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Extracting the attitudes of female students of vocational-technical schools towards entrepreneurship learning outcomes in Iran

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Abstract -Entrepreneurship as a strong economic force plays an important role in self-employment and unemployment reduction. Entrepreneurship education can have an effective role in promoting entrepreneurship in society. Some potential entrepreneurs are high school students and hence, entrepreneurship education should begin at an early age to induce entrepreneurial attitudes in students. In this study, the authors tried to extract the attitudes of female students in vocational-technical high schools in Iran towards the entrepreneurship learning outcomes using UNESCO'S four pillars of education and in the fields of learning to know, learning to do, learning to be, and learning to live together. These attitudes were drawn using a mind map. The results can help to improve and strengthen the students' attitudes towards entrepreneurship subjects as well as to eliminate the shortcomings in the entrepreneurship education methods in the schools. The statistical population of the study consisted of 12th-grade female students in vocational-technical high schools in Tehran who had successfully passed the entrepreneurship course.

Keywords: Entrepreneurship education, Entrepreneurial mindset, High school, Learning outcomes, Learning to know, Learning to do, Learning to be, Learning to live together.

I. INTRODUCTION

Entrepreneurship education can develop individual skills as well as create self-employment opportunities, which will reduce the unemployment rate [1].

Therefore, entrepreneurship skills should be taught in the process of education and learning to reduce the unemployment rate [2]. Furthermore, as the strongest economic force during the last decade [3, 4] and an essential factor in developingsociety, entrepreneurship should be taught in the form of educational plans with an entrepreneurship improvement approach in mind [5].

Some potential entrepreneurs are high school students [6] and hence, entrepreneurship education should begin at an early age to induce entrepreneurial attitudes in students [7] and to teach basic entrepreneurship knowledge and skills [8]. Furthermore, vocational-technical high schools contribute to the economic growth of countries and can create job opportunities, which can reduce the unemployment rate [9].

Consequently, vocational-technical high schools should not only prepare students to enter the job market by teaching them a range of skills but also enable them to work as entrepreneurs [10].

Furthermore, UNESCO has stated that the education system should teach entrepreneurial skills to students as a tool for their lives both theoretically and practically [9].

Using UNESCO four pillars of education, entrepreneurship learning outcomes in schools were identified and determined in four fields of learning to know,learning to do,learning to be and learning to live together [11]. To improve the performance of entrepreneurship learning in female students in terms of the four fields, it is necessary to draw the students' attitudes and understandings towards entrepreneurship outcomes in the form of a mind map to provide a more accurate picture of their learning state.

The results can be used to amend and improve the students' entrepreneurial attitudes as well as to eliminate the shortcomings in the entrepreneurship education methods in the schools.

Therefore, using a mind map, this study aims at extracting and analyzing the differences in the mental attitudes of female students of vocational-technical schools towards the entrepreneurial learning outcomes in the fields of doing, being, living together, and knowing.

The research questions are as follows:

- What are the differences in the attitudes of female students towards entrepreneurship learning outcomes in the field of “To know”?
- What are the differences in the attitudes of female students towards entrepreneurship learning outcomes in the field of “To do”?
- What are the differences in the attitudes of female students towards entrepreneurship learning outcomes in the field of “To be”?
- What are the differences in the attitudes of female students towards entrepreneurship learning outcomes in the field of “to live together”?

II. LITERATURE REVIEW

Entrepreneurship learning

There are two viewpoints on how people become entrepreneurs. The first viewpoint is that entrepreneurship is an inherent trait and talent, and the second viewpoint is that entrepreneurship is the outcome of an educational process. Consequently, without leaving out the talent factor, people can become entrepreneurs with the help of an education system designed with entrepreneurship in mind.

Entrepreneurship education is needed to address a wide range of social, economic, and political challenges [13, 14]. Over the last two decades, entrepreneurship has been taught as a course in various countries with different entrepreneurship education systems due to their different cultural contexts [15]. There are many ways to teach entrepreneurship based on education purposes [16]. A review of empirical studies has shown that education plays an important role in communicating entrepreneurship values and skills [17].

Entrepreneurship education includes activities aimed at fostering entrepreneurial mindsets, entrepreneurial attitudes, and entrepreneurial skills and covers a range of aspects such as the creation of ideas, creation of startups, and innovation [18]. Entrepreneurship education also helps to flourish the artistic, creative, and perceptual aspects of entrepreneurship.

Several studies have examined the effect of entrepreneurship education on entrepreneurial outcomes [20], entrepreneurial attitudes and intentions [21], and entrepreneurial skills and motivations [22]. In high schools, the outcome of entrepreneurship education is to develop entrepreneurial knowledge, skills, and attitudes [20]. If theeducation outcome is to improve knowledge of what entrepreneurship is, the best way to achieve this goal is by transferring knowledge through seminars and lectures. If the outcome of entrepreneurship education is to equip people with entrepreneurial skills, the best way to achieve this is by using those educational methods that enable people to be involved in entrepreneurial processes, like industrial training. Finally, if the outcome of entrepreneurship education is to prepare people to be entrepreneurs, the most effective technique to achieve this is by facilitating the experience of entrepreneurial activities in a controlled environment, for example by simulating a business or by role-playing" [23].

Johannisson identifies five levels of content for entrepreneurial knowledge outcome including "know-why" (attitude, values, motivation), "know-how" (skills), "know-who" (short-term and long-term social skills), "know-when" (intuition) and "know-what" (knowledge) [24].

Angela Shartrand& Phil Weilerstein studied entrepreneurial learning outcomes in the following five fields:

Becoming and Being an Entrepreneur, Finance and accounting, People and Human Resources, Sales and marketing, Product Ideation and Development [25].

Based on UNESCO's four pillars of education, learning is divided into four fields: learning to know, learning to do, learning to be, and learning to live together. "Learning to know" allows people to take advantage of the educational opportunities that occur during their life. This dimension of learning mainly assesses youth learning in the formal education system. "Learning to do" emphasizes the need to acquire the professional skills needed to do a job or a business. "Learning to be" emphasizes the development of capacities and human growth. In this learning, a person develops his/her personality and can act with his/her personal independence, judgment, and responsibility. "Learning to live together" convinces people to implement joint projects or to manage inevitable conflicts smartly and peacefully [26, 27]. Using the UNESCO's four pillars of education, entrepreneurship learning outcomes in high schools were identified

and determined in four fields of "learning to know", "learning to do", "learning to be" and "learning to live together" [11].

Few studies have been conducted so far to extract students' attitudes towards entrepreneurial learning outcomes based on the UNESCO's four pillars. Therefore, in this study, we aim at extracting the differences in the attitudes of female students in vocational-technical high schools towards the entrepreneurship learning outcomes in the four fields of "To know", "To do", "To be", and "To live together" and drawing them in the form of a mind map.

III. RESEARCH METHODOLOGY

The questionnaires were designed based on the research conducted on entrepreneurial learning outcomes in high schools and using the experts' opinions and to gain the students' attitudes towards entrepreneurial learning outcomes in four fields of To know, To do,To be, and To live together. The content validity of the research was evaluated based on previous studies as well as the experts' opinions. The students' responses to the questions indicate their attitudes and understandings towards the fields of knowing, doing, being, and living. The students were asked to write their understanding of the questionnaire questions.

The statistical population of the study consisted of 12th-grade female students in vocational-technical high schools in Tehran who had successfully passed the entrepreneurship course. The sample size was 180 students. The questionnaires were distributed among the students. Of these, 140 questionnaires were suitable for further analysis. The data were coded using the ATLAS.ti software. The obtained mind maps were analyzed by a focus group consisted of entrepreneurship education specialists. Furthermore, the responses repeated in more than one field of entrepreneurial learning were examined by experts and drawn in table 9.

IV. FINDINGS

Using entrepreneurial learning outcomes for students based on the UNESCO's four pillars of education [11], four open questionnaires were designed to extract possible differences in the students' attitudes towards these outcomes, which can be seen in tables 1 through 4.

Table 1: The questions related to entrepreneurial learning outcomes in the field of "to know

No.	The questions related to "learning to know
1	What resources and facilities do you need to start a business?
2	What are the duties of an entrepreneur in his business?
3	How can an entrepreneur identify entrepreneurial opportunities?
4	What features do you think an entrepreneur has?
5	What financial subjects do you think an entrepreneur should know?
6	How to find the right solution to a problem?
7	What can you do to grow and expand your business?
8	How can knowing different cultures influence the success of a business?
9	Are you familiar with the business plan concept? What information can be found in a business plan?
10	How do you think the opportunities and threats in a business can be identified?
11	How to identify the strengths and weaknesses of a business?

Table 2: The questions related to entrepreneurial learning outcomes in the field of "to do"

No.	The questions about entrepreneurial skills in the field of "to do"
1	What skills do you know regarding marketing and sales?
2	How can you get the funds you need to start a personal business?

3	What do you think should be the first thing to do to start a business?
4	If you own a business and the environmental conditions change in the course of your business, what would you do to prevent your business from any damages?
5	What measures can be taken to turn a threat into an opportunity for a business?
6	What traits do you need to have communication skills?
7	What features do you think a good idea to start a business should have?

Table 3: The questions related to entrepreneurial learning outcomes in the field of "to be"

No.	The questions related to intrinsic traits in the field of "to be"
1	Are you interested in entrepreneurship in general? What features of entrepreneurship are you interested in?
2	Can you make a fairly correct and appropriate decision about an issue with a little knowledge of that? What helps you to make quick decisions about an issue with limited knowledge of that?
3	What traits should you have to start a business?
4	What do you think are the benefits of becoming an entrepreneur?
5	Do you have a high motivation to become an entrepreneur? What kind of behavior do you exhibit that can indicate your high motivation to become an entrepreneur?

Table 4: The questions related to entrepreneurial learning outcomes in the field of "to live together"

No.	The questions related to interacting with other people (to live together)
1	What traits do you need to work with different peoples in your community?
2	What traits will help a person to create a network of friends (to gather friends) to start a business?
3	What skills and traits are needed for team management and leadership?
4	What do you think business ethics include?
5	What issues should we consider in collaboration?

The mind map obtained from the students' responses to the questions related to entrepreneurship learning in the field of "to know" is shown in figure 1. Table 5 shows the most frequently repeated responses of the students to these questions.

Table 5: The most frequently repeated responses of the students in the field of "learning to know

Question No.	The most frequently repeated responses of the students.
1	Financial capital 78%, Equipment 36%, Appropriate location 51%, Human resources 51%
2	Resources and equipment management 18%, Staff management 19%, Recruitment 11%
3	Identifying people's needs 16%, Using others' experience 9%
4	Risk taking 13%, Self-confidence 9%, Patience 9%, Broad vision 9%, Sociability 8%
5	Profit determination 15%, Financial resources' management 14%, Cost and revenue forecast 11%
6	Expert's advice 44%, Survey from staff 10%, Research 9%
7	Advertisement (social media, radio, TV, and billboard) 52%, Increasing budget, staff, and equipment 16%, Quality improvement 10%,
8	Recognizing the needs through knowing the culture 16%, Lack of conflict between product and culture 9%, Influence of culture on interests 9%
9	The initially required capital 8%, Business presentation 5%, Shortcomings and

	obstacles 5%
10	Employing experts and experienced people 9%, Identifying competitors 9%, Examining technological changes 9%
11	Customer feedback 18%, Employing experts and experienced people 9%, Examining criticism 8%

In response to the first question, the students pointed out to 14 responses with the most frequent ones related to physical facilities and the less frequent ones related to "knowledge resources", "proper idea" and "business consultant", which are of great importance for starting a business. In response to the second question, the students pointed out to over 30 responses with a low frequency. However, the most frequent ones (18%) were related to managerial issues. In response to the third question, the students pointed out to 19 responses, which are mainly related to the understanding of and paying attention to the community and getting ideas from environmental issues. In response to the fourth question, the students pointed out to 20 traits of entrepreneurs that encompassed a wide range of characteristics. In response to the fifth question, the students mentioned that the issues of how to manage finances, production costs, and how to determine the proper price are very important. In response to the sixth question, a majority of the students were interested in using other people's knowledge and capabilities to solve the problems in their own business. In response to the seventh question, the students pointed out to 16 responses, with more than half of them citing "advertisement" as a business development solution. It is worth noting that long-term solutions such as the product "quality improvement" or identification of "new markets" were far less frequent. In response to the eighth question, the students pointed out to 11 responses that illustrate the influential role of every society's culture on the success of a business.

In total, 119 students responded to the question "Are you familiar with the business plan concept?", of which 22% were "Yes" and the remaining 78% were "No". The responses of the students with entrepreneurs in their relatives to this question are also categorized in table 6.

Table 6: The students' responses to the question "Are you familiar with the business plan concept?" "

Variables		The division ofparticipants in the research responded to the question "Are you familiar with the business plan concept?".					
		All of the students who responded to this question.		The students who responded "Yes".		The students who responded "No".	
The students who participated in this question		119	100%	26	21.8%	93	78.2%
Those with entrepreneurs in their relatives	Yes	41	34.5%	11	26.8%	30	73.2%
	No	78	65.5%	15	19.2%	63	80.8%

In response to the second part of the ninth question, the students pointed out to 11 responses with a low frequency. Although a chapter in the textbook is devoted to the business plan concept, few students were familiar with the concept, indicating that the teachers have not paid enough attention to the concept. In response to the tenth question, the students pointed out to 11 responses including paying attention to environmental issues, Employing experts, and examining technological changes. In response to the eleventh question, the students pointed out to eleven responses, with the majority of them referring to feedback from customers and employees and attention to criticism.

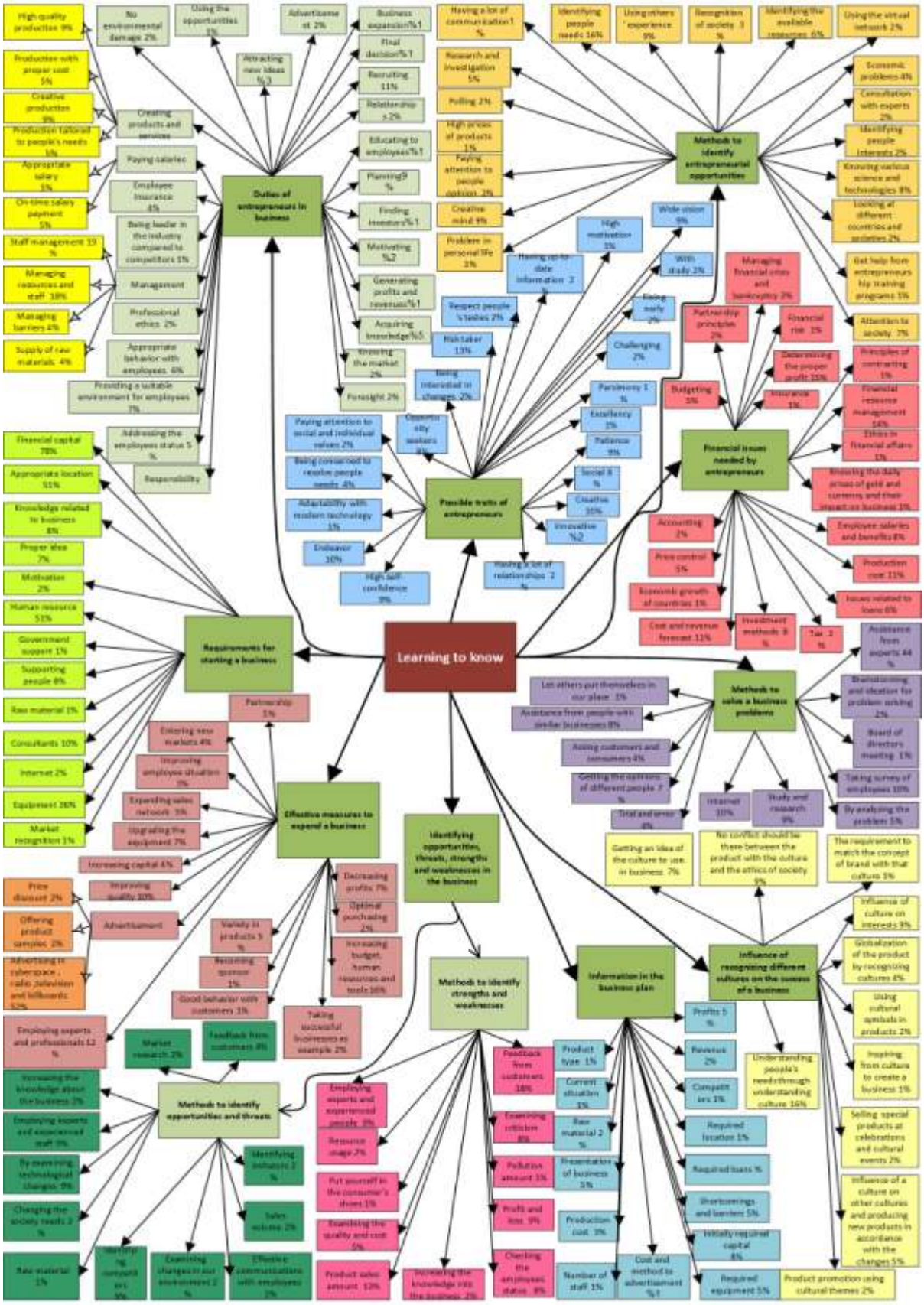

Figure 1: The mind map drawn for the students' responses to the questions related to entrepreneurial learning in the field of "To know"

The mind map drawn for the students' responses to the questions related to entrepreneurship learning in the field of "To do" is shown in figure 2. Table 7 shows the most frequently repeated responses of the students to these questions.

Table 7: The most frequently repeated responses of the students in the field of "learning to do".

Question No.	The most frequently repeated responses of the students.
1	Advertisement 23%, Oratorical skill 22%, Sociability 17%, Online advertisement 12%
2	Loan 60%, Savings 27%, Borrowing 18%, Family assistance 17%
3	Provision of location 17%, Recruiting staff 16%, Research on business 14%
4	Adapting to the environment 23%, Employing experienced people 8%, Moving the business to another location 6%
5	Experts' advice 4%, Changing product features 4%, Changing workflow 4%
6	Oratorical skill 27%, Sociability 23%, Appropriate interaction 16%,
7	Needed for the community people 26%, Profitability 13%, Being new 12%

In response to the first question, the students pointed out to 27 responses, of which 9 were related to "advertisement". In response to the second question, the students pointed out to 9 responses, where getting loans from banks was ranked first with a frequency of 60%. Given the high probability of failure of new businesses, paying attention to loans as a financing method can pose risks to these people. In response to the third question, the students pointed out to 22 responses, a very low percentage of them referring to the "business plan" drafting despite its high importance. As previously mentioned, this weakness does exist in the field of "To know" too. In response to the fourth question, the students pointed out to 17 responses, where the preferential attitude of the students towards adapting to the environment instead of moving the business to another location is considerable. In response to the fifth question, the students pointed out to 15 responses. The responses covered a wide range but with low frequencies and few people responded to the question. In response to the sixth question, the students pointed out to 24 responses, where oratorical skill and high sociability have the highest importance. In response to the seventh question, the students pointed out to 21 responses, mostly referring to the financial characteristics of businesses as well as addressing the people's needs.

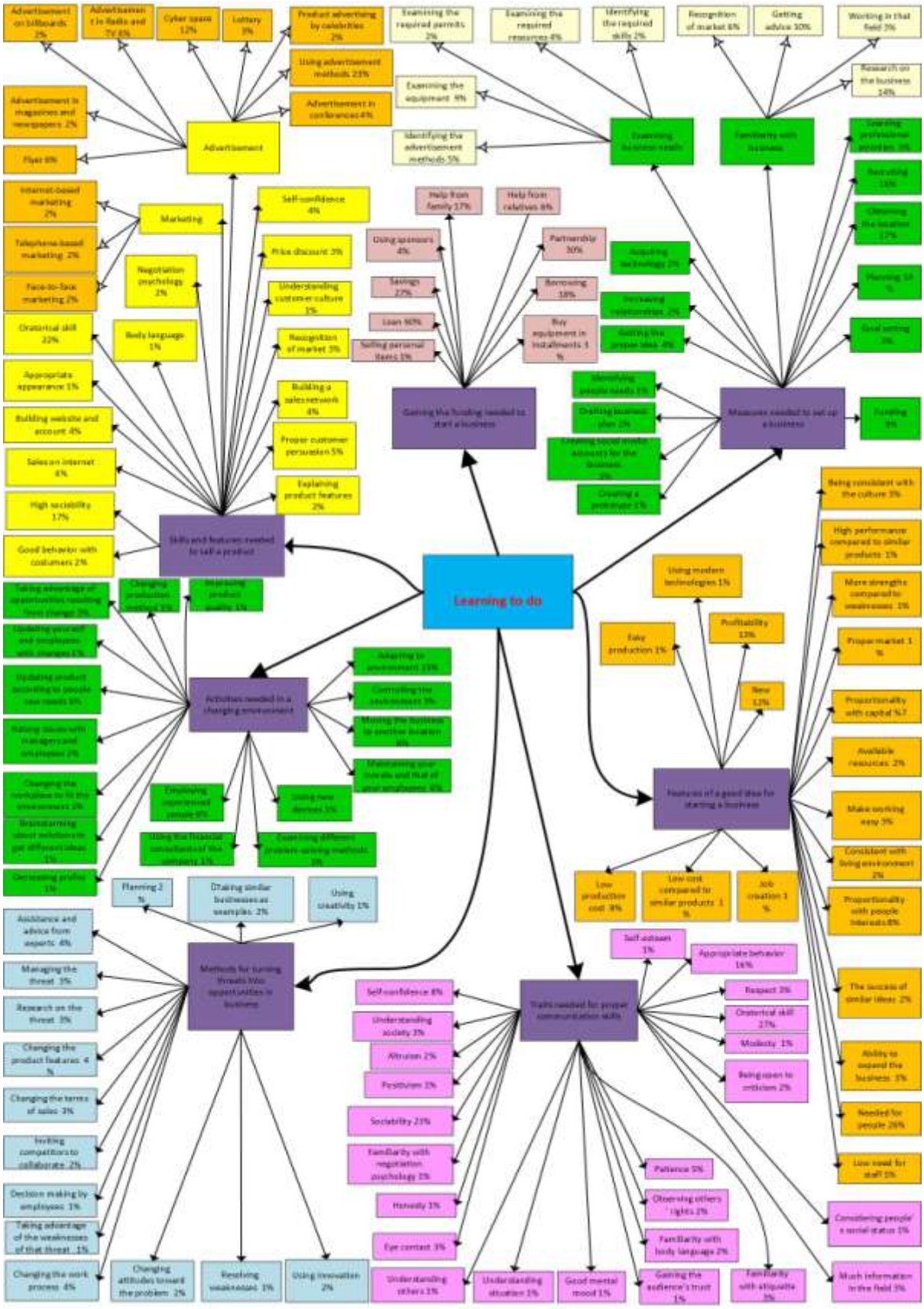

Figure 2: The mind map drawn for the students' responses to the questions related to entrepreneurial learning in the field of "To do"

The mind map drawn for the students' responses to the questions related to entrepreneurship learning in the field of "To be" is shown in figure 3. The most frequently repeated responses of students are shown in table 8.

Table 8: The most frequently repeated responses of the students in the field of "learning to be".

Question No.	The most frequently repeated responses of the students.
1	Job creation 14%, Wealth acquisition 14%, Independence 10%
2	Thinking 14%, Using other people's experiences 10%, Self-confidence 5%
3	Knowledge 23%, Risk-taking 16%, Self-confidence 11%
4	Independence 9%, Proper sociability 5%, Self-employment 5%, Self-esteem improvement 5%, Proper income 5%
5	Risk-taking 5%, Focus on the goal 5%, Addressing the community issues and needs 4%

In total, 104 students responded to the question "Are you interested in entrepreneurship?", of which 60% were "Yes" and the remaining 40% were "No". Furthermore, from the students with entrepreneurs in their relatives, 77.5% responded "Yes" and 22.5% responded "No" to this question. While, from the students without entrepreneurs in their relatives, 50% responded "Yes" and 50% responded "No" to this question. These statistics can show the positive influence of having entrepreneurs in relatives on being interested in entrepreneurship. Table 9 provides statistical information related to the responses to this question.

Table 9: The students' responses to the question "Are you interested in entrepreneurship?" "

Variables		The division ofparticipants in the research responded to the question "Are you interested in entrepreneurship?"					
		All of the students who responded to this question.		The students who responded "Yes".		The students who responded "No".	
The students who participated in this question		104	100%	63	60%	41	40%
Those with entrepreneurs in their relatives	Yes	40	38.4%	31	77.5%	9	22.5%
	No	64	61.6%	32	50%	32	50%

In response to the second part of the first question, the students pointed out to 16 responses with "Job creation" and "Wealth acquisition" as equally important. In response to the second question, the students pointed out to 11 responses, mostly referring to relying on personal capacities and traits as well as using other people's experiences.

In response to the question "Can you make a fairly correct and appropriate decision about an issue with a little knowledge of that?", a total of 96 students participated, of which about 82% said "No". It is noteworthy that the percentage of students with entrepreneurs in their relatives and responded "No" was approximately the same as the percentage of students without entrepreneurs in their relatives, equal to 83.7% and 81.3%, respectively. Table 10 provides statistical information related to the responses to this question.

Table 10: The students' responses to the question "Can you make a fairly correct and appropriate decision about an issue with a little knowledge of that?" "

Variables	The division ofparticipants in the research responded to the question "Can you make a fairly correct and appropriate decision about an issue with a little knowledge of that?"		
	All of the students who responded to this question.	The students who responded "Yes".	The students who responded

						"No".	
The students who participated in this question		96	100%	17	17.7%	79	82.3%
Those with entrepreneurs in their relatives	Yes	37	38.5%	6	16.2%	31	83.7%
	No	59	61.5%	11	18.6%	48	81.3%

In response to the question "Are you interested in creating a personal business?", a total of 101 students participated, of which about 68% responded "Yes". Table 11 provides statistical information related to the responses to this question.

Table 11: The students' responses to the question "Are you interested in creating a personal business?"

Variables		The division ofparticipants in the research responded to the question "Are you interested in starting a personal business?"					
		All of the students who responded to this question.		The students who responded "Yes".		The students who responded "No".	
The students who participated in this question		101	100%	69	68.3%	32	31.75
Those with entrepreneurs in their relatives	Yes	38	37.6%	30	79%	8	21%
	No	63	62.4%	39	62%	24	38%

In response to the question "Do you have a risk-taking spirit?", a total of 88 students participated, of which about 67% responded "Yes" and 33% responded "No". Among the respondents, about 77% of the students with entrepreneurs in their relatives responded "Yes", which is 16% more than students without entrepreneurs in their relatives. Table 12 provides statistical information related to the responses to this question.

Table 12: The students' responses to the question "Do you have a risk-taking spirit?"

Variables		The division ofparticipants in the research responded to the question "Do you have a risk-taking spirit?"					
		All of the students who responded to this question.		The students who responded "Yes".		The students who responded "No".	
The students who participated in this question		88	100%	59	67%	29	33%
Those with entrepreneurs in their relatives	Yes	31	35.3%	24	77.4%	7	22.6%
	No	57	64.7%	35	61.4%	22	38.6%

In response to the third question, the students pointed out to 11 responses, which include intrinsic traits such as self-confidence, creativity, and risk-taking, as well as the use of others' information and knowledge.

In response to the third question, the students pointed out to 32 responses. It is noteworthy that similar to the first question in the field of "To know", "knowledge" as a significant element in the creation of a business had a low frequency among the responses.

In response to the fourth question, the students pointed out to 29 responses, mostly referring to the improvement of personal traits, improvement of living standards, and improvement of society.

In response to the fifth question, the students pointed out to 17 responses that cover a range of responses, including personal traits such as risk-taking and creativity and pursuing entrepreneurship subjects and study.

In response to the question "Do you have a high motivation to become an entrepreneur?", a total of 80 students participated, of which about 49% responded "Yes" and 51% responded "No". Furthermore, about 80% of the students with entrepreneurs in their relatives responded "Yes", but only about 30% of the students without entrepreneurs in their relatives responded "Yes". This large discrepancy could be due to the influence of the entrepreneurs in their relatives on the motivation of the students to choose entrepreneurship for their future careers. Table 12 provides statistical information related to the responses to this question.

Table 12: The students' responses to the question "Do you have a high motivation to become an entrepreneur?"

Variables		The division ofparticipants in the research responded to the question "Do you have a high motivation to become an entrepreneur?"					
		All of the students who responded to this question.		The students who responded "Yes".		The students who responded "No".	
The students who participated in this question		80	100%	39	48.7	41	51.3
Those with entrepreneurs in their relatives	Yes	28	35%	23	82٪	5	17.8٪
	No	52	65%	16	30.7٪	36	69.2٪

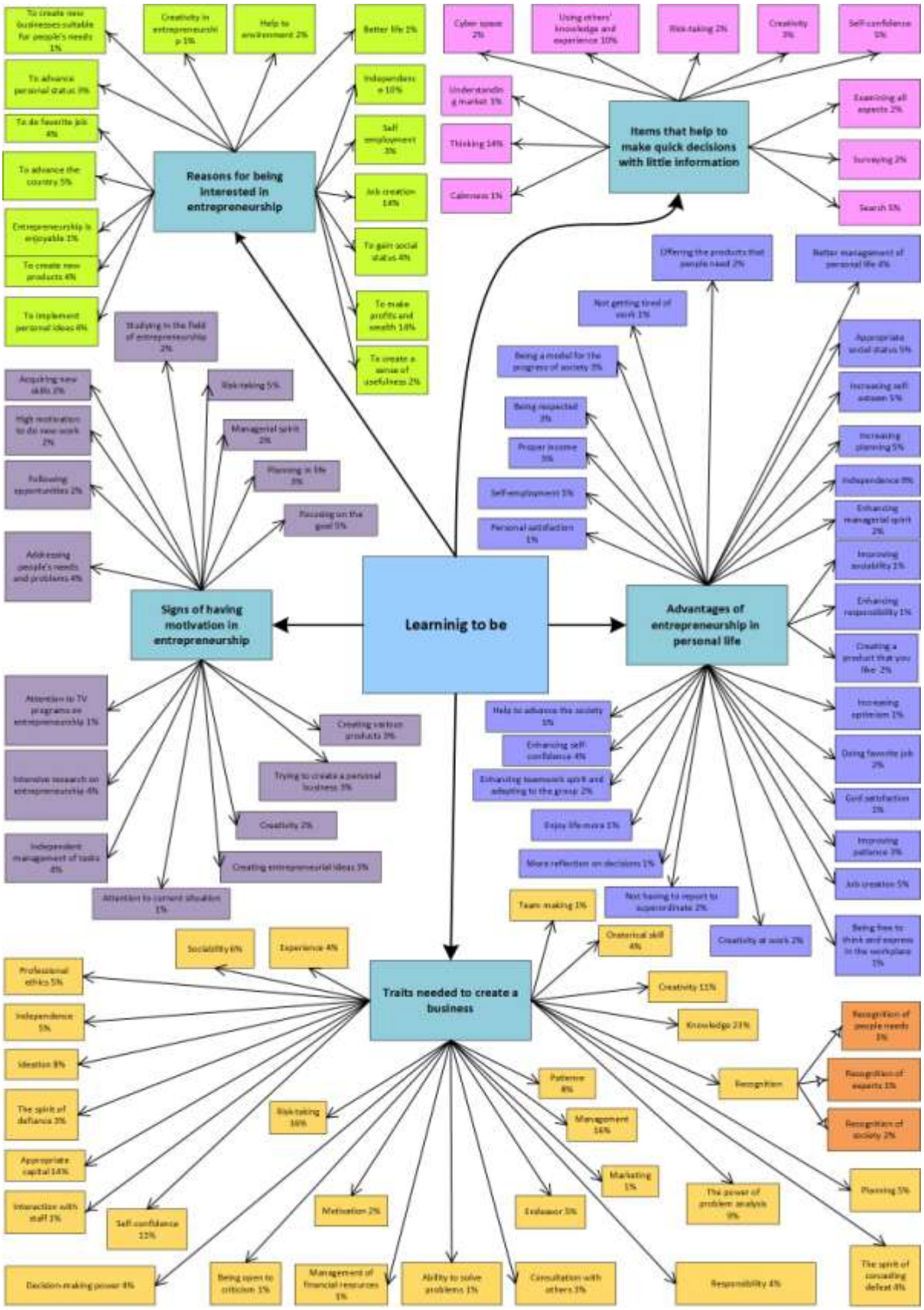

Figure 3: The mind map drawn for the students' responses to the questions related to entrepreneurial learning in the field of "To be"

The mind map drawn for the students' responses to the questions related to entrepreneurship learning in the field of "To live together" is shown in figure 4. The most frequently repeated responses of the students are shown in table 8.

Table 8: The most frequently repeated responses of the students in the field of "learning to live together".

Question No.	The most frequently repeated responses of the students.
1	Public relations 35%, Patience 28%, Oratorical skill 12%
2	Sociability 21%, Attention to others' opinions 17%, Appropriate ethics 7%
3	Knowledge in that field 17%, Planning 13%, Patience 12%, Responsibility 12%
4	Appropriate behavior 24%, Patience 9%, Respect to customers 9%
5	Respect to people opinions 17%, Responsibility 9%, Alliance 8%, Doing high-quality work 8%

In response to the first question, the students pointed out to 28 responses, of which about one third referred to the traits of sociability and patience. In response to the second question, the students pointed out to 29 responses, where, similar to the previous question, sociability is the most frequent response. In response to the third question, the students pointed out to 41 responses, which include acquired traits such as knowledge in that field and experience as well as personality traits such as risk-taking, patience, and courage.

In response to the fourth question, the students pointed out to 34 ethical responses that include a range of issues such as appropriate behavior with others and offering high-quality products and services. In response to the fifth question, the students pointed out to 24 responses, which include respecting the others' rights as well as performing a set of individual duties and paying attention to the moral traits regarding group members.

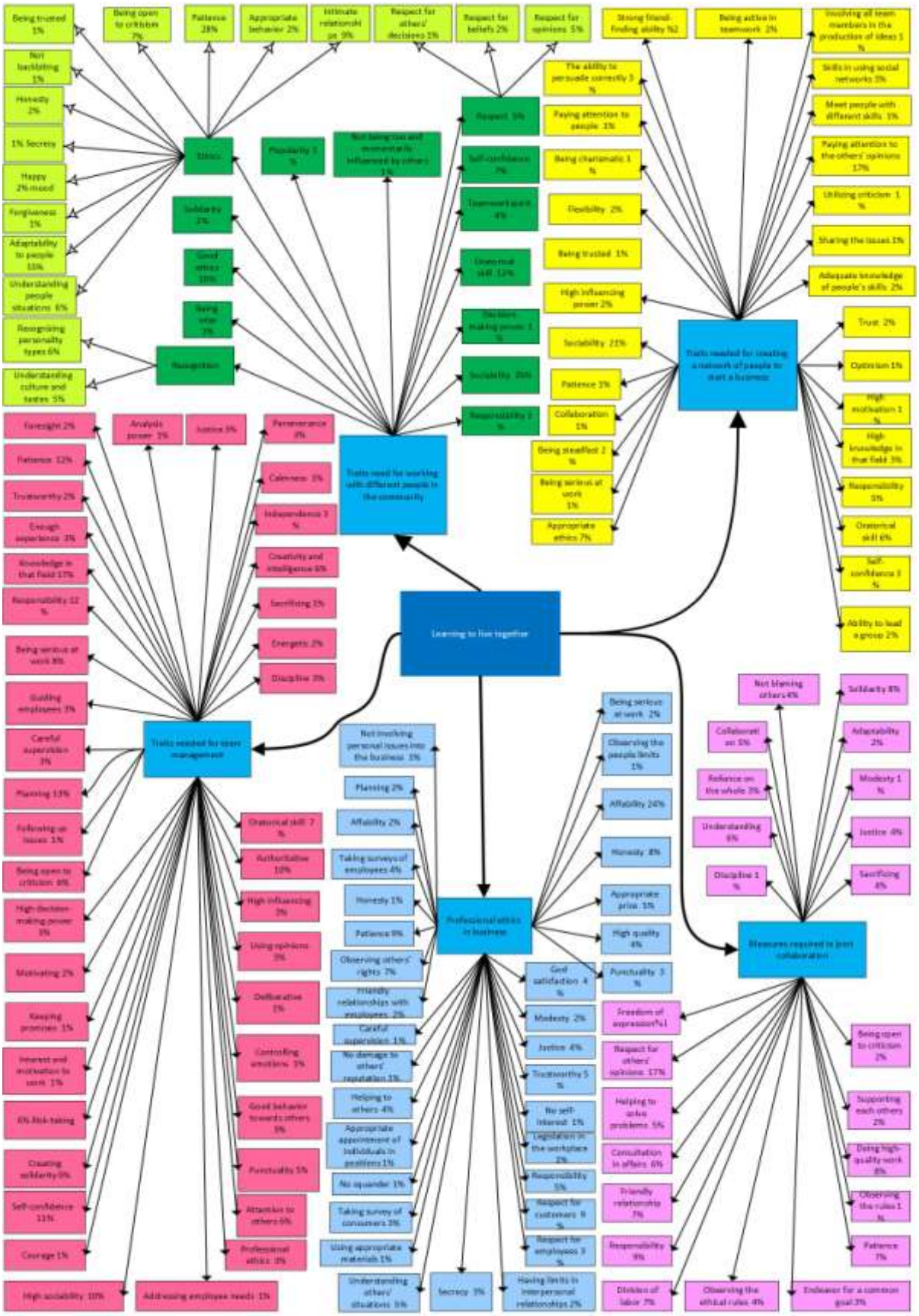

Figure 4: The mind map drawn for the students' responses to the questions related to entrepreneurial learning in the field of "To live together"

By analyzing the four mind maps using the Atlas.ti software, the codes repeated in more than one field of entrepreneurial learning were identified and drawn in table 9.

Table 9: The codes repeated in more than one field of learning.

The codes repeated in more than one field	Questions of Learning to know											Questions of Learning to do							Questions of Learning					Questions of Learning to live				
	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q8	Q9	Q10	Q 11	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 1	Q 2	Q3	Q 4	Q 5	Q 1	Q 2	Q 3	Q 4	Q 5
People's needs		×	×	×				×						×	×			×	×		×	×	×					
Human resource	×	×				×	×		×	×	×			×	×	×		×			×					×	×	
Knowledge	×	×	×	×		×				×	×			×	×	×	×			×	×		×		×	×		×
Idea	×	×						×						×	×				×		×		×		×			
Patience				×													×				×	×		×	×	×	×	×
Management		×			×											×					×	×	×					
Self-confidence				×								×					×			×	×	×		×		×		
Oratorical skill												×					×				×			×	×	×		
Sociability		×	×	×						×		×		×			×				×	×		×	×	×	×	
Planning		×												×		×					×	×	×			×	×	×
Risk-taking				×																×	×		×			×		
Being open to criticism											×						×				×			×	×	×		×
Moral issues		×			×		×	×				×					×				×	×		×	×	×	×	×
Advertisement		×					×	×	×			×		×														
Creativity		×	×	×												×			×	×	×	×	×			×		
Motivation	×	×		×																	×		×		×	×		
Opportunity		×		×											×								×					
Flexibility															×							×		×	×			×
Financial capital	×	×					×		×					×				×			×							
Profit		×					×		×		×				×			×	×			×						
Responsibility		×																			×	×		×	×	×	×	×
Market	×	×								×		×		×				×		×	×							
Customer						×	×			×	×	×		×	×			×	×		×	×					×	
partnership		×			×		×						×															
Loan					×				×				×															

The codes of human resources, knowledge, idea, patience, self-confidence, sociability, planning, being open to criticism, ethics, creativity, and customer are repeated in all of the four fields of entrepreneurial learning. The codes of people's needs, management, opportunity, capital, income, profit, and market are repeated in the three fields of "knowing", "doing", and "being". The codes of oratorical skill and flexibility are repeated in the three fields of "doing", "being", and "living together". The codes of risk-taking, motivation, and responsibility are repeated in the three fields of "knowing", "being", and "living together". The codes of advertisement and partnership are repeated in the two fields of "knowing" and "doing". The code of loan is repeated in the two fields of "knowing" and "doing".

Given the repetition of the traits and characteristics of self-confidence, high sociability, being open to criticism, ethics, creativity, planning, management, oratorical skill, responsibility, risk-taking, and motivation in the four fields of entrepreneurial learning, we recognized the importance and the necessity of acquiring these traits in the field of doing entrepreneurial activities by female students. Furthermore, we recognized that having good ideas, sufficient knowledge, appropriate human resources, recognizing the people's needs, and taking advantage of opportunities are essential for creating and sustaining business and entrepreneurial activities by female students.

Using advertisements as well as partnerships and lending can also be used as tools to accelerate the creation and the growth of a business.

V. CONCLUSION:

The research explored and extracted the entrepreneurial attitudes of 12th-grade female students who have successfully passed an entrepreneurship course. We derived the students' attitudes towards entrepreneurial learning outcomes based on the UNESCO's four pillars of education in the fields of "learning to know", "learning to do", "learning to be", and "learning to live together" and finally drew these attitudes in the form of a mind map.

From the viewpoint of the female students, the acquisition of self-confidence, being open to criticism, responsibility, risk-taking, sociability, appropriate ethics, and creativity are among the outcomes of the four fields of entrepreneurship learning. Furthermore, according to the students' attitudes, items such as planning, motivation, management, oratorical skill, and taking advantage of opportunities were identified as frequent outcomes of entrepreneurial learning.

Besides, funding, market recognition, using advertisement, and partnerships with others in the business were among the important points for students to create and develop a business and the students pointed out to them in several fields of entrepreneurial learning.

In the field of "learning to know", we extracted the students' attitudes and understandings towards the facilities required to start a business, the duties of an entrepreneur in business, identifying entrepreneurial opportunities, traits of an entrepreneur, financials required by an entrepreneur, measures required for business development, how to devise a proper idea to start a business, how culture affects the success of a business, the information in the business plan, and how to identify opportunities and threats in a business. Figure 1 shows the set of responses in the form of a mind map.

In the field of "Learning to do", we extracted the students' attitudes and understandings towards marketing skills, methods for financing the business needs, measures needed to start a business, management in a changing environment, turning threats into opportunities, required traits in communication skills, and the characteristics of a proper idea to start a business. Figure 2 shows the set of responses in the form of a mind map.

In the field of "Learning to be", we extracted the students' attitudes and understandings towards the features of entrepreneurship that makes them interested, the traits needed to make decisions with little information, the traits needed to create a business, the benefits of entrepreneurship in personal life, and the behavioral symptoms of students that show their motivation for being entrepreneurs. Figure 3 shows the set of responses in the form of a mind map.

The students' responses to some questions were further divided based on whether or not the students had entrepreneurs in their relatives. In response to the question "Are you interested in entrepreneurship?", 77.5% of the students with entrepreneurs in their relatives responded "Yes". However, only half of the students without entrepreneurs in their relatives were interested in entrepreneurship. The statistics may indicate the influential role of having entrepreneurs in relatives on the generation of interest and motivation in students in entrepreneurship.

Besides, about 82% of the students with entrepreneurs in their relatives mentioned that they were highly motivated to become an entrepreneur, and only about 31% of the remaining students, who did not have entrepreneurs in their relatives, responded "Yes" to the question. The statistics indicate that the students with entrepreneurs in their relatives have a better perspective on choosing entrepreneurship as their future career.

In response to the question "Can you make quick decisions about an issue with limited knowledge of that?", only about 16% of the students responded "Yes", without any significant difference between the students with and without entrepreneurs in their relatives.

Besides, 67% of the students said that they have a risk-taking spirit and are open to innovations and changes.

In the field of "Learning to live together", we extracted the students' attitudes and understandings towards the traits required to work with different people, the traits required to create a network of people to start a business, the traits required to manage a business, professional ethics in business, and the requirements that should be observed in collaborations, and figure 4 shows the set of responses in the form of a mind map.

The creativity and entrepreneurial potentials of women are resources that can lead to economic growth. Therefore, by providing appropriate entrepreneurship training and preparing the conditions, we should prepare a proper situation to enter them in the entrepreneurial arena.

VI. MANAGERIAL RECOMMENDATIONS

It is expected that those who are responsible for designing curriculum, textbooks' authors, teachers, and other related executives use the research findings to improve and strengthen students' attitudes towards entrepreneurship learning.

It is suggested that they use experiential approaches including internships, management simulation, role-playing, structured experiential, and case analyses to educate entrepreneurship courses in schools [28].

Production management can be used to help students implement their entrepreneurial ideas. Production management is a tool for entrepreneurial learning in vocational-technical schools to create products and services. In this environment, students have the opportunity to develop skills related to entrepreneurship [2].

Besides, students, as future entrepreneurs, should have constructive interaction with the community and the environment. Consequently, students need to learn how to interact with colleagues, competitors, and other stakeholders. In this regard, Cheng et al. (2009) suggested that several modules should be designed specifically to develop skills related to communication, creativity, critical thinking, leadership, negotiation, problem-solving, social networks, and time management to be used as parts of entrepreneurship education courses [29].

The suggestions can considerably help strengthen students' attitudes and understandings towards entrepreneurial learning in the fields of "To know", "To do", "To be", and "To live together".

VII. Recommendations for further research

Alongside the main findings, we have encountered limitations that may provide opportunities for future research. First, this research was conducted on the students who had successfully passed entrepreneurship courses. Therefore, examining entrepreneurial attitudes for students who have not passed this course and comparing them with those for students who have passed this course can provide an opportunity for future research to assess the impact of entrepreneurship courses on the students' attitudes. Second, the research did not consider teaching methods and therefore could not assess the impact of different teaching methods on entrepreneurial learning outcomes. Third, the study did not address gender differences in students' attitudes. Therefore, addressing the subject can be a good opportunity to examine the role of gender in entrepreneurial attitudes.

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