaire of Factors Which Influence Technical and Vocational School Students' Entrepreneurial Learning Behavior." The questionnaire includes Entrepreneurial intention Scale, Entrepreneurial self-efficacy Scale and Entrepreneurial Learning Behavior Scale (Dyer, Gregersen, & Christnesen, 2008; Haynie & Sepherd, 2009; McGee, Peterson, Mueller, & Sequeira, 2009; Mars & Garrison, 2009; Kirzner, 2009).

The "Questionnaire of Factors Which Influence Technical and Vocational School Students' Entrepreneurial Learning Behavior" was reviewed by three experts for subject contents' suitability to ensure the scale's expert validation. Five technical and vocational school students were invited to answer the questionnaire to enhance the validity of the scale's contents. In addition, five technical and vocational schools were selected for a pre-test, and 123 students were selected as the pre-test objects in total. The scales used in this study are in self-assessment form, and a Likert 5-point scale is used as the scoring method. There are five levels of choices from "agree" to "do not agree;" five equal portions of 5, 4, 3, 2 and 1 are distinguished according to the extent of agreement, and 5 points, 4 points, 3 points, 2 points and 1 point are given in this order. The higher the score an individual receives, the larger extent of agreement the individual has. The scales' factors, number of questions reliability and validity are shown in Table1.

**Table 1**  
**An Overview of Factors, Number of Questions, Reliability and Validity for Technical and Vocational School Students' Entrepreneurial Intention, Entrepreneurial Self-Efficacy and Entrepreneurial Learning Behavior Scale**

Entrepreneurial Self-Efficacy Scale				Entrepreneurial Intention Scale				Entrepreneurial Learning Behavior Scale			
Factor name	No.	Cronbach $\alpha$	Factor loading	Factor name	No.	Cronbach $\alpha$	Factor loading	Factor name	No.	Cronbach $\alpha$	Factor loading
Entrepreneurial belief	5	.891	26.24%	Self-employment	5	.912	24.24%	Entrepreneurial learning result	6	.878	31.52%
Entrepreneurial ability	4	.877	18.44%	Undertake risk	4	.831	20.44%	Entrepreneurial toward venturing	4	.828	19.21%
Entrepreneurial attitude	3	.861	18.23%	Subjective norm	4	.783	18.23%	Employment attitude	4	.829	15.92%
Total reliability Cronbach $\alpha$		.92		Total reliability Cronbach $\alpha$		.911		Total reliability Cronbach $\alpha$		.912	
Accumulated explained variance			66.51%	Accumulated explained variance			63.91%	Accumulated explained variance			64.65%

**1.3 Data Analysis**

In processing the survey data used in this study, the collected questionnaires were coded, and Statistical Package for Social Science (SPSS version 12.0) and linear structural analysis (LISREL version 8.5) were used to verify the correlation among the factors of “entrepreneurial intention,” “entrepreneurial self-efficacy” and “entrepreneurial learning behavior” variables and their effects in order to achieve the purpose of this study. In this study, the statistical test level  $\alpha = 0.05$ .

**2. RESULTS**

The empirical results of technical and vocational school students' entrepreneurial learning behavior are shown in Figure 1, and are analyzed as follows:

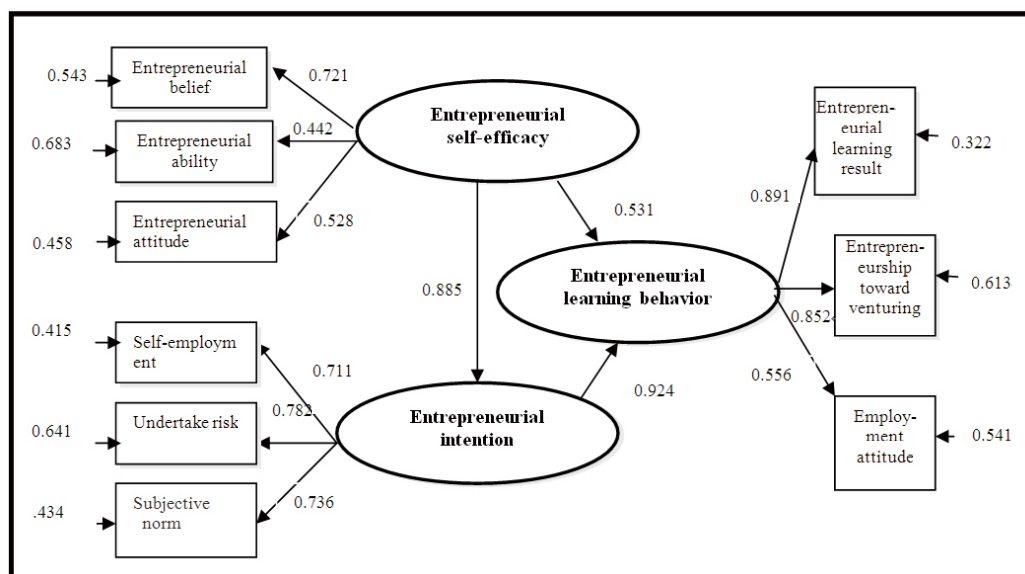
The estimated value of the direct affecting parameter between “entrepreneurial intention” and “entrepreneurial self-efficacy” is 0.885 ( $t = 8.132, p < .05$ ). This means that

“entrepreneurial intention” has a significant effect on “entrepreneurial self-efficacy.”

The estimated value of the direct affecting parameter between “entrepreneurial intention” and “entrepreneurial learning behavior” is 0.531 ( $t = 4.522, p > .05$ ). This means that “entrepreneurial intention” does not necessarily have a significant effect on “entrepreneurial learning behavior.”

The estimated value of the direct affecting parameter between “entrepreneurial self-efficacy” and “entrepreneurial learning behavior” is 0.924 ( $t = 5.283, p < .05$ ). This means that “entrepreneurial self-efficacy” has a significant effect on “entrepreneurial learning behavior.”

In summary, in this study of technical and vocational school students' entrepreneurial learning behavior and its influence pattern, “entrepreneurial intention” has a significant effect on “entrepreneurial self-efficacy,” but does not have a significant effect on “entrepreneurial learning behavior.” “Entrepreneurial self-efficacy” has a significant effect on “entrepreneurial learning behavior.”



**Figure 1**  
**Path of Technical and Vocation School Students' Entrepreneurial Learning Behavior**

### 3. DISCUSSION

Students' "entrepreneurial intention" has a significant direct effect on "entrepreneurial learning behavior," and "entrepreneurial self-efficacy" has a significant effect on "entrepreneurial learning behavior" through "entrepreneurial intention." The influence pattern and empirical data of "entrepreneurial self-efficacy" and "entrepreneurial intention" on "entrepreneurial learning behavior" has a good fit. The influence effects of "entrepreneurial intention" "entrepreneurial self-efficacy" and "entrepreneurial learning behavior" shows that for technological and vocational school students, the influence of "entrepreneurial self-efficacy" on "entrepreneurial learning behavior" comes mainly through their awareness of "entrepreneurial intention." In addition, "entrepreneurial intention" has a direct and significant effect on "entrepreneurial learning behavior." From the influence of entrepreneurial intention, entrepreneurial self-efficacy and entrepreneurial learning behavior, we can clearly see that compared with entrepreneurial self-efficacy, entrepreneurial intention has a greater influence on entrepreneurial learning behavior (Wilson, Kickul, & Marlino, 2007; Dyer, Gregersen, & Christnesen, 2008; Mars & Garrison, 2009; Kristiansen & Indarti, 2004).

Regarding the test results, according to the goodness of fit test standard by Hair et al, the model in this study has a good overall fit (Hair, Anderson, Tatham, & Black, 1998). In the absolute fitness and incremental fitness tests, all indices meet the standard, and have the best fit. Most of the parsimonious fitness indices meet the test standard, and have a good fit. Overall, in the entrepreneurial learning behavior and its influence model established in the study based on theories, both the model and the data have a good fit, and in the parameter estimation most of the estimated values are significant. This shows that all the indices of latent variables have their importance, and only the parameter value of "entrepreneurial self-efficacy" on "entrepreneurial learning behavior" is low. Overall, the empirical data have a good explanatory power. Students' "entrepreneurial self-efficacy" influences "entrepreneurial intention" and "Entrepreneurial belief" is an important factor which influences "entrepreneurial self-efficacy". Students' "entrepreneurial self-efficacy" influences "entrepreneurial learning behavior", "Entrepreneurial learning result" and "Entrepreneurship toward venturing" are important factors which influence "entrepreneurial learning behavior" (Haynie & Sapher, 2009; McGee, Peterson, Mueller, & Sequeira, 2009).

The results show that among all latent variables in the model, the direct influence of "entrepreneurial self-efficacy" on "entrepreneurial learning behavior" is not significant, indicating that the assumed influence of "entrepreneurial self-efficacy" on students' "entrepreneurial learning behavior" needs further testing; this is something worthy of a more in-depth study and

validation in the future. Based on test results, although the overall result is acceptable, the model consistency level is not entirely satisfactory, and its entrepreneurial intention has a relatively low explanatory power for entrepreneurial learning behavior. The possible reasons are: (a) The measurement error variance of the three main variables in the model is too large. Although in the course of the investigation in this study each step was made following reasonable procedures, in a sample survey there are a survey bias and restrictions on the study objects in answering the questionnaire. These can result in a bias between the survey data and the actual situation (Bentler & Bonett, 1980; Hair, Black, Babin, & Anderson, 2010; Sequeira, Mueller, & McGee, 2007). (b) The influence of test indices and method. Currently in the verifying calculation of structural equations, the index value is subject to the sample size, and sometimes the index value may influence each other. When the index is far greater than or much lower than the standard value, the judgment is more accurate; when the index is close to the standard value, we then need to consider the possible influence from the error. (c) The missing scope of variables. Although a complete research model was tried to be established in this study based on past researches and theories, there has been little domestic research on the topic of students' entrepreneurial learning behavior.

### 4. IMPLICATION

There may be undetected factors which resulted in a low explanatory power, and there are other variables which have not been identified (Florin, Karri, & Rossiter, 2007; Souitaris, Zerbinati, & Al-Laham, 2007; ZHAO, Hills, & Seibert, 2005). Regarding this model's test results, perhaps in the future a further study can be conducted to find the variables either missing in the theories or can be further added or deleted, or more comprehensive empirical data can be collected for testing to improve the consistency between this model and empirical data.

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