administrative sciences

MDPI

Article

Investigating the Structural Effect of Achievement Motivation and Achievement on Leadership and Entrepreneurial Spirit of Students in Higher Education

Bambang Budi Wiyono [1,*] and Hsin-Hung Wu [2]

[1] Educational Administration Department, Faculty of Education, Universitas Negeri Malang, Malang 65145, Indonesia
[2] Department of Business Administration, College of Management, National Changhua University of Education, Changhua County 500, Taiwan
* Correspondence: bambang.budi.fip@um.ac.id

Abstract: Today, it can be seen in the real world that many students are unemployed after graduating from college or university. Two soft skills are taught to determine the success of graduates at work, namely leadership and entrepreneurial spirit. The purpose of this study was to examine the structural effect of achievement motivation and achievement on student leadership and entrepreneurial spirit. This research was conducted in Indonesia, with a total sample of 789 students, through random sampling. Questionnaires and documentation techniques were used to collect the data, and then the data were analysed using descriptive statistics and structural equation modelling. The results showed that both exogenous variables, namely achievement motivation and achievement, affected both endogenous variables, but that achievement motivation had a stronger influence on student leadership and entrepreneurial spirit. In addition, the effect of achievement motivation was higher on entrepreneurial spirit than on leadership, whereas leadership influenced the entrepreneurial spirit of the students only to a small extent. The influences of these variables were then thoroughly discussed according to the theories and relevant research.

Keywords: achievement motivation; achievement; leadership; entrepreneurial spirit; higher education; students

Citation: Wiyono, Bambang Budi, and Hsin-Hung Wu. 2022. Investigating the Structural Effect of Achievement Motivation and Achievement on Leadership and Entrepreneurial Spirit of Students in Higher Education. *Administrative Sciences* 12: 99. https://doi.org/10.3390/admsci12030099

Received: 22 June 2022
Accepted: 4 August 2022
Published: 10 August 2022

1. Introduction

It is widely known that higher education is one of the most dominant factors in developing a country. Therefore, development will succeed if it is supported by qualified human resources that can only be produced through a good education system in higher education. One of the indicators of success is if it can produce successful graduates in a community.

Nowadays, many tertiary education graduates have not yet reached the expected indicator. There are a lot of university alumni who have not yet managed to find jobs in the real world. Based on the data from the Central Statistics Agency in 2019, there are 839,019 graduates from all Indonesian tertiary institutions who are still unemployed. The number is equivalent to 12.3 percent of the total open unemployment, which is as many as 6,816,840 people (Central Bureau of Statistics 2019). This shows that the expectation of universities to produce graduates who are competent, ready to work, and able to compete in the job market has not been fully achieved. The COVID-19 pandemic tended to increase the number of unemployed people due to the decline in the corporate sector.

Based on the Strategic Plan of the Ministry of National Education, one of the impacts of the low quality of the education system is the graduates' low entrepreneurial spirit. They tend to choose to work rather than create their own business. The data show that the higher the level of education people take, the greater the percentage of those working as

workers, laborers, or employees. In fact, those who work as employees comprise roughly 83.1%. On the contrary, new businesses are created by those taking lower education levels (Kemendiknas 2010). This shows the graduates' entrepreneurial spirit is still low.

On the other hand, universities have the responsibility to create future leaders. For this reason, they need to strengthen their students' leadership and entrepreneurship competencies. Moreover, some research results indicate that student leadership and entrepreneurial abilities are still relatively low, so this has to be improved (Farida and Anjani 2019; Indarti 2004; Sutanto et al. 2018). The question concerning how the relationship between the two variables works, and what variables affect both of them, has attracted much attention. Therefore, this study was carried out.

2. Literature Review

2.1. Student Leadership

Leadership is the process of encouraging others to perform certain activities to achieve certain goals. Based on its components, there are four elements of leadership, namely the person who assists and is a leader, the person who is being assisted and is a member, the situation of the mobilization activity, namely the organization, and the purpose, which is the target of the activity being performed.

There have been a lot of leadership theories proposed by experts. The first theory that was developed was the trait theory. Leadership effectiveness is determined by the qualities of the leader (for example, being honest, open, friendly, and so on). Stogdil and Bass classified them into two categories, namely traits, which include assertive, influential, cooperative, self-confident, energetic, and responsible, and skills, which include smart, creative, fluent in speaking, and possessing conceptual abilities and social skills (Lunenburg and Ornstein 2000).

Then, there is a type of leadership called behavioural-based, for which one of its theories is a two-dimensional leadership theory. The leader's behavioural orientation refers to two dimensions, namely people-oriented, which emphasizes the peer relationship and trust, warmth, and harmony between leaders and members, and task-oriented, which emphasizes the task structure, preparation of the work plans, setting of work methods, and procedures to achieve goals. Based on several research results, it has been found that every organization does not effectively apply the same leadership style. Therefore, situational leadership is developed, including Fiedler's contingency leadership theory, Vroom and Yetton's normative contingency theory, Kerr and Jermier's substitutes theory, House's path–goal theory, and Hersey and Blanchard's theory of situational leadership (Hoy and Miskel 2005).

In later development, the success of leadership does not only emphasize the behaviour displayed by the leaders in the group, but the behaviour of the members in the organization is also important. For this reason, transformational leadership is developed. This emphasizes efforts to transform organizational values to the members. Idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration are the main dimensions of leadership (Hoy and Miskel 2005). Idealized influence indicates behaviour that builds trust and respect in followers and accepts fundamental change in the ways individuals and organizations carry out their work. Inspirational motivation encourages and makes members have high morale to perform tasks and believe that an excellent organizational vision can be achieved. Intellectual stimulation stimulates followers to be innovative and creative. Individualized consideration pays particular attention to each individual's need for achievement and growth. The leader provides support and encourages and coaches the followers. Leadership theory widely refers to today's situation, which is used in this study. Moreover, transformational leadership has proven to be effective in increasing the performance of the members and the development of educational organizations (Wiyono 2018). Higher education lecturers have to develop student leadership competencies. Therefore, it is necessary to understand what factors influence leadership. There are several research findings on which variables influence leadership. Piaw and

Ting (2014) found out that school grade, school type, gender, age, working experience, and educational background influence the leadership style. Mozhgan et al. (2011) also proved that individual factors, students' experience, and the university environment influence student leadership abilities. On the other hand, Othman et al. (2012) revealed that the key elements that contribute to a successful leadership style are inspirational motivation, individualized consideration, and active management by exception. These factors refer to the dimensions of transformational and transactional leadership. Furthermore, the results of Algarni et al. (2018) showed that 24 factors influenced leadership performance. Thanh and Anh (2015) presented that traits and skills influenced leadership style and effectiveness. Based on those results, it can be concluded that individual characteristics affect leadership effectiveness. The individual characteristics can be seen in competence and motivation. However, a more dominant variable still needs to be investigated thoroughly.

2.2. Student Entrepreneurship Skills

Entrepreneurship is the process of doing or producing something new that is different from previous activities and is supported by the willingness and courage to take risks (Vidyatmoko and Hastuti 2017). Entrepreneurship can be defined as a process of doing something (creative), being different (innovative), and daring to take risks as well (Schimperna et al. 2022). The mission of entrepreneurship is to improve economic growth, employment, industrial structure, and the welfare of society. In addition, entrepreneurship also secures socially and ecologically sustainable economic growth (Heinonen and Hytti 2016).

People who run businesses are called entrepreneurs. To be an entrepreneur, an individual needs to have an entrepreneurial spirit, which means the attitude, willingness, and behaviours of individuals to handle businesses or activities that lead them to put in the effort to find, create and apply new ways of working, technology, and products to provide services or gain profits. It is also shown by the characteristics of having a strong will to work with an independent spirit, being able to make appropriate decisions, daring to take risks, being creative and innovative, persevering, being conscientious and productive, and having a spirit of togetherness and business ethics.

Entrepreneurial spirit is related to the characteristics, intentions, ability, will, and behaviours of entrepreneurship, namely decision-making capability, innovation capability, social capability, resource integration capability, self-exploration capability, market insight capability, management capability, good psychological quality, and adaptability (Yin and Wang 2017). Lastariwati et al. (2016) found fifteen entrepreneurial behaviours, namely being creative, being innovative, being independent, being responsible, being honest, being leading, being persistent, being disciplined, being cooperative, being action-oriented, being hardworking, being communicative, being risk-taking, being evaluative, and being reflective. Sanchez (2013) identified the specific personality traits linked to entrepreneurship, namely self-efficacy, proactiveness, and risk-taking. In another study, Sutanto and Eliyana (2014) identified entrepreneurial characteristics, which include: being honest, being innovative, being creative, having a vision of the future, persevering, working seriously, having good planning, and having a good reputation. Based on this theory and previous studies, it can be concluded that there are main dimensions of entrepreneurial spirit, namely innovation, challenge taking, hard work, being results-oriented, independence, skill in business, and being future-oriented.

Higher education institutions, including colleges and universities, need to develop their students' entrepreneurial spirit. In addition, the quality of higher education contributes to the formation of students' entrepreneurial abilities (Alves et al. 2018). Entrepreneurship education needs to be improved in universities. Entrepreneurship is a very important aspect for the economic growth of a country. Entrepreneurship is a powerful driver of economic growth and job creation. When studied further, the development of entrepreneurs depends a lot on entrepreneurship education in educational institutions. Entrepreneurship education is one aspect that encourages rapid economic growth. There

is a very strong relationship between entrepreneurship education and job creation and economic growth (Banha et al. 2022). The main element of entrepreneurship education program content is entrepreneurial skills that enable students to be able to face market challenges, such as a sense of initiation, problem-solving, innovation, creativity, and teamwork (Jardim et al. 2021). However, there is still a gap between entrepreneurship education and entrepreneurs. Entrepreneurship education only emphasizes knowledge, lacking in providing real entrepreneurial competencies. Likewise, the learning methodology has not been emphasized on the practice and creation of an environmental ecosystem to create entrepreneurship (Banha et al. 2022). Therefore, this needs to be studied in Indonesia, especially in universities related to the academic experience gained by students.

Student entrepreneurs are individuals attending award classes at university and conducting innovative and revenue-generating entrepreneurial activities. In the broadened concept it refers to all students involved in actively running any enterprising activities. They are creative individuals with a passion for helping others. University struggles to produce student entrepreneurs. Therefore, there are three missions affecting student entrepreneurship. The first mission refers to teaching that is based on the development of a proactive and innovative entrepreneurial character in students. The second mission refers to the research and relies on structural transformation to share and commercialize the university's intellectual property. The third mission is to transform the university into a teaching, research, and economic development enterprise (Schimperna et al. 2022).

When viewed more deeply, to be able to form students' entrepreneurial spirit, many factors are thought to have an influence, both internally and externally. Therefore, it is necessary to examine the factors that influence it. To enhance the spirit of entrepreneurship, the factors that influence it are necessary to be examined further. The results of a study conducted by Vidyatmoko and Hastuti (2017) found that variables that influenced business success were classified into several factors, namely demographic, psychological, work behaviour, competence, organization, resources, technical assistance, and external environmental factors. In line with previous work, the results of Sanchez's research (Sanchez 2013) showed that entrepreneurship education influenced student business interests. Then, Nieuwenhuizen and Kroon (2002) found several main factors that determine the success of a business, namely the willingness to take risks, involvement in business, quality of work, knowledge, and skills, and entrepreneurial commitment. On the other hand, Daim et al. (2016) proved that gender and national origin affected the interests of student entrepreneurs. Sutanto et al. (2018) showed that five entrepreneurial mindsets influenced one's entrepreneurial performance, namely innovativeness, competitive aggressiveness, risk-taking, pro-activeness, and autonomy.

Based on the results of those studies, it can be underlined that there are internal and external factors that affect an individual's entrepreneurship skills. The motivation factor is one of the factors that is considered to be dominant in determining entrepreneurial behaviour. Education is an external factor that is also believed to have a strong influence on students' entrepreneurial spirit. The level of the influence of these two variables needs to be examined more deeply. The relationship between the dimensions of leadership and the entrepreneurial spirit of students is also still a question.

2.3. The Achievement Motivation and the Achievement of Students

Two factors are considered to have a dominant influence on student leadership and entrepreneurial spirit, namely motivation and achievement. Motivation is a hidden power in human beings that drives an individual to act uniquely. Moreover, motivation can give direction and intensity to one's behaviour.

There are a lot of motivational theories, including Maslow's hierarchical needs theory which states five basic human needs, namely physical, security, social, needs of being valued, and self-actualization needs. Herzberg's motivational theory suggests two factors that encourage humans to work, specifically, motivator factors, which include achievement, recognition, responsibility, progress, and work, and then hygiene factors, which include

salary, position, the possibility to grow, policy and administration, work conditions, technical supervision, personal life, and job security. In addition, Vroom's expansion theory mentions three determinants of employees' work motivation, namely expectations, valence, and equipment, and McClelland presented the achievement motivation theory (Hughes et al. 1999). From those theories, this concept can be classified into two categories, namely motivation, which refers to content and process theory. Content theory emphasizes the impulses that exist in humans, whereas process theory views motivation as a combination of humans' needs and conditions to meet their needs (Kowalsky 2003).

On the other hand, Hughes et al. (1999) classified it into four categories, namely approaches referring to the theory of needs, the theory of individual differences, cognitive theory, and situational theory. The theory of needs emphasizes human need factors such as Maslow's needs theory, the theory of existence relatedness growth by Alderfer, and Herzberg's two-factor theory. The theory of individual differences emphasizes the differences in the forces of motivation within individuals, including Alkin's achievement orientation theory, McClelland's need for achievement (N-Ach) or achievement motivation theory, and intrinsic motivation theory. Cognitive theory emphasizes the process of awareness of an individual's thoughts in deciding actions to achieve goals (for example, goal setting theory and expectancy theory). Furthermore, situational theory emphasizes the aspects of a situation that affect motivation, such as job characteristic models and operant approaches. Individuals who have high achievement motivation tend to be competitive, be responsible for solving problems, strive to achieve social acceptance, enjoy the task of receiving feedback, and like to take moderate risks (Hughes et al. 1999).

Based on the classification, achievement motivation theories include the classification of content theory and individual differences theory. McClelland said that individuals with a strong need for achievement were competitive, liked taking responsibility for solving problems, strived to accomplish socially acceptable endeavours and activities, preferred tasks that provided immediate and ample feedback and were moderately difficult, and felt satisfied when they successfully solved work problems or accomplished job tasks (Hughes et al. 1999). The characteristics of a person with high achievement motivation showed high orientation, such as a willingness to accept relatively high risks, the desire to receive feedback about their work, and the desire to achieve the responsibility of problem-solving (Nasution 2010). Moreover, Ajiwibawani et al. (2017) indicated that success-oriented, responsible, needing feedback, taking risks, and working hard are the indicators of achievement motivation. Based on this theory and previous studies, it can be concluded that the main dimensions of achievement motivation are taking moderate risks, receiving feedback, calculating success, and integrating with the tasks.

The research results of Wiyono (2015) showed that learning motivation strongly influenced students' academic achievement. Pravesti et al. (2020) also found that there was a motivational effect on the self-regulation of learning. Moreover, Zhao et al. (2018) found that students' achievement motivation influences the adaptation of students' cognitive control. The study results of Wigfield and Eccles (2000) also proved that achievement motivation influences task choice and achievement. Therefore, thorough research needs to be conducted to examine how far the influence of achievement motivation is on student leadership and entrepreneurial spirit.

Students' achievement reflects the learning outcomes achieved by students in the form of knowledge, skills, or attitudes. They can be classified into two, namely academic and non-academic achievement. Academic achievement is achievement in curricular activities, known as grade point average. This is the result of learning in the form of knowledge, attitudes, or skills completed by the students, which is indicated by a value on the students' report cards, while non-academic achievement refers to achievement in extracurricular activities, for example in comprehension, art, sports, and organization. Since achievement reflects the learning experience of students, it can be concluded that it influences the leadership and entrepreneurial spirit of the students.

Based on the results of some studies, it can be underlined that achievement motivation and achievement are considered as one of the factors that affect student leadership and entrepreneurial spirit. The curricular and extracurricular activities in higher education institutions are assumed to contribute to develop those two variables, but it is still a question that remains to be explored. Of the two exogenous variables, the variable that has the more dominant influence still needs to be investigated thoroughly. Moreover, the effect of leadership on student entrepreneurial spirit is also unclear. The study results of Krauss and Hamid (2015) indicated that academic programmes and academic years did not influence students' motivation to lead in higher education, but campus factors and campus involvement influence their motivation. Moreover, Rina's (2019) research results showed that leadership activities could increase the entrepreneurial spirit of students. The study results of Jackson and Tomlinson (2020) show that students who reported more positive perceptions of the current labour market were more likely to develop higher self-perceptions of employability. The students had a greater sense of control over their careers. However, the influence of students' achievement motivation and achievement on their leadership and entrepreneurial spirit and the effect of the leadership on their entrepreneurial spirit remain to be determined. Therefore, it still needs to be proven empirically.

For this reason, this study was carried out. The purpose of this study was to examine the effect of achievement motivation and students' achievement on their leadership and entrepreneurial spirit, both directly and indirectly, to find dominant variables, and to explain the influence of the variables. Achievement is more indicative of student competence, while achievement motivation is more indicative of student motivation, which is more dominant between the two variables is not yet known. Thus, the results of the research will be able to reveal these two problems so that it can be used as a basis for increasing the effectiveness of entrepreneurship education in order to produce new entrepreneurs.

The research hypotheses proposed are: (1) achievement motivation affects student leadership directly; (2) academic and non-academic achievement affect student leadership directly; (3) achievement motivation has both a direct and indirect effect on student entrepreneurial spirit; (4) academic and non-academic achievement affect students' entrepreneurial spirit both directly and indirectly; and (5) leadership directly affects the student's entrepreneurial spirit.

3. Methods

3.1. Research Design

This study aimed to find the structural influence of achievement motivation and student's achievement on their leadership and entrepreneurial spirit. Following the objectives, this study used a causal explanatory modelling research design, namely testing the model empirically to determine how well the theoretical model built fits with empirical data in the field (Johnson and Christensen 2004).

3.2. Research Samples

The population targeted in this study was public education university students, which consisted of twelve universities in Indonesia. Six universities were located in Java, and six universities were located outside Java, and most of them have the same characteristics. For this reason, two random universities were chosen as samples, namely the State University of Malang, representing a university in Java, and Makassar State University, representing a university outside Java. The sampling technique used was the "random sampling" technique.

The total population is 64,870 students, which is divided into 38,802 students from the State University of Malang and 26,068 students of the State University of Makassar. Based on the Krejcie and Morgan formula, that is:

$$S = \frac{X^2\ NP\ (1-P)}{d^2\ (N-1) + X^2\ P\ (1-P)}$$

According to the Krejcie and Morgan formula, the number of samples taken was 382 (Isaac and Michael 1995). With reference to it and the population characteristics, in order to increase the level of data representation, a larger sample was taken, namely 791 students, consisting of 521 students from the State University of Malang and as many as 270 students from the State University of Makassar, representing eight faculties, with 557 female students and 234 male students. Broadly speaking, the number of samples is presented in Table 1.

Table 1. The research samples.

University	Female	Male	Total
State University of Malang	192 (71.10%)	78 (28.9%)	521 (65.86%)
State University of Makasar	365 (70.10%)	156 (29.9%)	270 (34.13%)
Total	557 (70.4 %)	234 (29.6%)	791 (100%)

The number is based on population data as a whole since the number of female students is more than male. Thus, the sample is quite representative.

Following the objectives, two data collection techniques were used to obtain data in this study, namely questionnaires and documentation. Questionnaires were used to collect data on achievement motivation, achievement, leadership, and student entrepreneurial spirit, and documentation was used to complete the data obtained through questionnaires, especially data that were documentary, for example, the grade point average of the students.

3.3. Research Instruments

The research instrument was developed based on the research variables. There were four instruments used, namely open questionnaires used to explore student achievement index and non-academic achievement, and the summated rating-type questionnaires used to measure students' achievement motivation, leadership, and entrepreneurial spirit. The open questionnaire is complemented by an analysis of the documentation.

The achievement motivation instrument was developed based on the achievement motivation construct of McClelland and other experts, which was translated into 24 instrument items divided into four dimensions, namely the dimensions of taking moderate risks, receiving feedback, calculating success, and integrating with tasks (Hughes et al. 1999; Wedhayanti et al. 2020). Taking moderate risks includes completing tasks according to ability, refusing difficult work, carrying out challenging work, and challenging work spurring achievement. Receiving feedback includes trying hard to achieve the best results compared to others, believing in your ability to achieve success, and being enthusiastic about your work receiving awards. Calculating success includes, among others, liking to create new things, liking to perform work according to specific interests and abilities, trying to produce the best achievements, and the achievements being used to improve performance. To integrate with tasks includes, among others, the best achievements becoming a priority in life, and always completing the work.

The leadership instrument was developed based on the structure of leadership transformation, consisting of twenty-four items divided into four dimensions, namely idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Hoy and Miskel 2005; Khan et al. 2020). Idealized influence includes carrying out tasks on time, keeping promises, being trusted by members, following the interests of the institution rather than personal. Inspirational motivation includes conveying the vision and mission, encouraging members to achieve organizational goals, working hard with enthusiasm, increasing cooperation, and expecting members to work with high standards. Intellectual stimulation, including introducing new programs or methods, encouraging members to use new programs or methods, rewarding members who use or develop new programs or methods. Individualized consideration includes, among others, assigning tasks according to the characteristics of members, meeting member expectations, providing opportunities for members to develop according to their abilities, and helping members to excel. The four dimensions of leadership are translated into twenty-four instrument items.

Each instrument has five choices, namely strongly agree, with a score of 5; agree, with a score of 4; undecided, with a score of 3; disagree, with a score of 2; and strongly disagree, with a score of 1, for a positive statement, whereas negative statements are given a reverse score. To obtain a valid and reliable instrument, an instrument trial was conducted. One hundred students from the same population were taken for the instrument trial. The type of empirical validity analysed was construct validity using item analysis and the instrument reliability index was estimated using the Cronbach alpha formula. The results of the reliability analysis are presented in Table 2.

Table 2. The results of the reliability and validity analysis.

Variables	Reliability		Validity	
	Alpha Cronbach	Status	Items Analysis	Status
Achievement Motivation	r_{ii} = 0.885	Reliable	$r > 0.3$	Valid
Leadership	r_{ii} = 0.930	Reliable	$r > 0.3$	Valid
Entrepreneurial Spirit	r_{ii} = 0.895	Reliable	$r > 0.3$	Valid

Based on Table 2, it can be seen that the reliability value of the three instruments is above 0.7; thus, it can be concluded that the instruments are reliable (Martens 2010). The result of item analysis also shows that all items have a correlation coefficient with the total items of >0.3. That means that each item supports the construct of the variables. Thus, it can be concluded that all of the instruments are valid and reliable.

3.4. Data Analysis Technique

Following the research objectives, the data analysis technique used is structural equation modelling. This technique is used to test the model and the magnitude of the structural effect of exogenous variables on endogenous variables, and endogenous variables on endogenous variables. This analysis technique includes two models, namely the measurement and the structural model analysis. The measurement model is intended to test the support of instrument items on the construct dimension of variables, while the structural model is aimed at testing the direct and indirect effects of exogenous variables on endogenous variables, and endogenous variables on other endogenous variables. Through testing the model, it is known that there is a structural relationship between academic achievement, achievement motivation, leadership and student entrepreneurial spirit, either directly or indirectly. Goodness-of-fit criteria used for the interpretation of results are chi-squared values, goodness-of-fit (GFI), normed fit Index (NFI), and root-mean-square-error of approximation (RMSEA).

4. Results

As per the research objectives, the main analytical technique used in this study is structural equation modelling. For this reason, it is carried out in two stages. The first step is to test the measurement model to see the loading factor of each variable. The second step is in the form of a structural model to test the effect of exogenous variables on endogenous variables, or endogenous variables on endogenous variables.

4.1. Results of Measurement Model Analysis

Analysis of the first measurement model is performed on endogenous variables of achievement motivation. For this reason, a confirmatory factor analysis technique is used. The results of the confirmatory factor analysis using the Lisrel (linear structural relations) programme are presented in Figure 1.

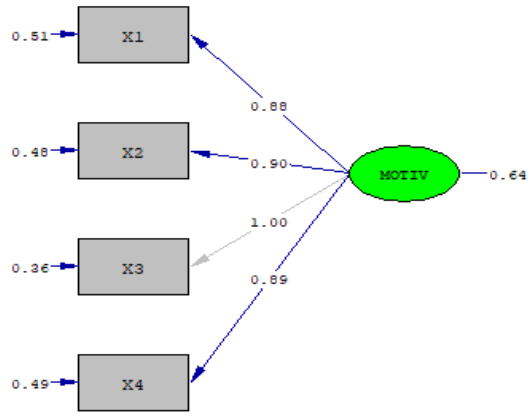

Figure 1. Measurement model of achievement motivation variable of students.

Based on Figure 1, it can be seen that the dimensions of achievement motivation variables, namely taking moderate risks (X1), obtaining feedback (X2), calculating success (X3), and integrating with tasks (X4) are the main variables of achievement motivation. The chi-squared value was 3.230 with p = 0.199 (>0.05). The goodness-of-fit index (GFI) value was 0.998 (>0.9), the normed fit index (NFI) value was 0.997 (>0.9), and the root-mean-square error of approval (RMSEA) value was 0.028 (<0.08). Thus, the hypothetical model that was formulated fits the data in the field. The magnitude of the factor loadings of each indicator towards the latent variable is indicated and is presented in Table 3.

Table 3. The measurement model of student achievement motivation variable.

Latent Variable	Observed Variable	Lambda
Achievement Motivation	Taking moderate risk	0.703
	Obtaining Feedback	0.721
	Calculating Success	0.801
	Integrating with Tasks	0.713

The second analysis is a leadership competency measurement model. Following the theory, there are four leadership dimensions tested, namely the dimension of idealized influence (X1), inspirational motivation (X2), intellectual stimulation (X3), and individualized consideration (X4). Broadly speaking, the results of the data analysis are presented in Figure 2.

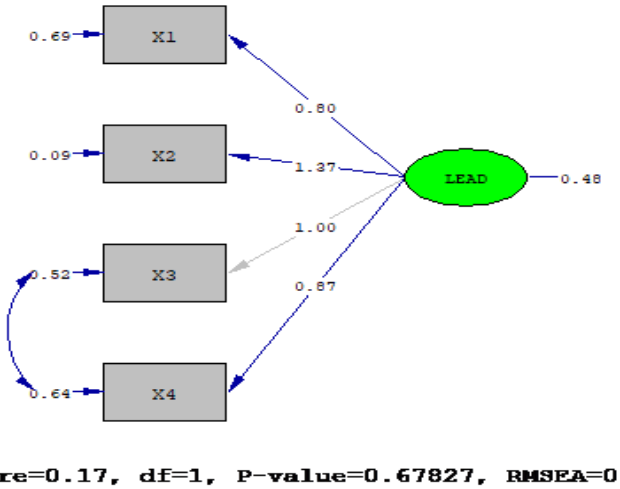

Figure 2. Measurement model of leadership variable of students.

Based on Figure 2, it can be seen that the dimensions of student leadership competency variables can be accepted. The chi-squared value was 0.172 with p = 0.678 (>0.05). The goodness-of-fit index (GFI) value was 1.0 (>0.9), the normed fit index (NFI) was 1.0 (>0.9), and the root-mean-square error of approval (RMSEA) value was 0.00 (<0.08). Thus, the proposed hypothetical model fits the data in the field. The magnitude of the factor loadings of each indicator towards the latent variable is indicated and is presented in Table 4.

Table 4. The measurement model of leadership variable.

Latent Variable	Observed Variable	Lambda
Leadership	Idealized influence	0.554
	Inspirational motivation	0.952
	Intellectual stimulation	0.695
	Individualized consideration	0.604

The third variable analysed is the measurement model of student entrepreneurship competency. In line with the theory, there are seven dimensions of entrepreneurial spirit being tested, namely the innovative dimension (X1), challenge taking (X2), hard work (X3), result-oriented character (X4), independence (X5), skill in business (X6), and future-oriented character (X7). Broadly speaking, the results of the analysis of the measurement of student entrepreneurship competency models are presented in Figure 3 as follows.

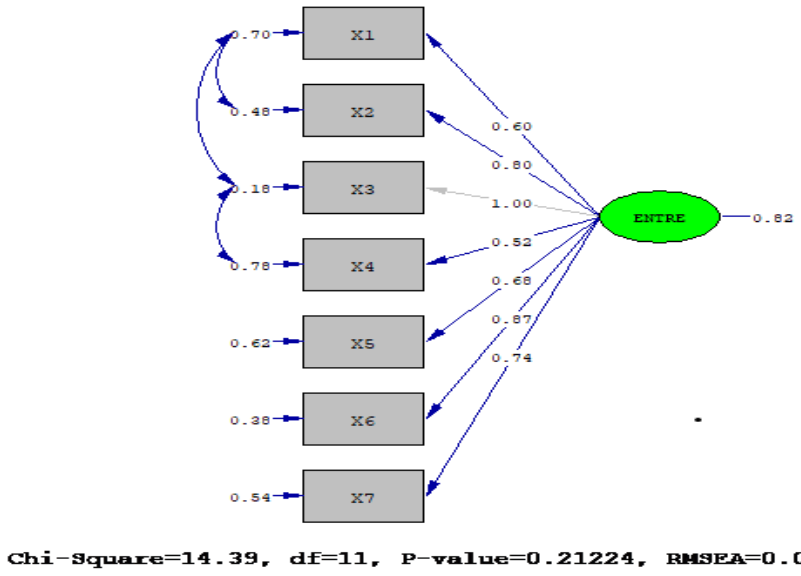

Figure 3. Measurement model of entrepreneurial spirit of students.

Based on Figure 3, it can be seen that the dimensions of student entrepreneurship competency variables can be accepted. The chi-squared value was 14.663 with p = 0.198 (>0.05). Goodness-of-fit Index (GFI) values were 0.995 (>0.9), normed fit index (NFI) values were 0.994 (>0.9), and the root-mean-square error of approval (RMSEA) value was 0.02 (<0.08). Thus, the hypothetical model proposed is also compatible with data in the field. The magnitude of the factor loadings of each indicator towards the latent variable is indicated and is presented in Table 5.

Table 5. The measurement model of entrepreneurship spirit variable of students.

Latent Variable	Observed Variables	Lambda
Entrepreneurship Spirit	Innovative	0.548
	Challenges Taking	0.724
	Work Hard	0.907
	Result Oriented	0.572
	Independent	0.614
	Skill in Business	0.788
	Future-Oriented	0.675

4.2. Results of Structural Model Analysis

The following analysis is carried out to examine the structural influence of some exogenous variables on endogenous variables to determine the determinant factors that affect entrepreneurial competence and student leadership. For this reason, there are four variables tested, namely student achievement motivation, student achievement, leadership competence, and student entrepreneurship competency. Broadly speaking, the results of the model analysis are presented in Figure 4.

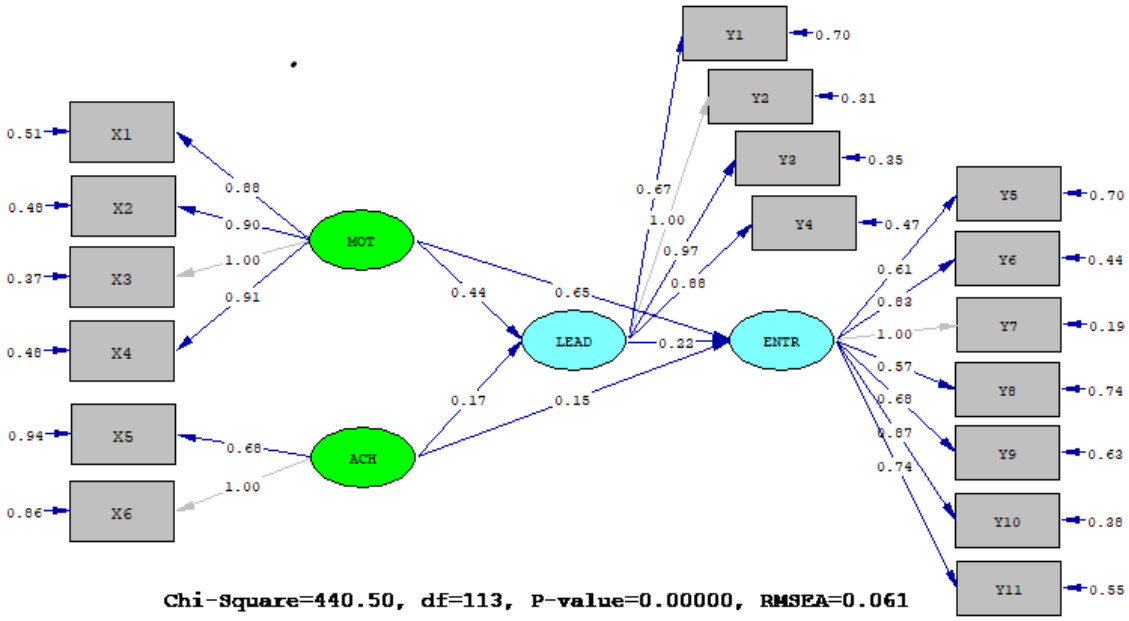

Figure 4. Structural effects of achievement motivation, achievement, leadership, and student entrepreneurial spirit. MOT = Achievement Motivation. ACH = Achievement. LEAD = Leadership. ENTR = Entrepreunership.

Based on Figure 4, it can be underlined that the hypothetical model that was built proved to be compatible with the data in the field. These are shown by several indicators. The goodness-of-fit index (GFI) value was 0.938 (>0.9), the normed fit index (NFI) value was 0.922 (>0.9), and the root-mean-square error of approval (RMSEA) value was 0.06 (<0.8). Thus, the proposed hypothetical model fits the data in the field. The coefficient of influence between variables is presented in Table 6.

Table 6. Coefficient of structural influence of exogenous and endogenous variables.

Exogenous Variable	Endogenous Variables	Direct Effects	Indirect Effects
Student Achievement	Leadership	0.174	
Achievement Motivation		0.437	
Student Achievement	Entrepreneurial Spirit	0.149	0.038
Achievement Motivation		0.649	0.096
Endogenous Variables	Endogenous Variables		
Leadership	Entrepreneurial Spirit	0.220	

Based on Table 6, it can be underlined that the four variables have a direct influence on each other. Achievement motivation is a variable that has a dominant influence on student leadership and entrepreneurial spirit. Achievement affects the leadership and entrepreneurial spirit of students but is relatively lower when compared to achievement motivation. Leadership has a positive effect on the entrepreneurial spirit of students, but the coefficient is also relatively low. These results need to be discussed in depth.

5. Discussion

Based on the results of the study, it was found that achievement motivation had a significant direct effect on student leadership and entrepreneurial spirit. The achievement also directly affects the leadership and entrepreneurial spirit of students, but its effect coefficient is relatively low compared to achievement motivation. This shows that achievement motivation has a higher contribution to student leadership and entrepreneurial spirit compared to achievement. The findings of this study need to be further discussed so that they can be understood rationally.

The dimensions of achievement motivation variables are linked to the dimensions of leadership and entrepreneurial spirit. For example, someone who has high achievement motivation will dare to take risks with consideration and calculated success. These individuals will work hard to achieve their best. These characteristics determine the development of leadership behaviour, especially the dimensions of idealized influence and inspirational motivation. Likewise, these characteristics also encourage students to increase their entrepreneurial spirit, especially in the behavioural dimension of working hard to achieve success. Therefore, achievement motivation is a dominant predictor of student leadership and entrepreneurial spirit.

The findings of the study are in line with some of the results of previous studies. The results of the study by Mardisentosa et al. (2018) show that high motivation to learn influences students' interest in entrepreneurship. The results of Widayat and Ni'matuzahroh's (2017) research show that there is an influence of attitudes on the enthusiasm and interests of student entrepreneurship. Motivation is based on emotions and goals related to achievement, and the need for self-achievement has been attributed to entrepreneurial behaviour (Barba Sánchez and Atienza-Sahuquillo 2012).

When examined further, the coefficient of the influence of achievement motivation on the entrepreneurial spirit is higher than leadership. This is due to the fact that the construct of the achievement motivation variable gives a greater contribution to the construct of entrepreneurial spirit. The dimensions of the achievement motivation construct are determinants of the dimensions of the entrepreneurial spirit construct. If someone has high achievement motivation, there is a great chance for them to become an entrepreneur. The higher one's achievement motivation is, the higher the entrepreneurial spirit one can have. Conversely, achievement motivation is not the main determinant of leadership. Other variables are dominant determinants of one's leadership quality. This is reinforced by the absence of an indirect effect of achievement motivation variables on students' entrepreneurial spirit.

The findings of the study corroborate several previous studies. Sabiu et al.'s (2018) results show that there is a significant positive relationship between achievement motivation and entrepreneurial persistence. The meta-analysis conducted by Collin et al. (2004)

shows that achievement motivation correlates significantly with entrepreneurial career choices and entrepreneurial abilities. The research results of Nasution (2010) also show that there is a significant relationship between achievement motivation and entrepreneurial leadership quality. The findings of Sutanto and Eliyana (2014) indicated that achievement motivation significantly affects student entrepreneurship attitudes as well. Moreover, Ajiwibawani et al. (2017) find that achievement motivation significantly influences students' entrepreneurial attitudes. Therefore, it can be concluded that achievement motivation is the dominant variable that determines entrepreneurial spirit.

This finding is following the results of research by Alwi et al. (2021), which indicated that the big five, emotional intelligence, and commitment have a dominant effect on organization citizenship behaviour. The results of research by Rahayu et al. (2018) also showed that emotional intelligence influences teacher innovation. The big five variables, emotional intelligence, and organisational commitment contain dimensions that refer to the dimensions of achievement motivation, such as self-awareness and self-motivation. The research results of Citriadin et al. (2019) indicated that attitude influences performance. The study results of Sofian et al. (2019) also showed that work discipline and self-actualization affect teacher performance. Work discipline and self-actualization show characteristics that are in line with the dimensions of achievement motivation as well. Thus, the findings of this study are in line with the results of previous studies.

The second research finding shows that the effect of achievement on the leadership and entrepreneurial spirit of students is present to a low extent. Achievement has little effect on the leadership and entrepreneurial spirit of students. This is allegedly due to the fact that the materials given in the core subjects of the study programme do not fully develop students' leadership or entrepreneurial spirit. Extracurricular activities that are followed by students during this time also do not emphasize the development of leadership competencies and students' entrepreneurial spirit. This finding is in line with the results of Arranz et al.'s (2016) research, which shows that there is an effect of curricular and extracurricular activities on students' business attitudes, but a low effect on the ability and interest in starting a student business. The study results of Krauss and Hamid (2015) also showed that there is no effect of academic programme and academic year on students' motivation to lead. The research results of Morris et al. (2017) also show that there is a positive influence of involvement in curricular and co-curricular activities on the scope of start-up activities, with a low coefficient of influence. Some research results, for example, the results of research by Hussain and Norashidah (2015), Martyajuarlinda and Kusumajanto (2018), Periansya (2018), Praticia and Silangen (2016), Buana et al. (2017), Mardisentosa et al. (2018), and Sang and Lin (2019) showed a significant influence of entrepreneurship education on the interests and abilities of student entrepreneurs. The strong influence is quite apparent as entrepreneurship education was carried out specifically for the development of students' entrepreneurial abilities. This is consistent with the results of Rasyad et al. (2019) who stated that the relevance of the material is the most dominant component that affects the formation of the ability of trainees. Students with high intellectual achievement have a higher chance of becoming entrepreneurs if given special entrepreneurship education (Tawil et al. 2015).

The results of this study are also in accordance with the systematic literature reviews conducted by Banha et al. (2022) and Jardim et al. (2021), which show that there is still a gap between entrepreneurship education and entrepreneurial development and economic growth. Entrepreneurship education in schools or colleges has not fully provided the provision of maximum competencies and an environment that allows the emergence of entrepreneurs for economic growth. The policies taken by the government in the development of education and the economy are still not fully matched.

The third research finding shows that there is an influence of leadership on the entrepreneurial spirit of students (but to a low extent). This means that the leadership variable has little effect on the students' entrepreneurial spirit variable. Someone who has a high leadership characteristic does not always have a high entrepreneurial spirit. Other variables

are more dominant in determining the entrepreneurial spirit of students. The results of Yin and Wang (2017)'s study show that leadership ability, especially decision-making ability, is one of the components that influence students' entrepreneurial abilities. Lastariwati et al.'s (2016) research results show that leadership is one of the components of entrepreneurial behaviour, ranked sixteen of the seventeen components of the behaviour. Based on some of these studies, it can be concluded that the dimension of leadership ability is only one component that determines students' entrepreneurial abilities.

6. Conclusions

Based on the research findings, it can be underlined that there is a relationship between the four variables, namely achievement motivation, achievement, leadership, and entrepreneurial spirit of students, albeit with different coefficients. Achievement motivation has a dominant influence on the variables of leadership and entrepreneurial spirit. Achievement also has a significant effect on both of those variables to a low extent. When analysed more deeply in terms of the characteristics of the variables, achievement motivation tends to lead to willingness, whereas achievement is more about ability. To be a leader or an entrepreneur is a real behaviour, so the willingness to take action has a stronger effect, which is then followed by the ability variable. The construct dimensions of achievement motivation variables are compatible with the constructs of students' leadership and entrepreneurship variables, thus providing a strong influence or greater contribution.

Students' achievement has a positive effect on students' leadership and entrepreneurial spirit but only to a low extent. That is due to the fact that the content of study material and extracurricular activities carried out so far have been unable to equip students with leadership and entrepreneurial competencies. To be able to instil students with leadership and entrepreneurial spirit, special education that leads to these two variables needs to be given. Therefore, it is necessary to develop a curriculum and educational programmes that provide many learning experiences to strengthen students' leadership and entrepreneurial spirit. Entrepreneurship education needs to provide a lot of practice, including creating an ecosystem that encourages the growth of students' entrepreneurial competencies and leadership. Entrepreneurship and leadership abilities cannot be formed through the transfer of knowledge but must be equipped with a lot of practical experience. To increase the effectiveness of entrepreneurship education, it would be better if it became compulsory education at the secondary and higher education levels. The instructional strategy also needs to be supported by innovative and entrepreneurial approaches, such as the collaborative co-learning approach, based on the engagement of entrepreneurs, and introduction to business simulation.

Leadership has a positive effect on the entrepreneurial spirit of students, but it also belongs to the low category. That means there is a leadership construct dimension that supports the construct dimension of the entrepreneurial variable, albeit not completely. Someone who has strong leadership characteristics does not automatically have high entrepreneurial abilities as well. In other words, there are leadership dimensions that lead to other variables (for example, being a good leader to one's employees). Someone who has good leadership characteristics is not always a great entrepreneur.

Author Contributions: Conceptualization, B.B.W.; methodology, B.B.W.; software, B.B.W.; B.B.W. and H.-H.W.; formal analysis, B.B.W.; investigation, B.B.W.; resources, B.B.W.; data curation, B.B.W.; writing—original draft preparation, B.B.W.; writing—review and editing, B.B.W.; visualization, B.B.W.; supervision, B.B.W. and H.-H.W.; project administration, B.B.W.; funding acquisition, B.B.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study due to local and institutional research ethics regulations.

Informed Consent Statement: This study uses a questionnaire for the main data collection and documentation, so that by filling out or answering the items of the research instrument, basically the respondents have agreed to the research.

Data Availability Statement: Data is available upon request and upon institutional approval.

Acknowledgments: The authors would like to acknowledge the support of the Faculty of Education and Institution of Research and Community Service of Universitas Negeri Malang Indonesia.

Conflicts of Interest: There is no potential conflict of interest in the research.

References

Ajiwibawani, Meriena Putri, Harti, and Waspodo Tjipto Subroto. 2017. The effect of achievement motivation, adversity quotient, and entrepreneurship experience on student entrepreneurship attitude. *International Journal of Academic Research in Business and Social Sciences* 7: 441–50. [CrossRef]

Algarni, Namshan A., McLaughlin Patrick, Al-Ashaab Ahmed, and Rashid Hamad. 2018. Identifying Factors Influencing the Leadership Performance of Saudi's Healthcare Sector. *The Journal of Organizational Management Studies* 2018: 1–18. Available online: https://ibimapublishing.com/articles/JOMS/2018/683208/ (accessed on 1 January 2022). [CrossRef]

Alves, André Cherubini, Bruno Fischer, Paola Rücker Schaeffer, and Sérgio Queiroz. 2018. Determinants of student entrepreneurship: An assessment on higher education institutions in Brazil. *Innovation & Management Review* 16: 96–117. [CrossRef]

Alwi, Muhammad, Bambang Budi Wiyono, Ibrahim Bafadal, and Ali Imron. 2021. The Relationship between Personality, Attitude, and Organizational Citizenship Behavior of Senior High School Teachers in Indonesia. *International Journal of Instruction* 14: 345–68. [CrossRef]

Arranz, Nieves, Francisco Ubierna, Francisco Ubierna, Marta F. Arroyabe, and Juan Carlos Fernandez de Arroyabe. 2016. The effect of curricular and extracurricular activities on university students' entrepreneurial intention and competences. *Studies in Higher Education* 42: 1–30. [CrossRef]

Banha, Francisco, Luís Serra Coelho, and Adão Flores. 2022. Entrepreneurship Education: A Systematic Literature Review and Identification of an Existing Gap in the Field. *Education Sciences* 12: 336. [CrossRef]

Buana, Yud, Desman Hidayat, Budi Prayogi, and Vendy Vendy. 2017. The effect of entrepreneurship education on entrepreneurial intention of university students by adopting linan model. *Binus Business Review* 8: 67–75. [CrossRef]

Central Bureau of Statistics. 2019. *Pengangguran Terbuka Menurut Pendidikan Tertinggi Yang Ditamatkan 1986–2019*. Jakarta: Badan Pusat Statistik, Available online: https://www.bps.go.id/subject/6/tenaga-kerja.html#subjekViewTab3 (accessed on 1 January 2022).

Citriadin, Yudi, Bambang Budi Wiyono, Muhammad Huda, and Imron Arifin. 2019. The Influences of Teacher Performance in Public High Schools in Indonesia. *International Journal of Innovation, Creativity and Change* 9: 25–41. Available online: https://www.ijicc.net/images/vol9iss6/9602_Citriadin_E_R.pdf (accessed on 1 January 2022).

Collin, Christopher J., Paul Hanges, and Edwin A. Locke. 2004. The relationship of achievement motivation to entrepreneurial behavior: A meta-analysis. *Journal Human Performance* 17: 95–117. [CrossRef]

Daim, Tugrul, Marina Dabic, and Elvan Bayraktaroglu. 2016. Students' Entrepreneurial Behavior: International & Gender Differences. *Journal of Innovation and Entrepreneurship* 5: 1–22. [CrossRef]

Farida, Syarifah Ida, and Septi Rostika Anjani. 2019. Menumbuhkan Jiwa Kepemimpinan Pada Mahasiswa di Lingkungan Univetrsitas Pamulang. *Jurnal Ilmiah Ilmu Manajemen* 6: 1–20. Available online: http://openjournal.unpam.ac.id/index.php/Inovasi/article/view/3676 (accessed on 1 January 2022).

Heinonen, Jarna, and Ulla Hytti. 2016. Entrepreneurship mission and content in Finnish policy programmes. *Journal of Small Business and Enterprise Development* 23: 149–62. [CrossRef]

Hoy, Wayne K., and Cecil G. Miskel. 2005. *Educational Administration*. New York: Random House, Inc.

Hughes, Richard L., Robert C. Ginnet, and Gordon J. Curphy. 1999. *Leadership: Enhancing the Lessons of Experience*. Boston: McGraw-Hill Companies, Inc.

Hussain, Altaf, and Norashidah. 2015. Impact of entrepreneurial education on entrepreneurial intentions of Pakistani students. *Journal of Entrepreneurship and Business Innovation* 2: 43–53. [CrossRef]

Indarti, Nurul. 2004. Factors affecting entrepreneurial intentions among Indonesian students. *Jurnal Ekonomi dan Bisnis Indonesia* 19: 57–70. [CrossRef]

Isaac, Stephen, and William B. Michael. 1995. *Handbook in Research and Evaluation: A Collection of Principles, Methods, and Strategies Useful in the Planning, Design, and Evaluation of Studies in Education and the Behavioral Sciences*, 3rd ed. San Diego: EdITS Publishers.

Jackson, Denise, and Michael Tomlinson. 2020. Investigating the relationship between career planning, proactivity and employability perceptions among higher education students in uncertain labour market conditions. *Higher Education* 80: 435–55. [CrossRef]

Jardim, Jacinto, Ana Bártolo, and Andreia Pinho. 2021. Towards a Global Entrepreneurial Culture: A Systematic Review of the Effectiveness of Entrepreneurship Education Programs. *Education Sciences* 11: 398. [CrossRef]

Johnson, Burke, and Larri Christensen. 2004. *Educational Research, Quantitative, Qualitative, and Mixed Approach*. Boston: Pearson.

Kemendiknas. 2010. *Rencana Strategis Kementerian Pendidikan Nasional 2010–2014*. Jakarta: Kementerian Pendidikan Nasional.

Khan, Hira, Maryam Rehmat, Tahira Hassan Butt, Saira Farooqi, and Javaria Asim. 2020. Impact of transformational leadership on work performance, burnout and social loafing: A mediation model. *Future Business Journal* 6: 40. [CrossRef]
Kowalsky, Theodore J. 2003. *Contemporary School Administration, an Introduction*. Boston: Pearson Education, Inc., Available online: https://www.amazon.com/Contemporary-School-Administration-Introduction-2nd/dp/0205347924 (accessed on 1 January 2022).
Krauss, Steven Eric, and Jamaliah Abdul Hamid. 2015. Exploring the relationship between campus leadership development and undergraduate student motivation to lead among a Malaysian sample. *Journal of Further and Higher Education* 39: 1–26. [CrossRef]
Lastariwati, Badraningsih, Pardjono Pardjono, and Sukamto Sukamto. 2016. Students' entrepreneurial behavior in the application of 'ekrenfatiha' productive entrepreneurial teaching model at culinary programs of vocational schools. *Research and Evaluation in Education* 2: 53–70. [CrossRef]
Lunenburg, Fred C., and Allan C. Ornstein. 2000. *Educational Administration: Concept and Practices*. Belmont: Wardsworth, A Division of Thomson Learning.
Mardisentosa, Bambang, Dedi Mulyasana, and Hendi Suhendraya M. 2018. Entrepreneurial interest at the university's student in Tangerang city: Educational entrepreneurship, family, and personal characteristics. *Nusantara Education Review* 1: 1–15. [CrossRef]
Martens, Donna M. 2010. *Research and Evaluation in Education and Psychology*. Los Angeles: Sage Publications, Available online: https://www.amazon.com/Research-Evaluation-Education-Psychology-Quantitative/dp/141297190X (accessed on 1 January 2022).
Martyajuarlinda, Patricia, and Djoko Dwi Kusumajanto. 2018. Effect of entrepreneurship education and self-efficacy towards the intention of entrepreneurship. *Jurnal Pendidikan Bisnis dan Manajemen* 4: 128–33. [CrossRef]
Morris, Michael H., Galina Shirokova, and Tatyana Tsukanova. 2017. Student entrepreneurship and the university ecosystem: A multi-country empirical exploration. *European Journal of International Management* 11: 65–85. [CrossRef]
Mozhgan, Amirianzadeh, Jaafari Parivashb, Ghourchean Nadergholic, and Bahram Jowkar. 2011. Student leadership competencies development. *Procedia-Social and Behavioral Sciences* 15: 1616–20. [CrossRef]
Nasution, Arman Hakim. 2010. Correlation between achievement motivation and entrepreneurial leadership quality: Meta-analysis. *IPTEK The Journal of Technology and Science* 21: 4. [CrossRef]
Nieuwenhuizen, Cecile, and Japie Kroon. 2002. Identification of entrepreneurial success factors to determine the content of entrepreneurship subjects. *Sajhe/Satho* 16: 157–66. [CrossRef]
Othman, Jamilah, Jeffrey Lawrence, and Abdullahi Mohammed. 2012. Review of factors that influence leadership styles among top management in small and medium-sized enterprises. *International Business Management* 6: 384–89. [CrossRef]
Periansya. 2018. Analysis of Effect of Education Entrepreneurship and Family Environment Toward Interest Students Entrepreneurs. *Jurnal Terapan Manajemen dan Bisnis* 4: 25–32. Available online: https://journal.stkipsingkawang.ac.id/index.php/JTMB/article/view/488 (accessed on 1 January 2022).
Piaw, Chua Yan, and Ling Lay Ting. 2014. Are school leaders born or made? Examining factors of leadership styles of Malaysian school leaders. *Procedia-Social and Behavioral Sciences* 116: 5120–24. [CrossRef]
Praticia, Patricia, and Christian Silangen. 2016. The effect of entrepreneurship education on entrepreneurial intention in Indonesia. *DeReMa Jurnal Manajemen* 11: 67–86. [CrossRef]
Pravesti, Cyndi Asli, Bambang Budi Wiyono, Dany M. Handarini, Triyono, and Adi Atmoko. 2020. Examining the effects of guidance and counseling services to the self-regulated learning for college students. *Journal for the Education of Gifted Young Scientists* 8: 33–45. [CrossRef]
Rahayu, Sri, Nurul Ulfatin, Bambang Budi Wiyono, Ali Imron, and Muh Barid Nizarudin Wajdi. 2018. The Professional Competency Teachers Mediate the Influence of Teacher Innovation and Emotional Intelligence on School Security. *Journal of Social Studies Education Research* 9: 210–27. Available online: https://jsser.org/index.php/jsser/article/view/266 (accessed on 1 January 2022).
Rasyad, Ach, Bambang Budi Wiyono, Zulkarnain, Sucipto, and Bronwyn Frances Ewing. 2019. The determinant factors that influence results of gradual training of early childhood education teachers based on the program evaluation in Indonesia. *Cogent Education* 6: 1–21. [CrossRef]
Rina, Lelahester. 2019. Student leadership in school: Internalization of entrepreneurial competence and character. *Jurnal Manajemen dan Kewirausahaan* 21: 1–8. [CrossRef]
Sabiu, Ibraahim Tijjani, Abdulaziz Abdullah, Aziz Amin, and Izah Mohd Tahir. 2018. An empirical analysis of the need for achievement motivation in predicting entrepreneurial persistence in Bumiputra entrepreneurs in Trenggano Malaysia. *International Journal Business and Globalization* 20: 190–202. [CrossRef]
Sanchez, José C. 2013. The impact of an entrepreneurship education program on entrepreneurial competencies and intention. *Journal of Small Business Management* 51: 447–65. [CrossRef]
Barba Sánchez, Virginia, and Carlos Atienza-Sahuquillo. 2012. Entrepreneurial Behavior: Impact of Motivation Factors on Decision to Create a New Venture. *Investigaciones Europeas de Direccion y Economia de la Empresa* 18: 132–38. Available online: https://www.econstor.eu/bitstream/10419/191043/1/740860755.pdf (accessed on 1 January 2022).
Sang, Dapeng, and Jinyan Lin. 2019. How does entrepreneurial education influence the entrepreneurial intention of college students: The moderating and mediating effects of entrepreneurial alertness. *International Journal of Emerging Technologies in Learning (iJET)* 14: 139–54. [CrossRef]
Schimperna, Federico, Fabio Nappo, and Bruno Marsigalia. 2022. Student Entrepreneurship in Universities: The State-of-the-Art. *Administrative Sciences* 12: 5. [CrossRef]

Sofian, Abu, Bambang Budi Wiyono, Wahjoedi, and Achmad Supriyanto. 2019. The Relationship between Self- Actualization Needs and Work Discipline with the Performance in Barito Kuala, South Kalimantan, Indonesia. *International Journal of Innovation, Creativity and Change* 5: 232–43. Available online: https://www.ijicc.net/images/vol5iss5/5517_Sofian_2019_E_R.pdf (accessed on 1 January 2022).

Sutanto, Eddy M., and Anis Eliyana. 2014. The Study of Entrepreneurial Characteristics with Achievement Motivation and Attitude as the Antecedent Variables. *International Refereed Research Journal* 5: 125–34. Available online: https://www.semanticscholar.org/paper/The-Study-of-Entrepreneurial-Characteristics-with-Sutanto-Eliyana/d1bdffe3b4ea772a658ec778b361eaa8a6ce2d4e (accessed on 1 January 2022).

Sutanto, Eddy Madiono, Peter J. Sigiols, and Ivando Putih. 2018. University students' entrepreneurial performance. *Journal of Economics, Business, and Accountancy Ventura* 21: 251–58. [CrossRef]

Tawil, Norngainy Mohd, Rosilah Hassan, Shamshubaridah Ramlee, and K.-Z. Batcha. 2015. Enhancing Entrepreneurship Skills among University Students by Online Business Simulation. *Journal of Engineering Science and Technology* 6: 71–80. Available online: http://jestec.taylors.edu.my/Special%20Issue%20UKM_ITC%202014/JESTEC-%20UKMITC_6_2015_071_080.pdf (accessed on 1 January 2022).

Thanh, Do Viet, and Nguyen Viet Anh. 2015. Factors Affecting Effective Leadership: An Empirical Study in Vietnam Logistics Enterprises. Paper presented at the Second Asia-Pacific Conference on Global Business, Economics, Finance and Social Sciences (AP15Vietnam Conference), Danang, Vietnam, July 10–12; pp. 1–15. Available online: http://www.globalbizresearch.org/Vietnam_Conference/pdf/VL547.pdf (accessed on 1 January 2022).

Vidyatmoko, Dyan, and Pudji Hastuti. 2017. The determinants of entrepreneurial success: A multidimensional framework. *Journal of STI Policy and Management* 2: 163–78. [CrossRef]

Wedhayanti, Gitta Citra, Ni Ketut Suarni, and Nyoman Dantes. 2020. Development of Achievement Motivation Instruments in High School Students. *Bisma The Journal of Counseling* 4: 146–53. [CrossRef]

Widayat, and Ni'matuzahroh. 2017. Entrepreneurial attitude and student's business start-up intention: A partial least square modeling. *Jurnal Manajemen dan Kewirausahaan* 19: 46–53. [CrossRef]

Wigfield, Allan, and Jacquelynne S. Eccles. 2000. Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology* 25: 68–81. [CrossRef]

Wiyono, Bambang Budi. 2015. Effect of learning environment, habit, and motivation on student's academic achievement. *International Journal of Academic Research* 7: 91–94. [CrossRef]

Wiyono, Bambang Budi. 2018. The effect of self-evaluation on the principals' transformational leadership, teachers' work motivation, teamwork effectiveness, and school improvement. *International Journal of Leadership in Education* 21: 705–25. [CrossRef]

Yin, Miaomiao, and Yang Wang. 2017. Research on the effect of entrepreneurship education on college students' entrepreneurial capability. *EURASIA Journal of Mathematics Science and Technology Education* 13: 5813–19. [CrossRef]

Zhao, Xin, Lina Jia, and Joseph H. R. Maes. 2018. Effect of achievement motivation on cognitive control adaptations. *Journal of Cognitive Psychology* 30: 453–65. [CrossRef]