

# BUILDING ENTREPRENEURIAL MENTALITY THROUGH INTERVENTION, EMPIRICAL EVIDENCE FROM UAE UNIVERSITIES

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## ABSTRACT

*Entrepreneurship, Entrepreneurial mindset, and entrepreneurial mentality are among the most discussed topics at the professional and academic levels. The main purpose of this study is to investigate the role of intervention to build the entrepreneurial mentality of the university students.*

*The COPSS method intervention concentrated on four characteristics: Opportunity Identification Capabilities (OIC), Entrepreneurial Creativity (ECR), Risk Management Capability (RMC), and Individual Entrepreneurial Orientation (IEO). Data from the treatment group (35 students), and two control groups (total 74 students) were collected by giving out a pre-test, and the post-test data were collected one month following the intervention. The author employed two control groups from the same course, at the Emirate University to apply the COPSS model.*

*The findings of this research show that the intervention will improve the participants' opportunity identification capabilities (OIC), and it accounts for 60% of the variation of the post-test. The intervention will improve the participants' entrepreneurial creativity (ECR) and it accounts for 30% of the variation of the post-test. The intervention will enhance the participants' self-efficacy regarding risk management capability (RMC) and it accounts for 40% of the variation of the post-test. The intervention will have a positive impact on the participants' individual entrepreneurial orientation (IEO) self-efficacy and the intervention accounts for 66% of the variation of the post-test. Gender does not have a significant effect, it has a very small positive effect on RMC variable and a very small negative effect on (OIC, ECR, and IEO) variables.*

**Keywords:** Entrepreneurship Education, Mindset- Empirical Evidence, UAE Universities.

## INTRODUCTION

Global demand for entrepreneurship is increasing; however, enterprise achievement elements are associated with numerous factors. In addition to technical issues, soft issues must be emphasized to fully comprehend entrepreneurship (Çemberci & Karakeçe, 2020). When entrepreneurs and young people have the correct entrepreneurial mindset, they will gain entrepreneurial skills, experience, skills, and abilities as well as the capacity to solve entrepreneurial problems (Nooh, 2022). Young people, faced with a poor economic climate, a high unemployment rate, and low salary, have increasingly turned to entrepreneurship as a means to forge their own paths in life, combat unemployment, boost their own incomes, and contribute to economic expansion (Huang & Yang, 2022). The impetus for this study comes from the pressing need to refine entrepreneurship education (EE), building students' entrepreneurial mentality practices and curriculum layouts that effectively instill an entrepreneurial attitude in students. Current studies highlight the challenges of executing EE activities in university settings, as these efforts are typically limited and temporary. The

investigation into how building students' entrepreneurial mentality affects their propensity to engage in entrepreneurial behavior includes determining whether it affects the students' opportunity identification competence (OIC), which is at the core of the entrepreneurial process. Building students' entrepreneurial mentality intervention with exercises that allow the participants to improve their entrepreneurial creativity (ECR) and risk management capacities can make OIC growth among course participants possible (Widianto et al., 2019).

## CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

### Building Students' Entrepreneurial Mentality

The first hypothesis (H1) predicts that building students' entrepreneurial mentality will improve the participants' opportunity identification capabilities (OIC). Observable improvements in students' OIC appear to follow naturally from shifts in their perspectives and behaviors (Hultén & Tumunbayarova, 2020). To rephrase, students improve their ability to see chances by altering their responses to the world and applying their knowledge in novel ways. This means that changes in students' opportunity identification (IO) mental frames affect their perception of reality and understanding of business knowledge Figure 1.

These results also lend credence to the notion that most students may considerably improve their OIC after taking an entrepreneurship module meant to boost OI, regardless of their background or level of entrepreneurship experience (Hou et al., 2022). The results also point to why some courses seem to help people find opportunities better than others. Education about entrepreneurship may significantly affect students if it changes the often-unconscious ways in which they see and act on reality when looking for opportunities (Rodriguez & Lieber, 2020).

Most management courses focus on instructing students to use specific analytical models or procedural guidelines (Stagias et al., 2021). People with an entrepreneurial mindset are always looking for better methods of doing things. They can easily forge ahead in the face of opposition and the market.

### Opportunity Identification Capability (OIC)

The second hypothesis (H2) proposes that building students' entrepreneurial mentality will improve the participants' entrepreneurial creativity (ECR). Helping students reflect on their own learning styles and requirements may stimulate reflection and open the door to new points of view and novel approaches to problem-solving (Syam & Sudarmi, 2019). According to Lindberg et al. (2017), one of how one's creative abilities can be improved is through engaging in self-directed learning activities. Therefore, it is essential to note that participants' ECR is enhanced when given practical and action-oriented assignments as a form of inspiration and development. This result lends credence to previous studies showing that students' creativity increases when they engage in hands-on activities during class (Hancock & Rummerfield, 2020).

Participants' confidence in their abilities was measured using self-efficacy surveys. These capacities included thinking creatively, discovering opportunities, and handling risks. The tests' findings prove that the components of the intervention, such as self-directed and action-oriented learning, have a beneficial effect on the level of self-efficacy possessed by the participants. Because of this, the findings are consistent with Bosman & Fernhaber (2021) views, who emphasize the necessity for a balance in learning activities. Learning that develops through experiencing the interplay of actions and emotions, as prompted by the exercises, leaves a lasting

impact. As a result, the students in the population sample benefited from an experience that was more immersive and more likely to actively engage their minds in the subject matter than any lecture or written text.

Positive results in this study regarding the participants' propensity to take an entrepreneurial approach are temporary if not reinforced (Supriyanto et al., 2020). Therefore, for a business school to guarantee that its bachelor's and master's degree graduates have developed entrepreneurial mindsets, it must incorporate assignments and activities that consistently reinforce such an approach (Bosman & Fernhaber, 2021). As a first "injection," a course utilizing intervention approaches like those in the creativity exercises, opportunity identification assignments, problem-based learning sessions, self-directed learning tasks, and supervision (COPSS) model can serve as a good starting point (Lindberg et al., 2017). Nevertheless, subsequent activities must be planned to preserve and further develop this mentality throughout the programs. When organizing activities of this kind, it is essential to consider the beneficial consequences of empowering students to direct and assume responsibility for their educational pursuits.

It's easy to fall into the trap of thinking that the success (or failure) of an intervention whose goal is to foster students' development of an entrepreneurial attitude depends on the specific tactics employed in that intervention (Bosman & Fernhaber, 2018). Students need to be taught that there are no correct answers. Hence an environment of trust must be fostered. Answers or recommendations that seem absurd may be the springboard for varied thought processes that lead to innovative solutions. Students' imaginations can be stimulated through a self-paced learning pedagogy. The findings revealed in this study are consistent with those of Bosman & Fernhaber (2021), indicating that this method encourages students to be proactive and ready to bear responsibility for their learning.

### **Risk Management Capability (RMC)**

The third hypothesis (H3) proposes that building students' entrepreneurial mentality will enhance the participants' self-efficacy concerning risk management capability (RMC) (Hultén & Tumunbayarova, 2020). RMC describes an individual's confidence in their ability to deal with the risks and ambiguities of developing a new product and service. Risk management is an essential component in the decision-making process for entrepreneurs, and by their very nature, businesses are inherently dangerous endeavors. A core task of a new entrepreneur is to deal with uncertainty and ambiguity. When they find opportunities, they need to assess the risks of taking advantage of them. This intervention encourages participants to consider their fears and risks. An entrepreneurial mindset encourages practical decision-making skills (Casulli, 2022).

Students with an adequate entrepreneurial mentality acquire entrepreneurial self-efficacy, which is the feeling of being able to handle problems that appear to be impossible (Karimi et al., 2016). Having a more optimistic opinion of one's ability to handle high-risk situations may emerge from changes in endogenous elements, including one's feeling of greater self-efficacy. The best strategy for dealing with EE is probably to master the art of moderate risk-taking (Syam & Sudarmi, 2019). Enhancing participants' risk management capability is meant to foster a sense of preparedness for handling the challenges that may come while seizing an opportunity. As one's ability to recognize opportunities grows, so does their willingness to take calculated risks.

Because it is challenging to foster RMC skills in the classroom, it is plausible that the post-test improvement in RMC scores across all three groups was since it was administered during the exam time (Hultén & Tumunbayarova, 2020). Due to increased work intensity and worry, risk

management self-efficacy may grow over weeks. This finding is intriguing because it indicates that students' RMC self-efficacy may improve as they practice for and endure test stress and anxiety. As a result, the increased RMC seen across the three groups may have been caused by a shift in attitude toward previously insurmountable challenges (Cui & Bell, 2022).

### **Individual Entrepreneurial Orientation (IEO)**

The fourth hypothesis (H4) proposes that building students' entrepreneurial mentality will improve the participants' entrepreneurial orientation (IEO) self-efficacy. According to the study by Hultén & Tumunbayarova (2020), students who received the intervention have higher levels of IEO self-efficacy. The post-test results for the intervention group's IEO show that their IEO self-efficacy has improved. It is worth noting that both control groups showed a drop in IEO post-test scores, with the engineering students' drop being statistically significant ( $p < .05$ ).

Many studies have found that learning about entrepreneurship is a factor in being an entrepreneur. For example, Hultén & Tumunbayarova (2020) found that people who had taken an entrepreneurship course were more likely to want to start their own business. Entrepreneurship education is meant to encourage people to act and think like entrepreneurs, grow entrepreneurs, and help people start new businesses. People believe that entrepreneurship education is essential for assisting people in learning how to be entrepreneurs. Education in entrepreneurship is seen to play a crucial role in the development of individuals' abilities to engage in entrepreneurial activities.

IEO can be thought of as a set of entrepreneurial competencies that one can acquire through an appropriate education in entrepreneurship (Larsen, 2022). Several studies have examined the role of IEO as a concept that influences entrepreneurial intention. The students who successfully finished the course on entrepreneurship unanimously acknowledged that it positively impacted their ability to think creatively and display a higher level of entrepreneurial ambition than previously.

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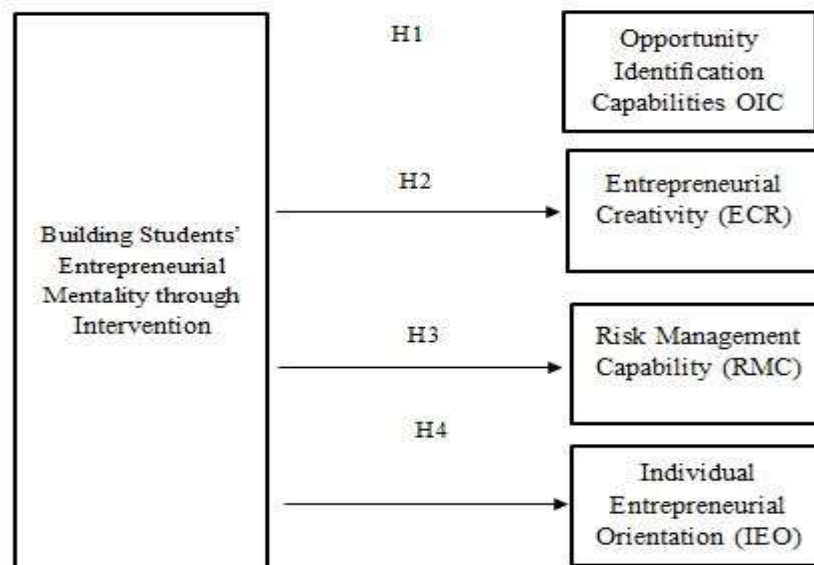
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**FIGURE 1**  
**BUILDING STUDENTS' ENTREPRENEURIAL MENTALITY**  
**RESEARCH DESIGN**

### Measurement and data collection

Statements with response choices on a five-point Likert scale (1 = entirely disagree, 5 = totally agree) are used to assess the intervention's influence on students' OIC, ECR, RMC, and IEO. The English questionnaire with these measurements Hultén & Tumunbayarova (2020) was

translated into Arabic by the author. Lindberg et al. (2017) utilized these measurements to investigate how the COPSS intervention technique affected the entrepreneurial mentality of Swedish students. But the author applied the Arabic version of the questionnaire to Arab students in the Emirates. Conceptually, the OIC assessment is based on research conducted by Gregoire et al. (2010) on managers' perceptions of opportunities while taking into account the restrictions inherent in the environment in which the opportunity was found. The statements to capture change in the students' ECR self-efficacy draw upon those used by Barakat et al. (2014) when examining students' creativity and entrepreneurial self-efficacy. The measurement to test whether the intervention resulted in enhanced RMC self-efficacy follows those used by Lindberg et al. (2017a). This RMC measurement specifically examines whether the intervention has enhanced the students' perceptions of being able to manage the risks that may follow from exploiting an opportunity. Lindberg et al. (2017) used the measurement to capture students' individual entrepreneurial orientation (IEO) to investigate whether a specific intervention technique influences students' general entrepreneurial predisposition while also including items on proactivity and risk-willingness. The goal of the IEO measurement is thus to see if the intervention has a broad impact on the students' entrepreneurial mentality. Table 1 displays descriptive data from the entire sample (N = 105).

<b>Axe No.</b>	<b>Variables</b>	<b>Sub Axe</b>	<b>Symbol</b>	<b>No. Items</b>
1	Personal Data	Age(Y), Gender (Z), Marital (M), educational level (E), and working experience (W)	****	5
2	leadership skills (Independent variables)	Opportunity Identification Capability, (Xa1, Xa2, Xa3)	OIC	3
		Entrepreneurial Creativity, (Xb1, Xb2, Xb3)	ECR	3
		Risk Management Capability, (Xc1, Xc2, Xc3)	RMC	3
3	Make decision (Dependent variable)	Individual Entrepreneurial Orientation, (Xd1, Xd2, ..., Xd10)	IEO	10

### Study Groups

At the beginning of the winter term in January 2022, data from the treatment group were collected by giving out questionnaires to participants at the beginning of the second semester (pretest) and at the end of the semester (post-test). As a result, the post-test data were collected one month following the intervention. The therapy class was conducted by the author, in collaboration with two professors from the department. There were 35 students in the treatment sample (24 males and 11 females). Males and females in the treatment group were 19 years old on average. The treatment course group's objective was to examine if the COPSS intervention method would increase participants' OIC, ECR, RMC, and IEO self-efficacy.

We employed two control groups from the same course, at the Emirate University to apply the COPSS model. We collected data from the control groups by administering the survey to students at the start of the winter term (pretest) and at the end of the semester (post-test) during the June 2022 exam period. As a result, data was collected from both the control and treatment groups. In all, the two control groups included 74 students. We received 35 responses

from each group (21 males and 14 females) in the first control group and (18 males, 17 females) in the second control group. Therefore, the number of responses from the treatment group and the two control groups are equal. Verbal informed consent was obtained from all participants.

### Data Analysis and Findings

Descriptive statistics, reliability tests, Statistics test of variance (Kruskal Wallis Test), Paired-samples t-tests, Multivariate regression test, and the ANCOVA analysis. The quantitative data of the research questions were analyzed using SPSS version 25.

### Descriptive Statistics

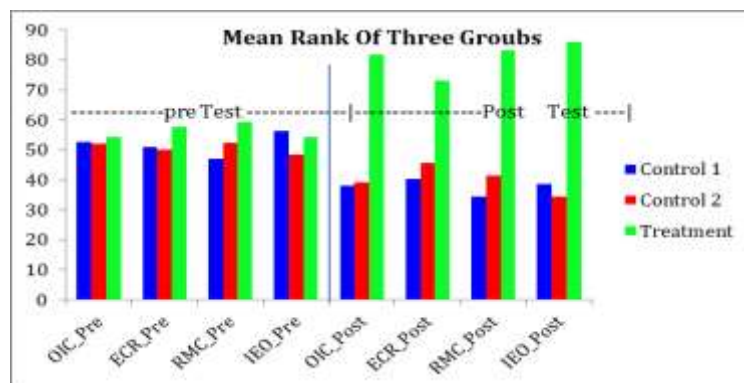
We are used the descriptive statistics in current study to the determine the respondents' impressions of the variables' items. The mean, standard deviations and Cronbach's, Alpha, were utilized as measuring scales in this study. Table 2, contains all this results for the pretest and posttest. The reliability test was used to find out if there is internal consistency among the variables' items by employing the Cronbach alpha value. The Cronbach alpha value for each value must be greater than 0.7. According to the results of the analysis (Table, 2), it was found that all the variables were highly consistent, with Cronbach alpha values ranging from 0.696 to 0.992.

Variables	PreTest			PostTest		
	Mean	SD	$\alpha =$	Mean	SD	$\alpha =$
<b>Opportunity Identification Capability, OIC</b>						
Despite limited resources I find possibilities	2.60	0.87	0.992	2.60	0.87	0.989
I often find potential opportunities to improve	2.63	0.92		2.63	0.92	
I often find opportunities that I carry out	2.66	0.95		2.70	0.91	
<b>Total</b>	2.63	0.90		2.64	0.88	
<b>Entrepreneurial Creativity, ECR</b>						
My capability to commercialize a new product or service is good	2.63	1.05	0.893	2.70	0.98	0.899
My capability to commercialize a new idea is good	2.50	0.97		2.67	0.90	
My ability to think creatively is good	2.44	0.89		2.64	0.80	
<b>Total</b>	2.48	0.84		2.64	0.78	
<b>Risk Management Capability, RMC</b>						
I engage in activities characterized by high risk	2.60	0.77	0.722	2.60	0.77	0.696
I consider myself prepared to take high risk	2.47	1.07		2.71	0.95	
I consider myself avoiding taking high risk (reverse coded)	2.57	0.88		2.60	0.73	
<b>Total</b>	2.55	0.63		2.64	0.55	
<b>Individual Entrepreneurial Orientation, IEO</b>						
First to implement novel ways to think and act	2.29	0.78	0.81	2.37	0.73	0.82
Learn from & adapt to the best solutions	2.53	0.74		2.59	0.65	
Recognize trends early on	2.50	0.79		2.53	0.74	
Follow trends early on	2.57	0.81		2.64	0.76	
Quickly discover techniques that influence life	2.44	0.97		2.61	0.84	
Ready to seize upon unexpected opportunities	2.56	0.81		2.60	0.79	
Always try to find new ways to carry out things	2.43	0.89		2.61	0.71	
In uncertain situations I prefer bold solutions	2.46	0.94		2.63	0.80	
Put time into exploring new possibilities	2.27	0.90		2.39	0.80	
Engage in activities characterized by high risk	2.34	0.85		2.34	0.85	
<b>Total</b>	2.44	0.48		2.53	0.45	

### Test for Selection Effects and Self-Selection Bias

To identify possible differences between the treatment group and the two control groups we conducted a non-parametric Statistics test of variance (Kruskal Wallis Test) on the pretest data from our four outcome variables, (OIC, ECR, RMC, and IEO) prior to testing our research hypotheses. The results of this analysis Table 3 indicated that there were not preexisting differences between the treatment group and the control groups in all variables (OIC, ECR, RMC, and IEO),  $P > 0.05$ . But the same test indicates that there are statistically significant differences between the three groups in the post-test for all variables,  $p < 0.05$  Figure 2. This motivated us to continue the analysis and confirm the results and study the strength of the impact of the intervention method.

	Mean Ranks of Pre Test				Mean Ranks of Post Test			
Groups	OIC	ECR	RMC	IEO	OIC	ECR	RMC	IEO
Control 1	52.67	52.89	47.11	56.19	38	40.21	34.41	36.41
Control 2	52.07	49.59	52.41	48.44	39.09	45.43	41.43	34.64
Treatment	54.26	56.53	59.47	54.37	81.91	73.36	83.16	87.94
Kruskal-Wallis H	0.102	0.936	3.028	1.246	48.688	24.476	53.53	69.367
Df.	2	2	2	2	2	2	2	2
Asymp. Sig.	0.95	0.626	0.22	0.536	0.000	0.000	0.000	0.000



**FIGURE 2  
MEAN RANKS OF THREE GROUPS FOR PRETEST AND POSTTEST**

**Paired-samples t-tests**

We used the Paired Samples Test to answer this question: are there any statistically significant differences between the mean scores of students in the pre- and post-test? As it is clear from the Table 4, there are statistically significant differences between the mean scores of students in the pre- and post-test where ( $p < 0.001$ , for all results).

N=35	Mean Treatment group (SD)		Mean Control group 1 (SD)		Mean Control group 2 (SD)	
	PreTest	PostTest	PreTest	PostTest	PreTest	PostTest
OIC	2.72 (0.76)	4.02 (0.5)	2.62 (0.91)	2.62 (0.91)	2.64 (0.9)	2.67 (0.86)
ECR	2.58 (0.76)	3.72 (0.95)	2.52 (0.92)	2.52 (0.92)	2.43 (0.78)	2.76 (0.61)
RMC	2.71 (0.54)	3.89 (0.58)	2.50 (0.64)	2.56 (0.59)	2.59 (0.63)	2.71 (0.51)



IEO	2.43 (0.38)	4.41 (0.26)	2.68 (0.98)	2.75 (0.95)	2.37 (0.43)	2.49 (0.37)
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Notes:  $p < .001$  for all results.

### Multivariate Regression Test

Multivariate regression is a method for estimating a single regression model with many outcome variables. When a multivariate regression model has more than one predictor variable, the model is a multivariate multiple regression. To investigate the proposed effects of the intervention on the dependent post-test variables, we employed a multivariate analysis of covariance (MANCOVA). This technique was used to account for covariance among the dependent variables. The Box M test of variance homogeneity of the variables included in the model suggests that this assumption was not violated ( $p = .177$ ). The MANCOVA findings suggest that the students' pretest IEO, and involvement in the intervention all had an effect on the dependent variables, as shown in Table 5. (OIC, ECR, RMC and IEO). In the multivariate test, the associations between the dependent variables and the proclivity for entrepreneurship (pretest IEO,  $p = 0.000$ ) and participation in the intervention ( $p = 0.00$ ) are the most significant. Individual propensity to entrepreneurship and the intervention, as shown in Table 5, explain roughly 42% and 87% of the variation in the dependent variables, respectively (pretest IEO,  $\eta^2 = 0.422$ , treatment dummy variable,  $\eta^2 = 0.867$ ). According to the results of Table 5, the gender is not significant because ( $p = 0.537 > 0.05$ ).

Effect	Wilks' $\lambda$	F	Num. df.	Denom. df	Sig.	$\eta^2$	Result
Intercept	0.047	342.266	4	68	0	0.953	Supported
Pretest IEO	0.112	2.512	80	270.673	0	0.422	Supported
Treatment dummy variable	0.133	111.060	4	68	0	0.867	Supported
Gender	0.956	.788	4	68	0.537	0.044	No Supported

### Test the Proposed Hypotheses

Is the improvement in the performance of the experimental group compared to the control groups for all variables (OIC, ECR, RMC, and IEO) have occurred by chance? The ANCOVA analysis can answer this question. We will use each variable in the posttest as the continuous dependent variable, use the same variable in the pretest as a fixed factor, and use the treatment category and gender as the covariate interaction effects. At a confidence level of 99%, the datasets were checked statistically for violations of normality, linearity, reliable measurement of covariates, homogeneity of variances, and a homogeneous regression slope. In order to interpret the results, we can read along the method row until you reach the "Sig." column. This provides the statistical significance value (i.e., p-value) of whether there are statistically significant differences in the score of the posttest (i.e., the dependent variable) between the groups (i.e., the independent variable) when comparing it by pretest (i.e., the covariate). From the Tables 6 and Table 7, we can see that there is a statistically significant difference between adjusted means  $p = 0.00$  for all variables (OIC, ECR, RMC, and IEO). The gender is not significant effect it have a very small positive effect on RMC variable and a very small negative effects on (OIC, ECR, and IEO) variables.

Source	Type III SS	df	$\beta$	F	Sig.	Partial $\eta^2$
Corrected Model Post-test OIC	86.780	11		37.257	0.000	0.815
Intercept	8.79	1		41.513	0.000	0.309
Pretest OIC	42.501	9	0.588	22.302	0.000	0.683
Treatment dummy variable	29.546	1	0.623	139.537	0.000	0.60
Gender	0.19	1	-0.015	0.897	0.346	0.01
Error	19.692	93				
Total	1116.556	105				
Corrected Total	106.472	104				
$R^2 = 0.815$ (Adjusted $R^2 = 0.793$ )						
Corrected Model Post-test ECR	57.023a	11		12.292	0.000	0.592
Intercept	23.118	1		54.814	0.000	0.371
Pretest ECR	31.082	9	0.459	8.189	0.000	0.442
Treatment dummy variable	16.714	1	0.456	39.629	0.000	0.299
Gender	0.934	1	-0.127	2.215	0.14	0.023
Error	39.222	93				
Total	1059.311	105				
Corrected Total	96.246	104				
$R^2 = 0.592$ (Adjusted $R^2 = 0.544$ )						

We investigated our hypotheses by running independent ANCOVAs for each of the four dependent post-test variables, using the associated measure's pretest, gender, and treatment category as covariates in each analysis. Tables 6 and 7 show the ANCOVA results. This indicates that the intervention explains roughly 60%, 30%, 40%, and 66% of the variation in the dependent variables (OIC, ECR, RMC, and IEO) respectively. The results reported in Table 6 indicate that ( $\eta^2 = 0.60$ ) there is support to uphold H1, which states that: the intervention will improve the participants' opportunity identification capabilities (OIC). And the  $\eta^2$  suggests that the intervention accounts for 60% of the variation of the post-test OIC. Table 5 indicates that ( $\eta^2 = 0.60$ ) there is support to uphold H1. The testing of H2, which states that: the intervention will improve the participants' entrepreneurial creativity (ECR) is supported at  $p = 0.00$ -level. And the  $\eta^2$  suggests that ( $\eta^2 = 0.299$ ) the intervention accounts for 30% of the variation of the post-test ECR. Combined these results suggest that H2 is supported.

Source	Type III SS	df	$\beta$	F	Sig.	Partial $\eta^2$
Corrected Model Post-test RMC	49.381a	9		26.682	0.000	0.717
Intercept	10.01	1		48.681	0.000	0.339
Pretest RMC	28.938	1	0.428	140.726	0.000	0.597
Treatment dummy variable	12.877	7	0.059	8.946	0.000	0.397
Gender	0.254	1	0.677	1.234	0.269	0.013
Error	19.535	95				
Total	1048.222	105				

Corrected Total	68.916	104				
$R^2 = 0.717$ (Adjusted $R^2 = 0.690$ )						
Corrected Model Post-test IEO	101.139a	22		28.74	0.000	0.885
Intercept	7.097	1		44.368	0.000	0.351
Pretest IEO	64.394	1	0.436	402.562	0.000	0.831
Treatment dummy variable	25.028	20	-0.055	7.823	0.000	0.656
Gender	0.206	1	0.823	1.29	0.259	0.015
Error	13.117	82				
Total	1199.72	105				
Corrected Total	114.256	104				
$R^2 = 0.885$ (Adjusted $R^2 = 0.854$ )						

Table 7 indicates that ( $\eta^2=0.60$ ) there is support to uphold H3, which states that: The intervention will enhance the participants' self-efficacy with regard to risk management capability (RMC). And the  $\eta^2=0.397$  suggests that the intervention accounts for 40% of the variation of the post-test RMC. Table 5 indicates that there is support to uphold H3. The testing of H4, which states that: The intervention will have a positive impact on the participants' individual entrepreneurial orientation (IEO) self-efficacy is supported at  $p = 0.00$ -level. And the  $\eta^2$  suggests that ( $\eta^2=0.656$ ) the intervention accounts for 66% of the variation of the post-test IEO. Taking the results together suggests support for H4.

Overall, the findings given in the results section demonstrate a shift in the treatment group's self-efficacy as evaluated by the OIC, ECR, RMC, and IEO assessments. The support for all our four hypotheses implies that the changes are in the desired beneficial direction and significant improvements considering the intervention's one month. The summary of data analysis findings refers to the following:

- The intervention will improve the participants' opportunity identification capabilities (OIC). And that the intervention accounts for 60% of the variation of the post-test OIC.
- The intervention will improve the participants' entrepreneurial creativity (ECR) and the intervention accounts for 30% of the variation of the post-test ECR.
- The intervention will enhance the participants' self-efficacy regarding risk management capability (RMC). And the intervention accounts for 40% of the variation of the post-test RMC.
- The intervention will have a positive impact on the participants' individual entrepreneurial orientation (IEO) self-efficacy and the intervention accounts for 66% of the variation of the post-test IEO.
- Gender does not have a significant effect it has a very small positive effect on RMC variable and a very small negative effect on (OIC, ECR, and IEO) variables.
- According to the values of (Adjusted R2) in Tables 6 and 7, structural models explain 54 to 84 percent of the change that occurred because of the intervention, with the remainder explained by other factors.

## DISCUSSION

The results of this research show that the Emirate university intervention to promote students' entrepreneurial mindsets also works in an Emirate university setting. The results highlight the significance of fostering an environment in the classroom where students may actively engage in forward-thinking learning. Therefore, replicating the learning environment to encourage the development of an entrepreneurial attitude is more important than just transferring pedagogical approaches. The results of this study show that involving students in creative

cognitive processes improves their ability to see opportunities and develop a personal entrepreneurial orientation.

Mostly, the discoveries detailed in the outcomes segment show a change in the treatment gathering's self-viability as estimated in the OIC, ECR, RMC, and IEO estimations. The assistance to maintain three of our four hypotheses proposes the progressions to be in the expected positive course and at a healthy level throughout the one-semester mediation period. In this manner, it would have been unreasonable to expect significant changes in how the understudies in the treatment group view their self-adequacy. It is additionally imperative that, with the exception of RMC, we track that the inclination variable as estimated in the pretest is the most grounded indicator of every variable's post-test score.

While taking a gander at every variable separately, we observe that the upgrade of the treatment gathering's OIC score is a sign of how the activities during the intercession expanded the members' capacities to create thoughts and recognize valuable open doors. The outcomes from the post-trial of the control groups' 1 and 2 OIC scores demonstrate a lessening in the OIC scores (see Table 3). Thusly, the improved OIC scores among the members in the treatment bunch are in accordance with Larsen (2022), who proposes that tasks considering play and trial and error might upgrade the members' capacity to find open doors. Both the control groups 1 & 2 reported significant decreases in their post-test ECR scores but the treatment group increased. This outcome was normal for the treatment group since the practices in the mediation pointed toward accomplishing this impact. Because they studied business with many course components with stagnation and conservation, the understudies in the treatment group detailed higher post-test ECR scores. Consolidated, these discoveries are consistent with Lindberg et al. (2017), who contend that innovative reasoning can be fostered across a variety of settings and disciplines.

It was unrealistic to decide the mediation's impact on the treatment gathering's RMC since their increment is higher than those announced in the control groups (see Table 3). Realizing that it is challenging to foster RMC capacities in the homeroom setting, a potential clarification with respect to why the RMC post-test scores expanded for every one of the three gatherings is that the post-test occurred during the assessment period when the understudies sat in tests. The elevated workforce and nervousness during these weeks might reflect an impression of expanded risk to the executives' self-viability. This perception is fascinating since it suggests that getting ready for tests and adapting to the related pressure and nervousness can increase the understudies' RMC self-viability. For example, RMC's remarkable expansion of the treatment may be the result of an impression of a choice to deal with things that from the start seemed unimaginable. As displayed in Table 6, the help to maintain H4 is at a moderate level. The outcomes announced in Table 2 recommend that the treatment group's post-test scores stand in sharp differentiation from the diminished post-test scores that the control groups detailed. Consequently, this perception suggests that the intercession emphatically affected the treatment gathering's IEO score. This perception is well in accordance with our presumption that an expansion in the post-test scores for OIC, ECR, and RMC would result in an expanded IEO post-test score.

With everything taken into account, the moderate improvement of the treatment group's post-test scores suggests that the intercession has started the advancement of an enterprising mentality among the members. In this manner, the mediation has started the turn of events, however, distinguishing any significant changes in the members' impression of their own capabilities was too soon. Obviously, the development of certainty and capability calls for investment and practice. In this manner, our discoveries support Hultén & Tumunbayarova

(2020) who recommend that EE consolidate self-improvement by building certainty and capability. Our discoveries cause us to notice the significance of figuring out how to think imaginatively, systematically, and brilliantly and, through such activities, gain trust in one's capacities. Building confidence in these capacities will upgrade the probability of understudies' eagerness to transform their imaginative thoughts right into it (Hancock & Rummerfield, 2020). Improved self-assurance may, along these lines, in the end, cause understudies to participate in enterprising exercises.

Consolidating the help for three of our four speculations demonstrates that the intercession emphatically affected the understudies' enterprising mentality. Our thought is that every part of intercession for the development of the understudies' enterprising mentality needs to zero in on fostering the people and supporting their mindfulness.

In this manner, much the same as Hultén & Tumunbayarova (2020), the discoveries of this research highlight the significance of making conditions that assist understudies with becoming mindful and using this mindfulness to foster their enterprising mentality and related capacities. Management of gatherings is basic to produce such circumstances. Through the management, the educator turns into a "guide as an afterthought" who can help the gathering understand how they can utilize their thoughts, shared interests, considerations, and dreams to conquer capability and certainty obstructions Lindberg et al. (2017) As a result, gathering management assists them with assembling broadly while discussing the means to be fundamental for forthcoming enterprising demonstrations.

## CONCLUSION

This research was carried out to identify the amount of entrepreneurial intention present among university students and determine the effects that IEO has on entrepreneurial intention. According to the findings, college students have shown an interest in starting their own businesses and expressed optimism about the prospect of doing so. In addition, the data demonstrated that the degree to which university students exhibited proactiveness and inventiveness was a significant factor in determining their level of entrepreneurial intention.

The intervention features elements that expose students to ambiguity and uncertainty to practice their risk management skills. These elements are crucial because they allow students to reflect on their experiences and gain confidence in their ability to deal with challenges that may have seemed insurmountable initially. Post-test ECR scores were significantly higher for the treatment and control groups. Since the intervention's exercises were designed to produce this impact, it's not surprising that the treatment group saw these outcomes. One possible explanation for the higher post-test ECR ratings the control group obtained is that their major, Construction, included several components that emphasized design and creative thinking. It's possible to foster creative thinking in various settings and fields.

## LIMITATIONS, AND FUTURE DIRECTIONS

The fact that this research solely looks at one intervention's short-term impact is a drawback. Longer periods are required for research on the formation of students' entrepreneurial mindsets to fully capture the growth process. Examining the impact of ongoing interventions on students' entrepreneurial mentality both during and after programs in several fields is, therefore, an essential direction for future research. The necessity for other disciplines to be involved stems from the realization that not only students studying business administration may gain from

cultivating an entrepreneurial attitude. Other disciplines should be included in light of the many start-ups launched by graduates in the fields.

The creation and evaluation of treatments for fostering entrepreneurial attitudes in fields outside of business administration is also an area of interest for future study. Although a pedagogical intervention like the one described in this work may seem isolated and erratic at first, it may eventually lead to the development of self-directed learning skills. This growth indicates that the pupils eventually adopt an active and independent learning style that helps them persevere in the face of challenges and disappointments. As a result, the intervention may enhance and strengthen the impact of other educational activities. While this intervention may operate as a "first injection," more interventions throughout the school program and extracurricular educational activities are required to establish an entrepreneurial micro-culture that will last over time. Therefore, even though the COPSS intervention model had a favorable impact on the entrepreneurial attitude of the treatment group, it still requires improvement in terms of follow-up activities and support systems.

This is crucial because, even if a single intervention might encourage participants to think creatively and entrepreneurially, the benefit will be short-lived without supporting structures and behaviors. In the educational framework of the Emirate host university, support systems and follow-up activities are especially crucial. This is so that the benefits of a particular intervention won't last long due to elements in the larger learning environment. The infrastructure necessary to encourage entrepreneurship is now a little lacking. When the larger learning environment is combined, it has an impact on pupils' conduct; they become submissive and reliant, which does not advance society. It is likely that to modify this tendency, entrepreneurial ecosystems will need to be developed, which calls on a range of Emirate society's players to adopt new attitudes and behaviors. Therefore, it is not only the kids' attitudes and conduct that have to change.

## REFERENCES

- Barakat, S., Boddington, M., & Vyakarnam, S. (2014). Measuring entrepreneurial self-efficacy to understand the impact of creative activities for learning innovation. *The International Journal of Management Education*, 12(3), 456-468.
- Bosman, L., & Fernhaber, S. (2018). Defining the entrepreneurial mindset. *Teaching the entrepreneurial mindset to engineers*, 7-14.
- Bosman, L., & Fernhaber, S. (2021). All Students Need an Entrepreneurial Mindset. *Teaching the Entrepreneurial Mindset Across the University: An Integrative Approach*, 3-10.
- Bosman, L., & Fernhaber, S. (2021). The Gap Within Entrepreneurial Mindset Education. *Teaching the Entrepreneurial Mindset Across the University: An Integrative Approach*, 21-25.
- Casulli, L. (2022). What do we talk about when we talk about entrepreneurial mindset training?. In *Theorising undergraduate entrepreneurship education: Reflections on the development of the entrepreneurial mindset* (pp. 137-156). Cham: Springer International Publishing.
- Çemberci, M., & Karakeçe, E. (2020). The role of fear on the entrepreneurial mindset. *Journal of International Trade, Logistics and Law*, 6(1), 158-163.
- Cui, J., & Bell, R. (2022). Behavioural entrepreneurial mindset: How entrepreneurial education activity impacts entrepreneurial intention and behaviour. *The International Journal of Management Education*, 20(2), 100639.
- Gregoire, D.A., Shepherd, D.A., & Schurer Lambert, L. (2010). Measuring opportunity-recognition beliefs: Illustrating and validating an experimental approach. *Organizational Research Methods*, 13(1), 114-145.
- Hancock, S.A., & Rummerfield, W. (2020). Simulation methods for teaching sampling distributions: Should hands-on activities precede the computer?. *Journal of Statistics Education*, 28(1), 9-17.
- Hou, F., Su, Y., Qi, M., Chen, J., & Tang, J. (2022). A multilevel model of entrepreneurship education and entrepreneurial intention: Opportunity recognition as a mediator and entrepreneurial learning as a moderator. *Frontiers in Psychology*, 13.

- Huang, S. N., & Yang, C. H. (2022). Exploring the impact of entrepreneurship education for service start-ups: perspective from the experiential learning Theory. *Journal of Service Science and Management*, 15(3), 129-152.
- Hultén, P., & Tumunbayarova, Z. (2020). Building students' entrepreneurial mindsets: Results from an intervention at a Russian university. *The International Journal of Management Education*, 18(2), 100380.
- Karimi, S., Biemans, H.J., Lans, T., Aazami, M., & Mulder, M. (2016). Fostering students' competence in identifying business opportunities in entrepreneurship education. *Innovations in education and teaching international*, 53(2), 215-229.
- Larsen, I.B. (2022). Fostering an entrepreneurial mindset: A typology for aligning instructional strategies with three dominant entrepreneurial mindset conceptualizations. *Industry and Higher Education*, 36(3), 236-251.
- Lindberg, E., Bohman, H., & Hultén, P. (2017). Methods to enhance students' entrepreneurial mindset: A Swedish example. *European Journal of Training and Development*.
- Lindberg, E., Bohman, H., Hultén, P., & Wilson, T. (2017). Enhancing students' entrepreneurial mindset: a Swedish experience. *Education+ Training*, 59(7/8), 768-779.
- Nooh, M.N. (2022). A review of the entrepreneurial mindset. *Voice of Academia*, 18(2), 178–198.
- Rodriguez, S., & Lieber, H. (2020). Relationship between entrepreneurship education, entrepreneurial mindset, and career readiness in secondary students. *Journal of Experiential Education*, 43(3), 277-298.
- Stagias, I., Retalis, S., & Sourgiadaki, M. (2021). Fostering business opportunity identification skills in secondary education via an orchestrated technology enhanced learning script. *Entrepreneurship Education*, 4, 89-116.
- Syam, A., & Sudarmi, S. (2019). Analysis of Student Entrepreneurship decision making in the Learning Prerspective. *Jurnal Ad'ministrare: Jurnal Pemikiran Ilmiah dan Pendidikan Administrasi Perkantoran*, 6(1).
- Widianto, B.K., Kristiyanto, A., & Liskustyawati, H. (2019). The Role of Islamic Boarding School in Maintaining Physical Fitness of Students (Physical Fitness Study at Huda Mayak Islamic Boarding School, Ponorogo). *International Journal of Multicultural and Multireligious Understanding*, 6(4), 66-75.

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