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Journal of Social Studies Education Research
Sosyal Bilgiler Eğitimi Araştırmaları Dergisi

2019:10 (4), 392-426

The Achievement of Entrepreneurship Competence and Entrepreneurial Intentions: Gender Role, Attitude and Perception of Entrepreneurship Controls Mediation

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Abstract

The purpose of this study is to investigate the different models on the factors that influence achievement of entrepreneurial competence and entrepreneurial intentions, between male and female students, which is mediated by attitudes and control perceptions of entrepreneurship. The participants of this study included 192 students who took entrepreneurship courses in various study programs at Universitas Muhammadiyah Surakarta in the even semester of 2015-2016 academic year. Entrepreneurial intentions, entrepreneurial attitudes, perceptions of entrepreneurial control, and achievement of entrepreneurial competencies data were obtained using questionnaires, while the student gender information was gathered from the university database. Data analysis was performed using Structural Equation Modeling (SEM) statistics through Partial Least Square (PLS) in multiple group analyses with the help of Smart PLS 3.1.7 software. The results stressed that the students' achievement of entrepreneurship, after completing entrepreneurship subject, did not have direct effect to their entrepreneurial intentions. Furthermore, the achievement of entrepreneurial competence had a significant positive effect on entrepreneurial intentions by mediating a combination of attitudes and perceptions of entrepreneurial control in male students with a t-statistic of 4.401, at $p < 0.05$ and in female students with a t-statistic of 5.072 at $p<0.05$. The model difference test results obtained were t-statistics of 0.913, with $p>0.05$, which suggest that there is no significant difference in the model of the effect of achievement of entrepreneurial competence on entrepreneurial intentions, between male and female students, which is mediated by entrepreneurial attitudes and perceptions of entrepreneurial control.

Keywords: *Entrepreneurial intentions, entrepreneurial attitude, perceptions of entrepreneurial control, achievement of entrepreneurial competence*

Introduction

Behavioral intention is believed to be important for understanding the behavior when people engage in an activity (Astuti & Martdianty, 2012; Bagozzi, Baumgartner, & Yi, 1989; Brigas, 2019; Kuehn, 2008; Soyer, 2019). Therefore, to advance entrepreneurial behavior studies further,

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it is necessary to examine the entrepreneurial intentions in advance (Kickul & Krueger, 2005; Krueger, Reilly, & Carsrud, 2000; Pruett, 2012; Pruett, Powell, & Tony, 2009). Entrepreneurial intention is essential as a liaison between considerations for entrepreneurship and entrepreneurial activities that will be carried out by an individual (Ajzen, 1991). The theory of Planned Behavior (Ajzen, 2005) suggests that intention is determined by 3 main factors, namely attitudes towards behavior, subjective norms, and perceived behavioral control. Each of these factors of the intention is motivated by individual, social, and informational factors. Based on this theory, it can be stated that entrepreneurial intentions are determined by 3 main elements, namely entrepreneurial attitudes, entrepreneurial subjective norms, and perceptions of entrepreneurial control. One of the important components of the individual backgrounds is entrepreneurial experience, and one main component of the background factors of information is entrepreneurship knowledge. Entrepreneurial experience and knowledge, both of which can be both obtained from the process of entrepreneurial learning.

Entrepreneurship learning in higher education in Indonesia has developed significantly in the past decade. Entrepreneurial learning is carried out in the form of organizing entrepreneurship courses. Entrepreneurship courses in universities in Indonesia aim (Direktorat Jenderal Pembelajaran dan Kemahasiswaan Ditjen Pendidikan Tinggi Kementerian Pendidikan & Kebudayaan [Dirjen Dikti], 2013) to ensure that students can understand, apply, and adapt to the lifestyle of entrepreneurship, by acquiring the ability to communicate, lead, and implement business management in managing their business, properly and correctly. Particularly, entrepreneurship courses are lessons that shape the character of entrepreneurship or help students gain knowledge regarding the ins and outs of business both in terms of soft skills and hard skills so that they can take advantage the of opportunities around them in creating their own business while still in college or after graduation.

Wu and Wu (2008) examined the entrepreneurship intentions of Chinese students by comparing their educational background found that the Chinese students' entrepreneurial intention model was primarily influenced by the diversity of educational backgrounds except for the subjective norms of entrepreneurship, as shown in Figure 1.

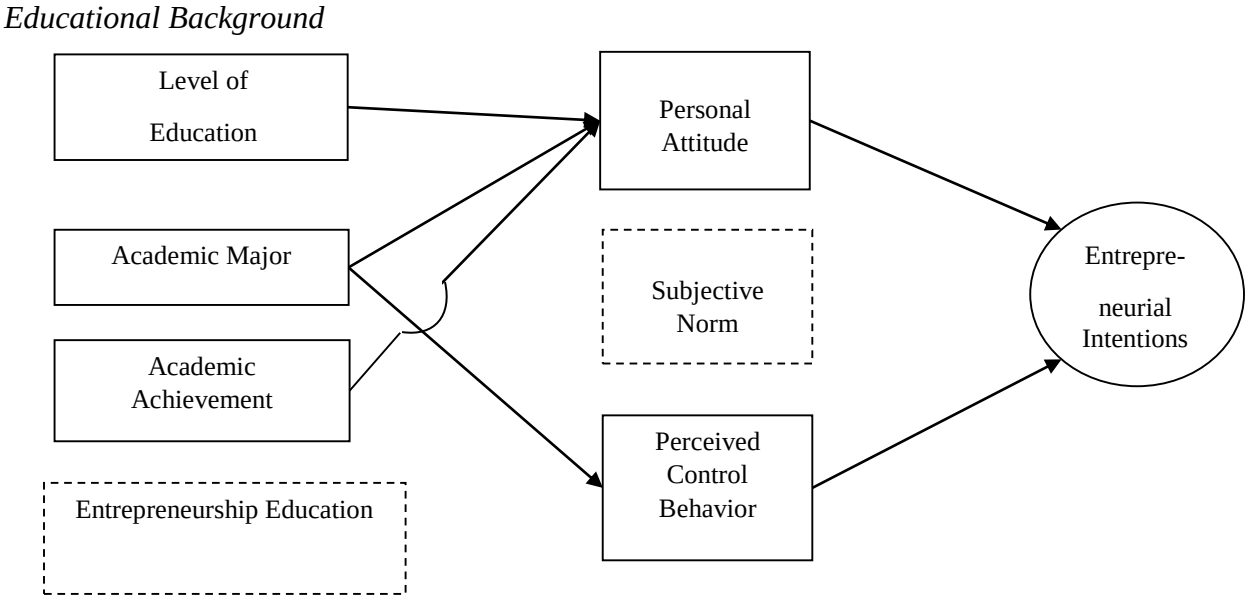
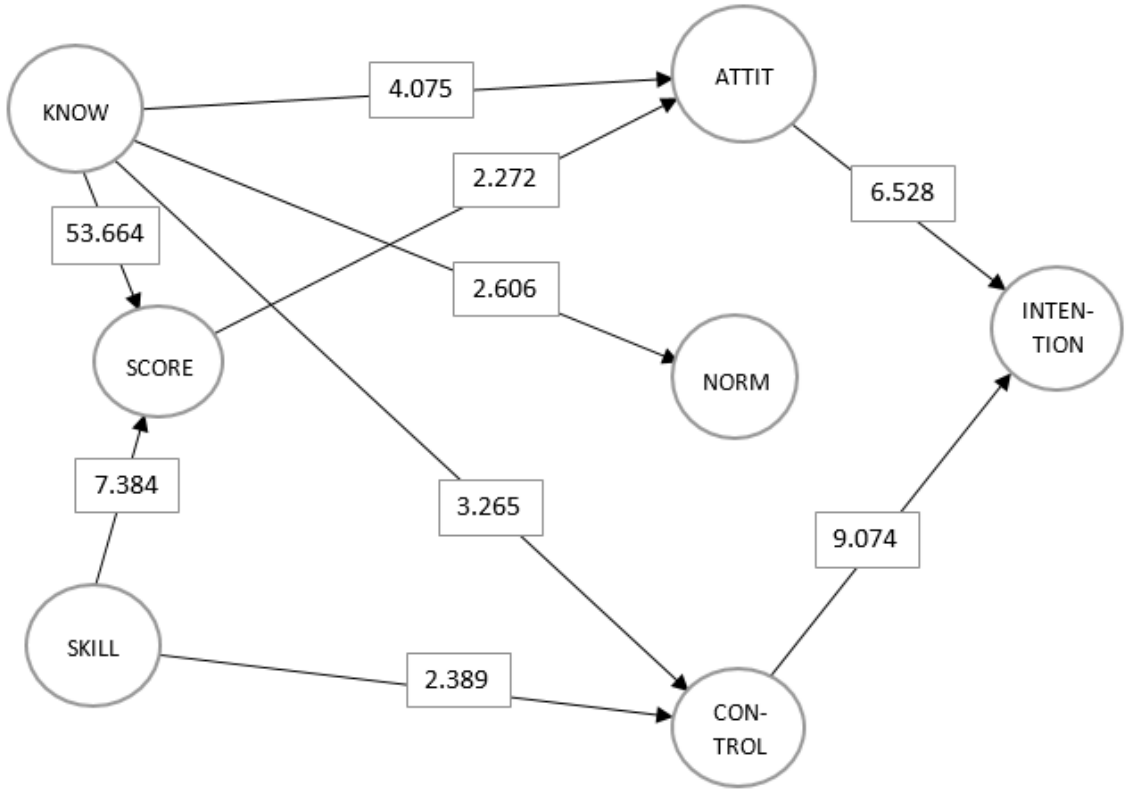


Figure 1. Results of the Model Entrepreneurial Intention Wu and Wu (2008).

Wu and Wu'S (2008) study involved 4 exogenous variables (Figure 1), namely the main field of science, the value of learning, and entrepreneurship education, and 4 endogenous variables, namely attitudes, subjective norms, perceptions of entrepreneurial behavior control, and entrepreneurial intentions. The 4 exogenous variables with respect to the theory of planning behavior are background intentions. Three endogenous variables, namely: attitudes, subjective norms, and perceptions of entrepreneurial behavior control with respect to the planning behavior theory are antecedent from intention, which functions as a mediating variable, while the one other endogenous variable is the entrepreneurial intention variable.

The involvement of the 3 types of exogenous variables in the Wu and Wu study (2008) included the level of education, main fields of science and learning achievement values, with variable mediating attitudes and perceptions of entrepreneurial control with the, towards endogenous variables of entrepreneurial intention. In accordance with the theory of planning behavior, this is the most comprehensive research in terms of the structure and components of the theory used, compared to the three studies by Ferreira, Raposo, Rodrigues, & Dinis, (2012), Krueger et al., (2000), and Liñán & Chen, (2009). The results of Daliman's study (2018) show that the theoretical model of student entrepreneurial intention is influenced jointly by knowledge and skills as

entrepreneurial learning outcomes, with a combination of mediation which is essentially the final value of entrepreneurial learning achievement and student attitudes towards entrepreneurship as shown in Figure 2.



Significance: t-statistic > 1.96, at p 0.05

Figure 2. Theoretical model of the intention of student entrepreneurship which is influenced jointly by knowledge and skills as entrepreneurial learning outcomes, with a combination of mediation, namely the final value of entrepreneurial learning achievement and student attitudes towards entrepreneurship.

This means implies that knowledge and skills as achievements in entrepreneurship learning can significantly influence the intention of student entrepreneurship, through a combination of certain mediation, namely the value of entrepreneurial learning achievement, student attitudes towards entrepreneurship, and entrepreneurial control. Daliman, Zainudin, Hadi, and Suhariadi's study (2019) found that the credit weight could be a moderator variable in influencing entrepreneurial

attitudes towards entrepreneurial intentions, but it cannot be a moderator variable for the influence of entrepreneurial subjective norms and perceptions of entrepreneurial control with respect to entrepreneurial intentions.

This research will be different from previous ones in the literature (Daliman, 2018; Daliman et al., 2019; Wu & Wu, 2008). The achievement of entrepreneurial learning competencies in this research will be a part of the level of entrepreneurship education in the research of Wu and Wu (2008). Variable levels of entrepreneurship education in the Wu and Wu study (2008) include a diploma or stratum with the achievement of entrepreneurial competencies that vary according to each level of education. The current research focuses on the strata 1 level.

Similarly, the differences in the model of the influence of achievement of entrepreneurial competencies on entrepreneurial intentions in this study are different from those of Daliman et al. (2019), which are distinguished based on student groups, namely male and female students. The results of this study are very important as data or information for future research to examine the antecedents of entrepreneurial intentions. Furthermore, the results are expected to provide a better understanding of the antecedents of student entrepreneurial intentions, especially with respect to learning through entrepreneurship courses. A conceptual framework has been provided. It visualized through the operational thinking flow chart in Figure 3.

Male (M) and female (F) student groups

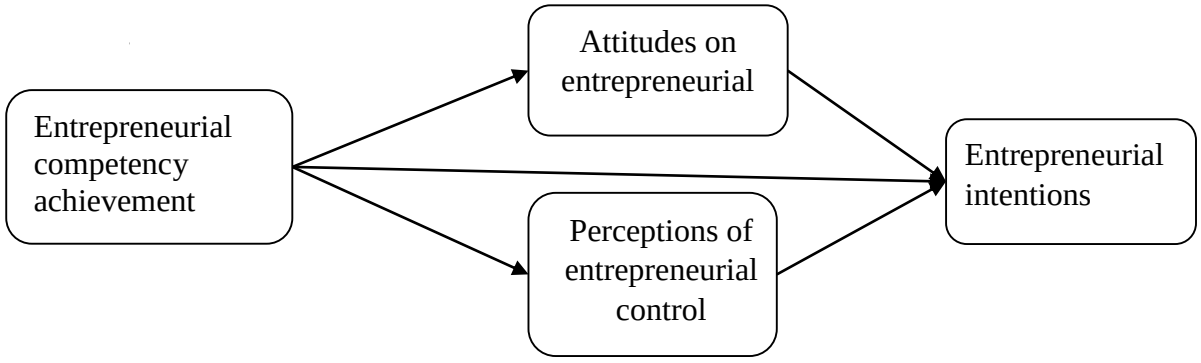


Figure 3. Conceptual Framework and Flow of Research Operational Thinking

Literature Review

Intention, Attitude towards Behavior and Perception of Behavior Control

Intention (Ajzen, 1991) is assumed to be a range of motivational factors that influence a behavior, also indicating the extent to which people are willing to attempt the engage in this behavior, and to which effort will be planned to be mobilized, in order to conduct the behavior. Intention has 4 aspects (Fishbein & Ajzen, 1975), namely: (1) Behavior, which is a specific behavior that will be realized later; (2) Targets, namely objects that are subject to behavior. Objects that are targeted by specific behavior can be classified into 3, namely people/certain objects (particular objects), groups of people/objects (a class of object) and people or objects in general (any object); (3) Situation, that is a situation that supports a behavior (how and where the behavior will be realized); (4) Time, which is the occurrence of behavior that includes a certain time in an unlimited period of time. It was further stated by Ajzen (2005) that there are 3 factors that can predict individual intentions, namely attitudes, subjective norms, and perceived behavioral control.

Based on this understanding, it can be concluded that intention is a set of motivational factors that influence a person's behavior, and the extent to which they will put effort and planning into mobilizing that behavior. Intention has 4 aspects, namely behavior, target behavior or specific objects and situations that support the conduct of behavior and time, namely where and when the entrepreneurship will be realized. There are 2 factors that can predict one's entrepreneurial intentions, namely attitudes, and perceived behavioral control.

Attitude towards Behavior

Attitude towards the behavior refers to the level of an individual’s evaluation of what is favorable or unfavorable for a behavior (Ajzen, 2005). Ajzen (2005) mentioned that attitudes towards behavior are determined by a combination of behavioral beliefs and outcome evaluations. Behavioral belief refers to one's belief about the positive or negative consequences of a particular behavior and outcome evaluation is an individual’s evaluation of the consequences that will arise from a behavior. Therefore, it can be concluded that individuals who feel confident that a behavior has positive consequences and can produce positive outcomes will have a positive attitude towards a behavior and vice versa. Based on this, it can be concluded that attitude towards behavior is the

degree of a person's positive or negative assessment of a behavior. Therefore, attitudes towards behavior comprise a combination of beliefs and evaluation of behavioral results.

Perception of Behavior Control

Perceived behavioral control that refers to the ease or difficulty of displaying certain behaviors as well as the assumptions made by individuals that reflect past experiences to anticipate obstacles (Ajzen, 2005). Ajzen (2005) further stated that perceived behavioral control is determined by control beliefs and power control. Control beliefs refer to one's beliefs about the existence – the absence of factors that support or hinder the emergence of a behavior. Perceived power control is the perception of the ability to control behavior or the ability to control behavior to achieve goals. The more the supporting factors and less the inhibiting factors, the more will be the ability to control behavior and the stronger the perceived behavioral control (Ajzen, 2005).

Background and Relationship of the Intention Antecedent

Furthermore Ajzen (2005) states that there are various factors behind the background of antecedent intentions; this can be divided 3 categories: individual, social, and informational. Individual factors consist of personality, mood, emotion, intelligence, values, stereotypes, general attitude, and experience. Social factors cover education, age, gender, income, religion/faith, race and ethnicity, and culture, and informational factors consist of knowledge, media and intervention. Figure 4 shows the schematic diagram of the background factors that influence intention in the theory of planned behavior (Ajzen, 2005).

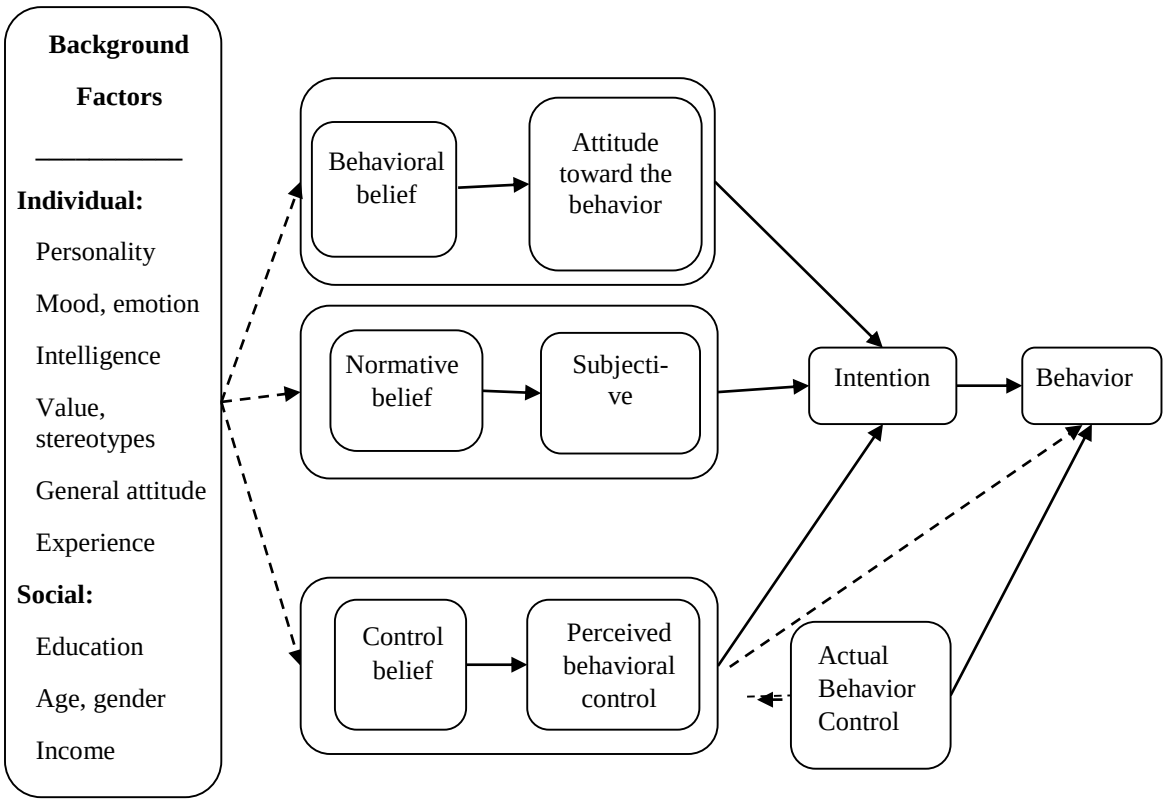


Figure 4. Theory of Planned Behavior

Entrepreneurial

The definition of entrepreneurship has been the subject of much debate (Abbassi & Sta, 2019). Low and MacMillan (1988) state that entrepreneurship is an effort to create a new business. According to Zimmerer, Scarborough, and Wilson (2008) entrepreneurship is the result of a discipline as well as a systematic process of applying creativity and innovation to meet market needs and opportunities. Kuratko and Hodgetts (2004) define entrepreneurship as a dynamic process of view, change and creation. Based on the various definitions, in this study the definition of entrepreneurship proposed by Zimmerer et al. (2008) has been used which describes entrepreneurship as the result of discipline and a systematic process of applying creativity and innovation to meet market needs and opportunities. This definition has psychological dimensions as well as economic dimensions.

Entrepreneurial Intention, Attitude and Control Perception of Entrepreneurship

If the definitions of intention, attitude towards, behavior and perception of behavior control discussed previously are applied to entrepreneurship, it can be stated that entrepreneurial intentions are a set of motivational factors that influence entrepreneurial behavior which indicate the extent to which a person is willing to engage in entrepreneurship and the amount of effort they are applying to plan and be mobilized in entrepreneurship (Schul, 2017). The intention of entrepreneurship has 4 aspects, namely entrepreneurial behavior that will be realized, specific behavioral goals or objects that are the target of entrepreneurial behavior, situations that support entrepreneurial behavior, and the time that is where and when the entrepreneurship will be realized. There are 2 factors that can predict one's entrepreneurial intentions, namely attitude and perceived entrepreneurial control behavior. Entrepreneurial attitude is a person's positive or negative assessment towards entrepreneurship. Attitudes towards entrepreneurship are determined by a combination of entrepreneurial beliefs and evaluation of entrepreneurial results. Perceived behavioral control of entrepreneurship refers to the ease or difficulty of displaying certain entrepreneurship behaviors as well as assumptions made by individuals that reflect past experiences as material anticipation in the face of entrepreneurial obstacles. Entrepreneurial perceived behavioral control is determined by entrepreneurial control beliefs and entrepreneurial power control. The factors underlying the anti-entrepreneurial intentions are divided into 3 categories: individual, social, and informational (Ajzen, 2005).

Achievement of Entrepreneurship Competency in Entrepreneurship Courses

Achievement of learning outcomes according to Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 49 Tahun 2014 concerning National Education Standards refers to learning outcomes from a particular teaching field, in the form of knowledge, attitudes, skills, competencies, and accumulated student work experience. Essentially, the achievement of entrepreneurship competency learning above by researchers is divided into 2 categories by researchers, namely entrepreneurial achievement competency in the form of knowledge and in the form of skills.

The following is the formulation of the 2 categories of achievement of entrepreneurial competencies (Direktorat Jenderal Pembelajaran dan Kemahasiswaan Ditjen Pendidikan Tinggi Kementerian Pendidikan & Kebudayaan [Dirjen Dikti], 2013): (1) Character; the ability to understand the importance of entrepreneurial character (Knowledge) and spontaneously automatically behaving according to this character based on one's understanding of it and making it a pattern in one's daily life (Skill); (2) Communication and Interpersonal; the ability to apply leadership and communication skills that are smooth and appropriate to motivate oneself and others so that they can become organized (Skill) and efficient individuals practicing productive communication (Knowledge); (3) Creativity and innovation; the ability to create alternative products and services and practicing efficient problem-solving (Knowledge) to provide a competitive advantage and make creativity a lifestyle (Skill); (4) Selling Products and Services; the ability to understand the process of selling products and services as a business pulse to both retail (Knowledge) and corporate consumers and being able to do it spontaneously and automatically in every opportunity and making it a lifestyle in one's daily life (Skill); (5) Business Financial Management; the ability to evaluate business management from planning to implementing spontaneously (Knowledge) and automatically in managing one's family and business assets and making it an efficient and effective lifestyle (Skill). Based on the description above, it is clear that 5 types of entrepreneurial competencies are addressed in entrepreneurship courses, which include character, communication and interpersonal competencies, creativity and innovation, selling products and services, and business financial management. Each of those courses can be categorized under the 2 broad achievements namely in the form of knowledge and skills.

Characteristics of Male and Female Students

According to Hungu (2007), gender is a difference between women and men biologically since a person is born. The term gender is also used for understanding gender in a non-biological way, namely sociologically where women are reconstructed as gentle beings, while men are powerful creatures. Furthermore, gender is also used to denote the difference in roles, behavior, temperament of men and women by culture/society through an interpretation of their biological differences.

Achievement of Entrepreneurial Competence and Attitude Entrepreneurship

Achievement learning outcomes are learning outcomes from a particular teaching area in the form of knowledge, attitudes, skills, competencies, and accumulated student work experience. Ghazali, Ibrahim, and Zainol (2013) found that entrepreneurship learning materials influenced students' attitudes in entrepreneurship. Packham, Jones, Miller, Pickernell, and Thomas (2010) found that entrepreneurship education obtained by students affected the attitude of students in entrepreneurship. Lestari and Wijaya (2012) found that entrepreneurial knowledge had a positive and significant effect on student attitudes towards entrepreneurship. Wright, Aron, McLaughlin-Volpe, and Ropp (1997) showed that teacher learning is a dominant factor that influences student's academic achievement, and academic achievement influences a person's attitude toward a behavior. Based on the description of some of the aforementioned research results when applied in this study, it can be stated that there is a possibility that when a student has high entrepreneurial competency achievements, they will have a high entrepreneurial attitude as well.

Achievement of Entrepreneurial Competence and Control Perception of Entrepreneurship

Wu and Wu (2008) found that there was a relationship between academic achievement and the level of control of entrepreneurial behavior. Obschonka, Silbereisen, and Schmitt-Rodermund (2011) found that early entrepreneurial competencies affected entrepreneurial control beliefs. In the case of entrepreneurial control beliefs affecting perceptions of behavioral control, it is possible that the achievement of entrepreneurial competencies influences perceptions of behavioral control. Similar research results were also described by Yang (2013) that there is a relationship between entrepreneurship education and the level of control of entrepreneurial behavior. Hermina, Novieyana, and Zain (2011) found that entrepreneurship course supports individuals' interest in being entrepreneurship. The knowledge gained during college is the basic capital used for entrepreneurship.

Research on the relationship between education and entrepreneurship intentions as conducted by Küttim, Kallaste, Venesaar, and Kiis (2014) showed that participation in entrepreneurship education was found to have a positive impact on entrepreneurial intentions. Barba-Sánchez and Atienza-Sahuquillo (2018) found that entrepreneurship education hasa positive contribution on

entrepreneurial intentions. The results of research related to the development of entrepreneurship by Razak et al. (2019) points out that there is a need to improve the current entrepreneurship curriculum to meet the needs of students with special needs in order to inspire and encourage entrepreneurship. Based on aforementioned research results when applied in this study, it can be stated that there is a possibility that when a student has high entrepreneurial competency achievements, they will a high level of control perception of entrepreneurship as well.

Relationship between Attitude Entrepreneurship and Entrepreneurial Intention

Ajzen (2005) mentioned that attitude is the disposition to respond positively or negatively to a behavior. If a person has an evaluation that a behavior will produce positive consequences, then the individual will tend to be favorable towards the behavior; conversely, if the individual has a negative evaluation, then the individual will tend to be unfavorable toward the behavior. This is supported by research results from Moi, Adeline, and Dyana (2011) conducted a sample of Malaysian students; it was found that entrepreneurial attitudes influenced the intentions of student entrepreneurship. Iakovleva, Kolvereid, and Stephan (2011) stressed that attitude has a relationship with intention; this agrees with Bektaş and Nalçaci (2012)'s study. Usman and Yennita (2019) through a structural test output, showed that attitudes towards entrepreneurship has a significant and direct positive effect on entrepreneurial intentions. Based on the various aforementioned research results when applied in this study, it can be stated that there is a possibility that when a student has a high entrepreneurial attitude, they will have strong entrepreneurial intentions as well.

Relationship between Control Perception of Entrepreneurship and Entrepreneurial Intention

Perceived behavioral control is an individual's perception of the ease or difficulty of performing certain behaviors (Ajzen, 2005). It is determined by a combination of control belief and perceived power control. Control beliefs are individual beliefs about supporting factors or obstacles to bring about a behavior. Perceived power control is the strength of individual feelings about each of these supporting or inhibiting factors. Autio, Keeley, Klofsten, Parker, and Hay (2001) found that perceived power control was an important influence on one's entrepreneurial intentions. De Pillis and DeWitt (2008) in their study found that there is a relationship between perceived behavioral control and intention. Similarly, Iakovleva et al. (2011) and Kautonen, Tornikoski, and Kibler

(2011) found that perceived behavior control has a relationship with entrepreneurial intentions. Liñán, Battistelli, and Moriano (2008) showed that perceived behavioral control is a good predictor for entrepreneurial intentions. Usman and Yennita (2019) through structural test outputs showed that perceived behavioral control had a significant and direct positive effect on entrepreneurial intentions. The various aforementioned research results when applied in this study indicate the possibility that when a student has a strong perceived power control, they will have strong entrepreneurial intentions as well.

Gender Role to the attitude entrepreneurship, control perception of entrepreneurship and entrepreneurial intention

Hungu (2007) explained that gender is the difference in roles, behavior, and temperament of men and women as perceived by culture/society through an interpretation of the biological differences between them. Crant's research (1996) with a sample of 181 students found that gender influences student entrepreneurship intentions with male entrepreneurial intentions being higher than that of women. Sarwoko (2011) found that male entrepreneurship intentions were higher than women. Similarly, Indarti, Rostiani, and Nastiti (2010) found that gender had a significant influence on entrepreneurial intentions among Taiwanese students. Research by Gupta and Turban (2008), with a sample of 469 students found that gender stereotypes influenced entrepreneurial intentions with men's intentions higher than women. Karimi and Alipour (2011) stressed that attitudes of male students towards entrepreneurship were more positive than that of women, but there was no difference between men and women in perceptions of entrepreneurial behavior control. Haque, Kabir, Rahman, Chowdhury, and Islam (2017) found that gender was not related to entrepreneurial intentions, entrepreneurial attitudes, and perceptions of entrepreneurial control. This is because the research participants belonged to urban communities such that entrepreneurship intentions are still relatively low. Based on the various aforementioned research results when applied in this study, it can be stated that there is a possibility of differences in the attitude towards entrepreneurship, control perception of entrepreneurship, and entrepreneurial intention on the basis of gender differences.

Gender Role to the Achievement of Entrepreneurship Competence

As mentioned by Hungu (2007), gender is the difference in roles, behavior, temperament of men and women as perceived by culture/society through an interpretation of the biological differences between them Yuniarti (2017) found that there is no difference in the learning achievement between male and female students of the Madrasah Ibtidaiyah, Teacher Education Study Program, Faculty of Tarbiyah and Education, UIN Aluddin Makassar. Robi (2017) claimed that male students had slightly better performance compared to the female students. Furthermore, some previous studies proved that there are significant differences between men and women in terms of academic performance with women performing better than men. In a study by Hdii and Fagroud (2018), the independent variables were subjects, the graduating classes, and gender. Subjects were classified into 3 main categories: scientific subjects (mathematics and statistics), technical subjects (agronomy and animal care), and language subjects (English and French). Hdii and Fagroud's (2018) claimed that girls were proven to be more likely to perform better than boys in some subjects such as agronomy, animal care, and language subjects (English and French). Research by Goni, wali S.B., Ali, and Bularafa (2015) on students at the College of Education in Borno State found that there was no difference in academic performance between male and female students. This might be due to the differences in the field of research. Based on the various aforementioned research results when applied in this study, it can be argued that there might be differences in the achievement of entrepreneurship competence on the basis of gender.

Method

Research Design

The approach used in this study was a quantitative approach with a survey research design. If seen from the incident, this research was ex-post - facto. This approach was chosen since this study gained data from the learning event held by an entrepreneurial lecturer. The learning event had occurred, namely, in the form of competency achievements in entrepreneurship learning outcomes, entrepreneurial intentions, attitudes, and perception of entrepreneurial control between male and female students. This study adopted the Structural Equation Modeling causality model, technique through Partial Least Squares (SEM-PLS), with a combination of two mediation.

Population and Sample

The population of this study is 878 students who enrolled to Entrepreneurship courses in the even semester of 2015-2016 academic year. The students came from 17 out of 22 study programs at Universitas Muhammadiyah Surakarta. The subjects were determined using a cluster and proportional random sampling technique by considering the study program group and the number of respondents. The total number of subjects in this study was 192, consisting of 96 male and 96 female students represented from 5 different faculties. A proportion of 9.9% men and 8.3% women were from the psychology faculty. The students of economics faculty were 13.4% men and 17.2% women. Respondents who took entrepreneurship courses from pharmacy faculty were 7.8% men and 10.4% women. The students from the education faculty were 5.2% male and 11.4% female, and the respondents from the faculty of engineering were 13.5% male and 2.6% female.

Variables and Measurements

The endogenous variable in this study was entrepreneurial intentions, and the exogenous variable was the achievement of entrepreneurial competence. The attitude and perception of entrepreneurial control were placed as mediating variables in the model. The entrepreneurship intention variable had 3 indicators, namely, behavior, situation, and time. Each indicator consisted of 2 items so that the number of items of the entrepreneurial intention variable was 6 items.

The achievement of the entrepreneurial competence variable consisted of 5 indicators, namely, indicators of entrepreneurial personality, communication, leadership and motivation, innovation and creativity, and marketing and management. Each indicator consisted of 2 dimensions, namely knowledge and skills. Then, the number of items of knowledge and skill dimensions on the entrepreneurial personality, indicator consisted of an item. Besides, the number of items of knowledge dimensions in the indicators of communication, leadership and motivation is 3 items, while the skill dimension consisted of an item. Moreover, the number of items of knowledge and skill dimensions of each indicator of the entrepreneurial innovation and creativity indicator, marketing indicator, and management indicator was an item. Thus, the total number of items in the achievement of the entrepreneurial competence variable was 12 items.

The entrepreneurial attitude variable had 2 indicators, namely behavioral beliefs indicators, namely behavioral beliefs indicator, which consisted of 3 items, and evaluation results indicator, which consisted of 2 items. Thus, the number of items in the entrepreneurial attitude variable was 5 units. Meanwhile, the perceptions of entrepreneurial behavior variable has 2 indicators, namely entrepreneurial behavior beliefs and entrepreneurial strength control. Each indicator consisted of 3 items. Thus, the number of variable items perceptions of entrepreneurial behavior was 6 items.

Based on the description above, it was known that the overall items used in this study were 29 items. Judging from the relationship of indicators with the research construct, it was found that there were 20 items in the second-order construct type and 9 items in the first-order construct type. The second-order construct was found in the variables of entrepreneurial attitudes, perceptions of entrepreneurial control, entrepreneurial intentions, and achievement of entrepreneurial competence, only in the indicator of leadership and motivation, for the knowledge dimension. However, the first-order construct was found in the achievement of entrepreneurial competence variable in all indicators and dimensions, except for the knowledge dimension in the indicator of leadership and motivation.

The first step in the measurement analysis on PLS was to test each item in the second-order construct by looking at the results of outer loading. The outer loading results of the second-order construct in male and female students obtained outer loading >0.7. Based on these results, it could be concluded that the items at the second-order level met the validity requirements and could be used to form indicators in accordance with the research construct.

Furthermore, after it was known that the items in the second-order had fulfilled the validity requirements, a simplification was done by adding the items in one score. Each indicator would be obtained in each research construct consisting only of a score. At this stage, the total score as an indicator in each research construct was described as follows. The entrepreneurial intention variable had 3 scores/indicators, and the entrepreneurial competency achievement variable consisted of 5 indicators. Each indicator had 2 dimensions so that it becomes 10 score /indicators.

The entrepreneurial attitude variable had 2 scores/indicators, and the perceptions of the entrepreneurial behavior variable had 2 scores/indicators. The construction of indicator relationships with the research construct up to this stage was included in the first-order category.

Based on this description, the total score/indicator in this study was 17 pieces, both for male and female students. Furthermore, a re-measurement analysis was performed on the 17 score/indicators of this study, in order to determine whether these indicators were valid or not.

The results of repeated measurements of the first-order items found that as many as 5 indicators were not valid in male students, and 6 in women, with an outer loading value < 0.7, while other indicators obtained outer loading values > 0.7. Because there were still invalid indicators, the second measurement was repeated by removing the invalid indicators. The number of indicators to be estimated in stage 2 for male students was 12 indicators, while women were 11 indicators. The results of the re-measurement of stage 2 showed that all indicators had an outer loading > 0.7, as shown in Table 1 for male students and Table 2 for female students.

Table 1

Student Male Loading Factor

Achievement	Loading Factor	Attitude	Loading Factor	Perception	Loading Factor	Intention	Loading Factor
Ach1	0.840	Att1,4	0.950	Percp1,2,6	0.964	Int1,4	0.968
Ach2,3,4	0.881	Att2,3,5	0.928	Percp3,4,5	0.968	Int2,6	0.956
Ach5	0.888					Int3,5	0.951
Ach6	0.843						
Ach7	0.870						

Table 2

Student Female Loading Factor

Achievement	Loading Factor	Attitude	Loading Factor	Perception	Loading Factor	Intention	Loading Factor
Ach2,3,4	0.875	Att1,4	0.973	Percp1,2,6	0.953	Int1,4	0.929
Ach5	0.742	Att2,3,5	0.974	Percp3,4,5	0.946	Int2,6	0.928
Ach6	0.898					Int3,5	0.935
Ach7	0.818						

It implied that all first-order items for both male and female students met the validity requirements, so it could be concluded that all indicators of research instruments in this measurement analysis

met the convergent requirements of validity. The Average Variance Extracted (AVE) results in this study showed that AVE values for all constructs were higher than 0.50. Therefore, it could be concluded that the scale in this study had fulfilled convergent and discriminant validity criteria.

Composite reliability and Cronbach's Alpha calculation results on achievement of entrepreneurial learning competencies, entrepreneurial intentions, perceptions of control of entrepreneurial behavior, and student attitudes towards entrepreneurship for both male and female students showed p-values <0.05; so, it can be concluded that all constructs have good reliability as in Table 3 and 4.

Table 3

Student Male Composite reliability and Cronbach's Alpha

Latent Variable	Composite reliability	Cronbach's Alpha
Achievement	0.937	0.915
Attitude	0.937	0.867
Perception	0.965	0.928
Intention	0.971	0.956

Table 4

Student Female Composite reliability and Cronbach's Alpha

Latent Variable	Composite reliability	Cronbach's Alpha
Achievement	0.902	0.856
Attitude	0.974	0.947
Perception	0.948	0.891
Intention	0.951	0.923

Procedures

The data collection process was coordinated with the permission granted from Universitas Muhammadiyah Surakarta. Questionnaires were distributed to the representative sample (university students). They were administered in the last lecture of the semester with the

permission of the lecturer. Research assistants helped the researchers on the process of data collection process. The full confidentiality of the data processing and presentation only for scientific purposes was ensured. It should be noted that throughout the process of data collection, the students were agreed to participate in the study without any hesitation.

Data Analysis Technique

Data analysis was performed with the Structural Equation Modeling (SEM) technique through Partial Least Square (PLS) (Ghozali & Latan, 2015) in a multiple group analysis, with a significance level of 5%. The calculation was done with the help of Smart PLS 3.1.7 software. Data analysis was carried out in with the following steps:

1. The path coefficient of the bootstrapping table was calculated to obtain the price of the path coefficient and error standard in each group.

2. The difference between the formula Smith-Stterthwait (Chin, 2000) was tested as follows.

$$t = \frac{Path_{sample\_1} - Path_{Sample\_2}}{\sqrt{S.E._{sample1}^{2} + S.E._{sample2}^{2}}}$$

Description:

Sample path 1 : Path coefficient for male group

Sample path 2 : Path coefficient for female group

S.E sample 1 : The standard error value of the male group

S.E sample 2 : Standard error value of the female group

Research Results

Hypotheses Testing

Based on the direct hypotheses tests' results (Table 5 & 6), it could be stated that:

1. Hypothesis 1 obtained a statistical r-value of 0.007 for males and 0.107 for females, and p>0.05; the hypothesis analysis was rejected, which means that the entrepreneurial competency achievements have no significant effect on the entrepreneurial intentions.

2. Hypothesis 2 obtained a statistical r-value of 0.615 for males and 0.408 for females, and p<0.05; the hypothesis of analysis was accepted, which means that entrepreneurial competency achievements have a significant influence on the entrepreneurial attitudes.

3. Hypothesis 3 obtained a statistical r-value of 0.590 for males and 0.490 for females, and p<0.05; the hypothesis of analysis was accepted, which means that entrepreneurial competency achievements have a significant influence on the perception of entrepreneurial control.

4. Hypothesis 4 obtained a statistical r-value of 0.280 for males and 0.494 for females, and p<0.05; the hypothesis of analysis was accepted, which means that entrepreneurial attitudes have a significant influence on the entrepreneurial intentions.

5. Hypothesis 5 obtained a statistical r-value of 0.552 for males and 0.352 for females, and p<0.05; the hypothesis of analysis was accepted, which means that perceptions of entrepreneurial control have a significant influence on the entrepreneurial intentions.

Table 5

Direct Effect, PLS Results for Male Student

Variable	Attitude	Perception	Intention
Achievement	0.615**	0.590**	0.007
Attitude			0.280**
Perception			0.552**

**Significant at p<0.05

Table 6

Direct Effect, PLS Results for Female Student

Variable	Attitude	Perception	Intention
Achievement	0.408**	0.490**	0.107
Attitude			0.494**
Perception			0.352**

**Significant at p<0.05

Moreover, based on the indirect tests, which helped to answer the main hypothesis 1 (Table 7), it could be stated that achievement of entrepreneurial competencies had a significant positive effect on entrepreneurial intentions, by mediating a combination of attitudes and perceptions of entrepreneurial control for both male (0.364) and female (0.374) students, which p <0.05.

Table 7

The Mediating Effect Model PLS Results for For Male and Female Student on The Main Hypothesis 1

Gender	Variable	Path to		Intention
Male	Achievement	Attitude	Perception	0.364**
Female	Achievement	Attitude	Perception	0.374**

**Significant at p<0.05

The test of path difference of main hypothesis 2 could be analyzed by observing the results of the path coefficient calculation and the standard deviation from the indirect test results in male and female students, at a significance level of 5%. The statistical analyses (Table 8) showed that t-statistic value is 0.918 with p-value > 0.05. It implies that there is no difference between the 2 paths to influence the achievement of entrepreneurial competence on entrepreneurial intentions, by mediating a combination of entrepreneurial attitudes and perceptions of entrepreneurial control, between male and female students. Based on the results of this study, it could be concluded that gender could not function as a moderator variable control.

Table 8

The Test Results of Path Difference on The Main Hypothesis 2

Variable				Componen	Gender		t-Statis-
Exogenous	Mediation		Endogenous		Male	Female	tic
Competency achievement	Entrepreneurial attitudes	Perceptions of entrepreneurial control	Entrepreneurial intentions	*Path coefficient*	0.498	0.374	0.918
				Deviation Standard	0.113	0.074	

**Significant at p<0.05

Discussion

Based on the results of the research hypothesis test 1, it was found that the achievement of entrepreneurial competence had no significant effect on entrepreneurial intentions, both for male and female students, with a value of p> 0.05. It means that the higher the achievement of entrepreneurial competence of students after attending the entrepreneurship course is not followed, the higher the entrepreneurial intentions. It could be explained that although students already had high entrepreneurial competency achievements, however in general, most respondents were in the 4th and 5th semesters. They were still far from the possibility of graduating, or still a long way to start practicing their entrepreneurial skills so that they still did not have a strong intention to become an entrepreneur immediately. The results of this study are in accordance with the theory of planning behavior proposed by Ajzen (2005), which states that personal characteristics, social factors, and information factors do not directly influence intentions. The student's entrepreneurship competency achievement after taking entrepreneurship courses is part of individual factors in the form of entrepreneurial experience or skills and information factors in the form of entrepreneurial knowledge. Based on the description above, it can be stated that the achievement of entrepreneurial competence of students after attending entrepreneurship lectures does not significantly influence the intentions of student entrepreneurship directly. Nevertheless, this study result contradicts with the previous finding which mentions that the entrepreneur courses affect the students' entrepreneurial skills (Bonesso, Gerli, Pizzi, & Cortellazzo, 2018; Solesvik, 2019).

The test results of research hypotheses 2 and 3 show that the analysis hypotheses are accepted. The achievement of entrepreneurial competence has a positive effect on the attitudes and perceptions

of student entrepreneurial behavior control, which means that the higher the achievement of entrepreneurial competencies, the higher the attitudes and perceptions of student entrepreneurial behavior control. It means that a student has the higher entrepreneurial attitudes and the perception of entrepreneurial control, if he/she has entrepreneurial knowledge and skills as an entrepreneurial learning achievement, including personality traits, communication, and interpersonal understanding, innovative and creative, and business management. The higher the entrepreneurial attitude means the more positive, profitable, and satisfied someone in entrepreneurship.

The coefficient value of the effect of the entrepreneurial competence achievement on the attitudes and perceptions of student entrepreneurial control is 0.379 and 0.348. Based on the results of these coefficients, it can be seen that the values of R Square are respectively of 0.14.7 and 0.12.1. It means that the variability of student entrepreneurial attitudes can be explained by the variability of entrepreneurial competency achievements by 14.7%, while other factors outside the study explain 85.3%. The variability of students' perceptions of entrepreneurial control can be explained by the variability in the knowledge of entrepreneurial learning outcomes of 12.1%, while other factors outside the study explain 87.9%. Based on this analysis, it can be concluded that the role of the variability of entrepreneurial competence achievement on the variability of attitudes and perceptions of student entrepreneurial behavior control is relatively small, which is a maximum of 14.7%, although each has a significant influence.

The results of this study are in accordance with the theory of planned behavior (Ajzen, 2005), which states that attitudes and perceived behavioral control are determined by the achievement of one's experience and knowledge, which includes the achievement of entrepreneurial competencies. The results of this study support the research results of Ghazali et al. (2013) who found that entrepreneurial learning materials influenced students' attitudes towards entrepreneurship. The results of the study by Packham et al. (2010), who found that entrepreneurship education obtained by students influenced the attitude of students towards entrepreneurship. Lestari and Wijaya (2012) shows that entrepreneurial knowledge has a positive and significant effect on attitudes towards student entrepreneurship. Research Hermina et al. (2011) found that the Entrepreneurship course supports their interest in being entrepreneurs. The knowledge gained during college is the basic capital used for entrepreneurship. The results of this study are also supported by the results of

(Obschonka et al., 2011), who found that early entrepreneurial competencies affected entrepreneurial control beliefs. In terms of entrepreneurial control, beliefs affect the perception of behavioral control so that the achievement of entrepreneurial competence influences the perception of entrepreneurial behavior control. The results of this study are also consistent with the results of research Yang (2013), which found that there is a relationship between entrepreneurship education with the level of control of entrepreneurial behavior. Based on the description above, it can be stated that the factors that influence attitudes and perceptions of student entrepreneurial behavior control in this study are the achievements of entrepreneurial competence, with the influence of both is relatively the same.

The test results of research hypotheses 4 and 5 show that the analysis hypotheses are accepted. The attitude and perception of student entrepreneurial behavior control have a significant positive effect on student entrepreneurship intentions after attending entrepreneurship lectures. Based on the theory of Planned Behavior (Ajzen, 2005), attitudes are determined by the belief in behavior and the outcome of a behavior. It means that the attitude towards student entrepreneurship in the belief of entrepreneurial behavior is that if students have the opportunity and resources, then they will start an entrepreneur. Also, if there are several choices, then students prefer to choose to become an entrepreneur who is already formed as part of their personalities. In terms of assessing the results of student entrepreneurship, being an entrepreneur will bring benefits, an attractive career, and satisfaction to students, which then influences students' entrepreneurial intentions. Perceived behavioral control (Ajzen, 2005) is determined by a combination of control belief and perceived power control. Control beliefs are individual beliefs about supporting factors or obstacles to bring about a behavior. Perceived power control is the power of individual perception of each of these supporting or inhibiting factors. This means that the perception of control of student entrepreneurial behavior, both from the control of entrepreneurial behavior and the strength of control of entrepreneurial behavior have a very significant effect on student entrepreneurial intentions. Based on the description above, it was stated that attitudes towards entrepreneurship and perceptions of student entrepreneurial behavior control influence student intentions on entrepreneurship.

The results of this study support the results of research by Liñán and Chen (2009) showing that attitudes towards entrepreneurship have a relationship with one's entrepreneurial intentions.

Iakovleva et al. (2011) found that attitude has a relationship with intention, as well as the results of Bektaş and Nalçaci (2012). Research by Ghazali et al. (2013) and Moi et al. (2011) shows that attitudes towards entrepreneurship are positively related to entrepreneurial intentions.

The results of the influence of the perception of control of student entrepreneurial behavior on student entrepreneurial intentions in this study, according to the results of the study of Autio et al. (2001) who found that perceived power control influences one's entrepreneurial intentions. Research by Liñán and Chen (2009) found that entrepreneurial perceived behavioral control has a relationship with one's entrepreneurial intentions. Furthermore, the results of the research by Iakovleva et al. (2011) found that attitudes toward a behavior and perceived behavior control behavior have a relationship with behavioral intentions. The results of De Pillis and DeWitt (2008) research found that there is a relationship between perceived behavioral control and intention. Research by Liñán and Chen (2009) found that perceived entrepreneurial control behavior has a relationship with one's entrepreneurial intentions. Likewise, Iakovleva et al. (2011) and Kautonen et al. (2011) found that perceived behavior control has a relationship with intention. Based on the description above it can be stated that when a student has many supporting factors for entrepreneurship, then the individual will have a strong intention to bring up the entrepreneurial behavior.

The indirect test results on main hypothesis 1 show that entrepreneurial competency achievement influences entrepreneurial intentions through a combination of 2 mediating variables, namely attitudes and perceptions of entrepreneurial control for both male and female students. Based on these findings for both male and female students, the higher achievement of entrepreneurial competence will be followed by higher intention of student entrepreneurship, through higher entrepreneurial attitudes and higher perception of entrepreneurial control. Achievement of entrepreneurial competencies in male students consists of 5 fields of competence which include character, communication and interpersonal, creativity and innovation, selling of products and services and business financial management, while for female students it consists of 4 fields of competence, in addition to character, communication and interpersonal, creativity and innovation, selling of products and services, and business financial management. The results of this study support the results of Daliman's study (2018) even with fewer subjects. Daliman's research (2018)

found that student entrepreneurial intentions are influenced jointly by knowledge and skills as an achievement of entrepreneurial learning. The results of this study support the results of Yıldırım, Özgür, and Aşkun (2016) who found in that educational program gender influences entrepreneurial intentions.

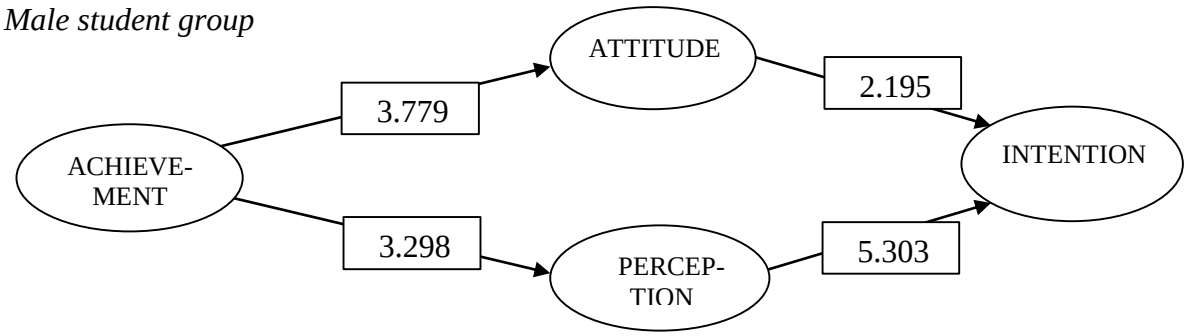
Overall, the results of this study also support the results of research by Packham et al. (2010) and Ghazali and Zainol (2012) who found that entrepreneurship education obtained by students influenced their attitudes toward entrepreneurship. Similarly, this study 's results agree with those of Hermina et al. (2011), Obschonka et al. (2011), Yang (2013) who found that entrepreneurship education affects the level of entrepreneurial behavior control. Particularly, these research results also supported the finding by Ambad and Damit (2016); Lestari and Wijaya (2012), Miranda, Chamorro-Mera, and Rubio (2017), and Wu and Wu (2008) that entrepreneurial attitudes influence entrepreneurial intentions. The results showed that attitudes towards the usefulness of websites have links with intentions to shop online. Miranda et al. (2017) found that entrepreneurial attitudes influence entrepreneurial intentions. Similarly, the results of this study also support the results of Wu and Wu (2008) who found that the perception of entrepreneurial behavior control affected entrepreneurial intentions.

The indirect tests' results on main hypotheses 2 suggested that there was no difference between the 2 paths of the effect of entrepreneurial competency achievement on entrepreneurial intentions by mediating a combination of entrepreneurial attitudes and perceptions of entrepreneurial control between male and female students. Based on the this study, gender cannot function as a moderator variable (Ghozali & Latan, 2015) for the influence of entrepreneurial competency on entrepreneurial intentions between male and female students by mediating a combination of student entrepreneurial attitudes and perceptions of entrepreneurial control. This finding implied that between male and female students, there is no different theoretical model of influence of achievement of entrepreneurial competence on entrepreneurial intentions by mediating a combination of entrepreneurial attitudes and perceptions of entrepreneurial control. When compared to the results of the study, the direct influence of various research variables is related; the results of this study are different from those of Gupta and Turban (2008), and Kickul and Krueger (2005) who found that male students' entrepreneurial intentions were higher than women. It is also different from the results of Crant (1996), Gupta and Turban (2008), Kolvereid (1997),

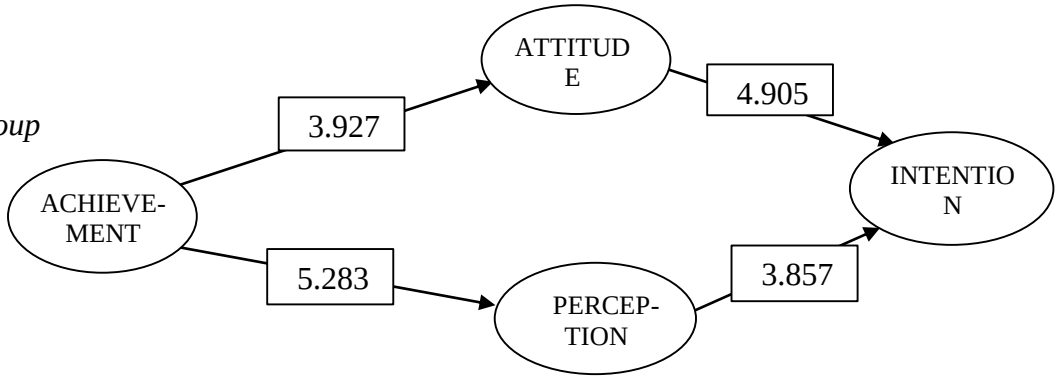
Matthews and Moser (1996), Mazzarol et al. (1999), Sarwoko (2011), and Schiller and Crewson (1997) who found that male students had a different level of entrepreneurial intention than female students. The results of this study are different from the results of research conducted by Karimi and Alipour (2011) who found that male students' entrepreneurial attitudes were higher than women.

However, the results of this current study supports the results of research Gupta and Turban (2008), Indarti, Rostiani, and Nastiti (2010), and Karimi and Alipour (2011) who found that there were no differences in entrepreneurial intentions between male and female students. Similarly, the results of this study supports the results of research by Karimi and Alipour (2011) and Gupta and Turban (2008) who found that there was no difference in the perceptions of entrepreneurial behavior control between men and women. Karimi and Alipour (2011) found that attitudes towards entrepreneurship of male students were higher than women. Based on the results of the test and the discussion, it can be concluded that there is no difference in the model of the effect of entrepreneurial competency achievement on entrepreneurial intentions between male and female students by mediating a combination of student entrepreneurial attitudes and perceptions of entrepreneurial control. The research results model is as shown in Figure 5.

Male student group



Female student group



Significance: t-statistic > 1.96, p 0.05

Figure 5. Research Results Model

In connection with the results of the study that gender cannot function as a moderator variable for the influence of entrepreneurial competency achievement on entrepreneurial intentions between male and female students by mediating a combination of student entrepreneurial attitudes and perceptions of entrepreneurial control, hence, in entrepreneurship learning, there is no need to distinguish between male and female students.

Conclusion

Based on the results of the test and the discussion above, it can be concluded that student entrepreneurial competency achievement after attending entrepreneurship lectures does not directly influence student entrepreneurial intentions. However, it has an indirect effect on the students' entrepreneurial intentions by mediating a combination of attitudes and perceptions of entrepreneurial control. The achievement of student entrepreneurship competencies after attending entrepreneurship courses directly influences the attitudes and perceptions of entrepreneurial control. The attitude and perception of entrepreneurial control directly influence the intentions of student entrepreneurship. There is no difference in the model of the effect of entrepreneurial competency achievement on entrepreneurial intentions between male and female students by mediating a combination of student entrepreneurial attitudes and perceptions of entrepreneurial control. Therefore, gender cannot function as a moderator variable on the effect of entrepreneurial competency achievement on entrepreneurial intentions between male and female students by mediating a combination of student entrepreneurial attitudes and perceptions of entrepreneurial control.

Research Limitations

This study has limitations, namely the difference in the number of fields of entrepreneurial competency achievement between male and female students. Students have a complete range of 5 competency fields namely character, communication and interpersonal fields, creativity and innovation, selling of products and services, and business financial management, while female students only have 4 fields of competency, namely communication and interpersonal, creativity

and innovation, selling of products and services, and business financial management, without competency in the field of character. Therefore, the entrepreneurial competence of this character field for students needs to be further investigated in the future.

Acknowledgement

We thank the Faculty of Psychology, Universitas Muhammadiyah Surakarta for granting us permissions to conduct the research. This research received specific grant from Universitas Muhammadiyah Surakarta.

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