

# **The effect of experiential learning on entrepreneurial competencies and business performance**

Matshepo Koape<sup>a</sup> and Anastacia Mamabolo<sup>b\*</sup>

<sup>a, b</sup> University of Pretoria's Gordon Institute of Business Science  
26 Melville Rd, Illovo, Johannesburg, 2196, South Africa

<sup>a</sup> Email address: koapem@gibs.co.za

\*Corresponding author: Anastacia Mamabolo\*

Mailing address: 26 Melville Rd, Illovo, Johannesburg, 2196, South Africa

Tel.: +27 11 771 4346 Fax: +27 86 637 1594

E-mail: mamaboloa@gibs.co.za; anastaciamamabolo@gmail.com

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## **Abstract**

Experiential learning is significant in cultivating entrepreneurial competencies required for business performance. However, there is limited research on the interplay between experiential learning, entrepreneurial competencies, and business performance. In the past, experiential learning has been linked to entrepreneurial intentions rather than to the implementation of entrepreneurial activities. The study's purpose is to examine the impact of experiential learning on business performance through the mediating role of entrepreneurial competencies. Therefore, quantitative research was conducted on 123 entrepreneurs in business development phase, who were part of a business school's experiential entrepreneurial program in South Africa. Multiple hierarchical regression analysis revealed that experiential learning led to entrepreneurial competencies that benefited business performance. Specific competencies played a role as mediators, such as opportunity recognition and market analysis. Other competencies were insignificant. It should be noted, however, that the insignificant mediating

competencies, such as financial capabilities and networking, were affected by the period when the study was conducted, during the Covid-19 pandemic. The findings also suggest that environmental factors such as access to finance shape the mediating role of entrepreneurial competencies on experiential learning and business performance. The study contributes to the entrepreneurship field by looking at experiential learning beyond entrepreneurial intentions to action. In addition, the study demonstrates that experiential learning and its outcomes are influenced by the stage of the business and intended learning outcomes. Therefore, researchers and practitioners should consider entrepreneurial competencies from a multi-dimensional perspective.

### **Keywords**

Entrepreneurial competencies; Experiential learning; Business performance

### **Introduction**

Entrepreneurial education has gained increasing scholarly attention because of the potential impact of igniting and enhancing entrepreneurial activities among individuals and the broader society (Loi et al., 2019). Entrepreneurial education evolved from having been teacher-centered in the 90s to student-focused in 2010s (Hägg & Gabrielsson, 2020). The student-focused approaches are based on using experiential and constructivist learning methods to teach entrepreneurship (Hägg & Gabrielsson, 2020). Underpinned by Kolb's Experiential Learning theory (Kolb & Kolb, 2009), experiential learning can take different forms and can be achieved through experience, observation, reflection and other thought processes, and active experimentation (Bell & Bell, 2020; Kozlinska et al., 2020).

Experiential learning contributes towards outcomes, which include comprehension of the entrepreneurship content taught (Thomsen et al., 2021), enhanced entrepreneurial

competencies (Motta & Galina, 2023) and the intention to start a business (Taneja et al., 2024). This paper focuses on entrepreneurial competencies as one of the outcomes of experiential learning. Entrepreneurial competencies are "skills, abilities, and attitudes, which, together with performance, lead to greater satisfaction in a professional job" (Silveyra et al., 2021, p. 3). Kozlinska et al. (2023) empirically demonstrate that entrepreneurial experience leads to acquired entrepreneurial skills, greater knowledge, and improved attitudes.

These outcomes of experiential learning were identified from the results of educational programs that mainly focused on individuals who had not yet actively started business ventures but were still pursuing their graduate degrees (Hägg & Gabrielsson, 2020; Motta & Galina, 2023; Nabi et al., 2017). A meta-analysis study by Reis et al., (2021) found that entrepreneurial competencies are predominantly studied in the context of the intention to start a business. Additionally, Motta and Galina (2023) found that there are a few studies whereby the experiential activities involved individuals who participated in activities for developing and implementing a business. However, this study shifts the focus to understanding the role of experiential learning on individuals who are already implementing their business ideas.

Therefore, we focus on business performance as an outcome of experiential learning (Bell & Bell, 2020) beyond the entrepreneurial intentions (Taneja et al., 2024). Business performance as an outcome of experiential learning is applicable to individuals who are already running businesses. For experiential learning to have an impact on business performance, it should be specific to entrepreneurial tasks (Unger et al., 2011). Thus, experiential learning should focus on teaching individuals how to start, manage, and scale entrepreneurial opportunities. In theory, executing these entrepreneurial tasks can then contribute to entrepreneurial success, also measured as business performance – financial and non-financial (Unger et al., 2011; Rehman et al., 2023).

We argue that the relationship between experiential learning and business performance is contingent on the entrepreneurial competencies that are required for entrepreneurial activities. Entrepreneurial competencies can play a mediating role, as experience-based approaches lead to the development of entrepreneurial competencies, especially as the individuals become "constructivists" who construct their learning based on their experience (Bell & Bell, 2020; Reis et al., 2021; Scott et al., 2016). Other studies on business performance also demonstrate that entrepreneurial competencies have an impact on business performance (Moshi & Matotola, 2023; Rehman et al., 2023). Our study will reveal the specific competencies that emerge from experiential learning and how those specific competencies influence business performance (Alsos et al., 2023; Reis et al., 2021).

This research explored the impact of experiential learning on business performance, through the mediating role of entrepreneurial competencies. A quantitative study was conducted on a sample of 123 South African entrepreneurs who took part in an experiential learning program offered by a business school. These entrepreneurs were owners of small and medium-sized enterprises (SMEs) and were in the business development stage. Experiential activities in the program included field learning activities, action learning projects, and business development activities (Motta & Galina, 2023).

South Africa is an important context for such a study because self-employment makes up only 10% of jobs versus 30% in most other emerging economies (Baduel et al., 2021). Additionally, South Africa's total early-stage entrepreneurial activity rate is low at 10.8%, below the African region's average of 12.1% (Bosma et al., 2020). One of the contributing factors to such low entrepreneurial activities could be nascent entrepreneurial education, which has yet to be implemented in most institutions of learning (Ramchander, 2019). Hence, examining how experiential learning contributes to building competencies and improving business performance is essential.

This study makes academic and practical contributions. Regarding academic contributions, this study shows that the impact of experiential learning on business performance is explained by the mediating role of entrepreneurial competencies, especially opportunity recognition and market analysis. Second, the study shows that experiential learning should be aligned with the stage of business development. Also, the competencies obtained from experiential learning will be influenced by the program goals. Lastly, the study shows that the impact of experiential learning on entrepreneurial competencies and business performance is influenced by contextual factors. These findings will help educators in Higher Education design experiential programs based on the competencies entrepreneurs require to achieve business performance. To the entrepreneurs, the findings of this study will provide guidance and knowledge on entrepreneurial competencies that enable business performance and how to use these competencies actively in their business ventures.

## **Literature Review**

### ***Theoretical Underpinning***

This study is anchored on Kolb's Experiential Learning Theory (ELT) that suggests learning as a process, whereby knowledge is created through the transformation of experience (Kolb & Kolb, 2009). The ELT contributes to the development of a constructivist approach to learning, in which the concept of 'social knowledge' is constructed in the students' mind (Bell & Bell, 2020). The theory is appropriate in this study for a number of reasons. First, considering the dynamism of entrepreneurship, experiential pedagogy is the most appropriate method of teaching for entrepreneurship education (Bell & Bell, 2020). Second, the theory provides a theoretical lens through which we may understand entrepreneurial competence development, since students are encouraged to explore and experience entrepreneurial concepts in action. By reflecting on an experience, the Kolb cycle emphasizes the importance of authentic learning

that enables entrepreneurs to develop the competencies that are necessary for their success as entrepreneurs. This methodology disintegrates the borderlines between professional and educational settings, and through this approach, it reflects reality (Kozlinska et al., 2020). Therefore, its contribution to entrepreneurial pedagogy is important to building entrepreneurial capabilities that closely mirror reality and the cyclical nature of the entrepreneurship process.

### ***Entrepreneurial Experiential Learning***

Experiential learning that takes place through entrepreneurial education can be defined as a pedagogical approach in which entrepreneurs learn by doing (Motta & Galina, 2023). Entrepreneurs who rely on strategic growth need to learn from their experiences as they seek out new opportunities to survive (Corbett, 2005). In contrast, traditional pedagogies focus more on lecturing rather than providing active or experiential learning (Castaldi et al., 2020; Haase & Lautenschläger, 2011). Castaldi et al. (2020) state that the traditional education model currently in use has a mismatch between what is taught in the classroom and what the industry needs. Recognizing such mismatch, programs are now moving towards more participatory methods of producing entrepreneurs who are analytical and critical thinkers (Castaldi et al., 2020). This also relies on experiential learning contributing positively to entrepreneurial learning, which is the acquisition of entrepreneurial competencies. However, according to Aidara et al. (2021) and Pamungkas et al. (2019), the degree to which learning is experiential is important; yet the challenge remains regarding how to best facilitate the experiential learning activities to support entrepreneurs during the process.

Earlier scholars found that entrepreneurial education is more impactful if it is aligned with the entrepreneur's needs (Martin et al., 2023). We focus specifically on entrepreneurs who have passed the ideation stage and are now in business development. Entrepreneurs in this stage have started new businesses and are now growing them into established organizations

(Shepherd & Patzelt, 2021). In this stage, the entrepreneur focuses on establishing the teams, new venture strategy, organizational processes and building the legitimacy of the business (Bowmaker-Falconer et al., 2023; Shepherd & Patzelt, 2021). We argue that entrepreneurs in the business development stage would require entrepreneurial competencies aligned with their business needs.

### ***Entrepreneurial Competencies***

Entrepreneurial competencies are described as a specific set of competencies, abilities, and knowledge that enable an entrepreneur to utilize resources optimally to achieve sustainable growth in a competitive business environment (al Mamun et al., 2019; Gümüşay & Bohné, 2018; Jena & Sahoo, 2014). Such competencies capture the entrepreneurs' ability to start and develop a business or businesses and successfully integrate resources to ensure performance. Various scholars have identified the different sets of competencies that contribute to business performance. In this study, we focus on the four entrepreneurial competencies that had been identified by Kyndt and Baert (2015). We used these measures of entrepreneurial competencies because they had been developed based on the notion that the competencies of entrepreneurs differ according to the stage of their business activity.

Established entrepreneurs will have a higher level of competencies than nascent entrepreneurs. Those in the nascent stage will have higher competency levels than aspiring entrepreneurs. Therefore, the scale is designed in such a way that it acknowledges the measurement invariance, and it measures the underlying dimensions of entrepreneurial competencies similarly for all groups. This means that the scale can be used to measure entrepreneurial competencies for all entrepreneurs and still show the differences between the groups. The sub-dimensions of entrepreneurial competencies include:

*Opportunity recognition capabilities.* A group of competencies that lead to improving performance is embodied in the entrepreneur, and they add value through resource management and the creation of opportunities for the business. According to Kyndt and Baert (2015), entrepreneurs possess risk-taking traits, enabling them to identify and capitalize on opportunities and ensure their business success.

*Networking capabilities.* The core competence of an entrepreneur is their ability to develop and manage relationships with customers, key suppliers, business networks, and other organizations. This has an impact on the firm's performance and its competitive strength (Ritter et al., 2002).

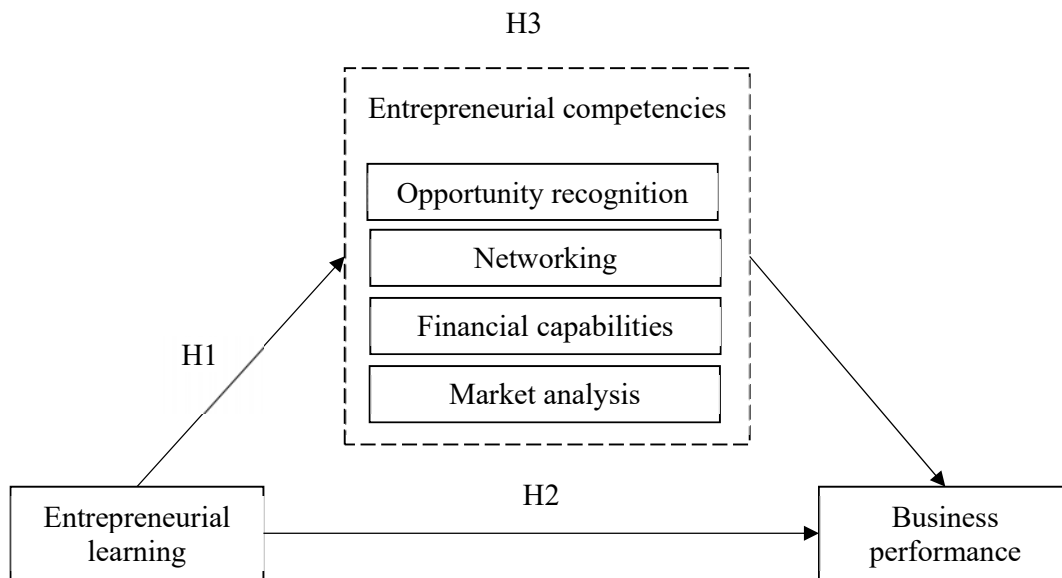
*Financial capabilities.* A business can expect to gain a certain return on investment when it searches for and successfully exploits business opportunities. The knowledge gained through the eventual return provides the entrepreneur with information on the potential profits and losses that may result from the business (Kyndt & Baert, 2015).

*Market analysis capabilities.* A market orientation refers to an enterprise's approach to collecting, disseminating, and responding to market intelligence to meet customers' needs and guarantee the company's success (al Mamun et al., 2019). Market orientation is a learning construct through which entrepreneurs learn more about their industry, customers and their needs, and products or processes for continuous improvement (Baker & Sinkula, 2009). The gained awareness and knowledge and the resulting improvements enhance an enterprise's innovative and dynamic performance, placing it on the cusp of competitive advantage.

### ***Business Performance***

Attributable to the varying definitions of entrepreneurship, it is not surprising that the definitions and measures of success for small businesses differ as well (Trailer et al., 1996). Cho and Lee (2018) define business performance as an organization's ability to manage

fluctuating external factors, such as profits, productivity, employee satisfaction, and social responsibility. To gain a competitive advantage, enterprises compete by converting resources into desirable products and services (Zhao et al., 2013). To gain a competitive advantage, an enterprise must "transform its resources into products that customers need and are willing to pay more for than those that its competitors offer" (Zhao, 2013, p. 791). Ideally, the enterprise's performance can be measured by its innovative approaches, production processes, and market and financial performance (Gunday et al., 2011). However, most studies focused on financial performance, which does not consider other non-financial performance indicators. Financial performance is difficult to measure among SMEs because of the protection of company information (Gunday et al., 2011). Therefore, in this study, an enterprise's performance is based on its innovative performance, which is suitable for SMEs.



**Figure 1: Conceptual Model**

### ***Hypotheses and the Conceptual Model***

This study tests the mediating role of entrepreneurial competencies on the relationship between experiential entrepreneurial learning and business performance. The conceptual model below presents the hypotheses tested in this study.

#### *Entrepreneurial experiential learning and entrepreneurial competencies*

Experience-based learning is particularly effective when it is part of entrepreneurship education (Bell & Bell, 2020). Participants in this form of learning engage in active learning, where simulations of reality enable them to develop new skills and entrepreneurial competencies. Man et al. (2002) concurred that successful entrepreneurs often possess a set of competencies derived from some form of entrepreneurial education. A study focused on assessing how experiential learning affects soft skills development demonstrates that the experiential learning model can enhance entrepreneurs' soft skills and increase self-confidence (Pamungkas et al., 2019). This demonstrates that experiential learning pedagogy can bridge the gap between theory and practice, with the outcome leading to more competitive individuals and organizations. However, it remains uncertain whether experiential learning is effective in achieving the desired learning outcomes. Therefore, in our study, the following hypothesis will be evaluated:

H1: Experiential learning has a positive impact on the mastery of entrepreneurial competencies.

#### *Entrepreneurial experiential learning and business performance*

For an enterprise to compete successfully, the entrepreneur needs the knowledge, skills, and resources to gain a competitive advantage. SMEs face increasingly competitive business environments because of globalization, which makes it difficult to increase or sustain their business performance (Barazandeh et al., 2015). Business performance has multiple

dimensions, and it is essential to consider the financial and non-financial measures when evaluating the total organization's performance (Murphy et al., 1996). In this context, our focus is on non-financial measures that are suitable in the context of small organizations (Gunday et al., 2011). Learning by doing and student-led approaches facilitate linkages to real-life experiences that develop human capital skills entrepreneurs can use to spot opportunities and respond strategically. This will facilitate the improvement of non-financial measures to improve business performance (Bell & Bell, 2020). In this study, the second hypothesis that will be evaluated is:

H2: Experiential learning has a positive impact on business performance.

*Experiential entrepreneurial learning, entrepreneurial competencies, and business performance*

In the context of entrepreneurship, the birth, survival, and growth of an enterprise are linked to entrepreneurial competencies (Minai et al., 2018). Martin et al. (2013) posited that individuals who possess greater competencies and knowledge also tend to achieve enhanced individual performance and that of their enterprise. However, current research shows that there is no agreement on which entrepreneurial competencies obtained from experiential learning are specifically associated with success (Reis et al., 2020). In the entrepreneurial context, SMEs use creativity and innovative activities to establish and develop their enterprises (Hwang et al., 2020; Minai et al., 2018). A study by Hwang et al. (2020) states that innovative performance is required for an enterprise to become and remain a leader in the market. The entrepreneurs' ability to successfully innovate and create is linked to their competencies, leading to higher productivity levels (Aidis & van Praag, 2007; Man et al., 2002). These competencies, which include successful opportunity recognition, networking, financial capabilities and market analysis, have been assumed to lead to better performance.

Man et al. (2002) demonstrated the importance of entrepreneurial education in developing entrepreneurial competencies that enhance an enterprise's performance, which sparked academic studies to investigate the mediating role of entrepreneurial competencies. Minai et al. (2018) developed a conceptual framework that discussed the importance of entrepreneurial competencies in the enterprises' performance. They suggest that future research should test the mediating effect of entrepreneurial competency on enterprises' performance in entrepreneurship education. The various dimensions of the entrepreneurial competencies examined in this study will act as mediators. Therefore, the present study suggests that:

*H3: Experiential learning and business performance are mediated by entrepreneurial competencies, especially:*

*H3a: The mastery of opportunity recognition capabilities*

*H3b: The mastery of networking capabilities*

*H3c: The mastery of financial capabilities*

*H3d: The mastery of market analysis capabilities*

## **Research Methodology**

This research followed a positivist research philosophy to guide the research methods and analysis (Saunders & Lewis, 2012). A deductive reasoning approach was used to allow the research and the research problem to be narrowed down from general to specific hypotheses (Ryan, 2018) using Kolb's ELT (Kolb & Kolb, 2009).

## ***Sample Description***

The sample size of this study comprises 123 delegates from a South African business school who have completed a 12-month experiential business development program in the last year (2020 -2021). At the business school, “students” are referred to delegates because they are not enrolled full-time and are already working in and running their businesses. The survey was

conducted within six months of completing the program. Entrepreneurs working in various industry sectors with a minimum revenue turnover of U.S. \$ 3000 per annum were sampled. All participating entrepreneurs were the founders of their business ventures and were in the stage of developing their ventures into established organizations. The entrepreneurship program was customized to support entrepreneurs during their business development phase. Entrepreneurs were divided into cohorts based on their primary business activities – social entrepreneurship, agriculture, township businesses, and supplier development. Even though they were in different cohorts, the training offered was the same except for the industry-specific topics and experiential exercises. The experimental activities in the program were field trips, action learning projects, and business development activities (Motta & Galina, 2023; Thomsen et al., 2021).

**Field visits:** The experiential activity in the program involved visits to entrepreneurial businesses. Entrepreneurs working in agriculture visited other entrepreneurial farms to see how established businesses manage their value chain. Other activities involved going into the city center on assigned entrepreneurial projects.

**Business development plans:** Since the entrepreneurs who participated in the programs already ran their businesses, they were also tasked with the project to design and implement business development plans for and in their organizations. The students first submitted the business development plans at the business school, and other students were given the opportunity to present them to various stakeholders, including potential funders.

**Action learning project.** The action learning project is usually conducted in groups to enhance peer-to-peer learning. Delegates identify a societal issue that requires a solution, which they will seek to address through an entrepreneurial intervention. Research is incorporated into

the action learning project, where the delegates interview multiple stakeholders. At the end of the action learning project, the delegates can present their potential solutions.

Other experiential activities were incorporated into the delivery of the course. For example, the students' assignments included working on real case studies, workshops with industry experts, interviewing stakeholders of businesses to obtain feedback, and continuous testing of their business concepts.

### ***Operationalization of Variables***

Experiential learning: Clem et al. (2014) designed an instrument referred to as the Experiential Learning Survey (ELS), and the scale was designed to measure a "student's perception of meaning or value of experience-based educational instruction ... rooted in the experiential learning theory" (Clem et al., 2014, p. 493). The scale includes 28 questions, and covers "four domains for subscales: authenticity, active learning, relevance and utility", (p. 495), measured on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Entrepreneurial competencies: Kyndt and Baert (2015) designed an instrument that contains 12 competencies relevant to entrepreneurs in different sectors. For this competency variable, opportunity identification, market analysis, networking, and financial capabilities were included in the survey. All items were answered on a 6-point Likert scale, with the following response options (1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = most of the time, and 6 = always).

Business Performance: Since there are many factors that could contribute to financial performance, we used non-financial measures of performance. The innovation performance scale by Gunday et al. (2011) was used, and the Cronbach's Alpha ranged from .90 to .76, suggesting satisfactory levels of construct reliability. The advantage of the scale is that

participating individuals can refer to the new products, services, and processes they have introduced in their businesses (See Appendix A for the detailed scale).

### ***Data Gathering Process***

Ethical clearance was obtained before data collection. Many entrepreneurship studies, including a study by Zizile and Tendai (2018) on how entrepreneurial competencies influence women entrepreneurs' performance, collected data using a questionnaire. The survey questionnaire was pilot-tested before collecting the data. The self-administered survey questionnaire was designed and distributed online from July to September 2021. This allowed participants to answer independently and resulted in a successful response rate. It was a cost-effective medium and easy for participants to use. The survey questionnaire was sent to individuals who participated in the business school's experiential training programs, focusing mostly on those who completed the program. The University permitted the distribution of the survey questionnaire to their database.

### ***Data Analysis***

Before the analysis could begin, the data was checked for missing values. The Little's Missing Completely at Random test showed no missing values. The descriptive statistics were run to determine the frequencies and mean of the demographic factors. Since the data collected was based on self-reported measures, the common method bias was tested, using Harman's one-factor test, which showed that the total variance extracted was 31.941, which is less than 50%. This confirmed that there was no problem with the common method bias. Cronbach's Alpha was run to determine the reliability of the scale. Thereafter, factor analysis showed the dimensions of the scale. The factor loadings were used to calculate composite reliability, and convergent and discriminant validity.

Multiple hierarchical regression analysis was used to investigate the linear relationships and predict business performance as a dependent variable based on multiple independent variables. Also, the hierarchical multiple regression helped to test the mediating role of entrepreneurial competencies on the relationship between experiential learning and business performance. When regression was computed, three control variables were used: age, gender, and education. The coefficient ( $\beta$ ) and statistical significance based on a 95% confidence level ( $p < 0.05$ ) were measures used to assess the hypotheses. Gender was found to influence the entrepreneurial competencies due to the sample skewed towards female entrepreneurs.

## **Results**

### ***Descriptive Statistics***

The survey used four demographic questions to profile the participants. Gender, education level, and age were collected and analyzed. The gender question was categorized into two groups: male and female. The final sample consisted of 123 valid gender responses, of which 23% were male, and 77% were female. It must be noted that in South Africa, there are more men involved in entrepreneurial activities (Bowmaker-Falconer et al., 2023). In order to encourage women's participation in entrepreneurial activities, various businesses, organizations, and business schools or universities have launched locally and internationally sponsored-programs targeted at women entrepreneurs. This explains the high percentage of women being registered in entrepreneurship training programs. The statistics of programs that are not sponsored would be different.

The education level question was categorized into six groups: Higher Education, secondary education (Grades 8-12), diploma, bachelor's degree, honors degree, master's degree, or other. The final sample size consisted of 123 valid education responses, where 24,6% possessed a bachelor's degree; 21,4% possessed a diploma; 20,6% possessed secondary

education Grade 8-12; 18,3% possessed an honors degree; 4,8% a master's degree; and 10,4% had achieved other qualifications.

The age question was categorized into six groups, i.e., younger than 20 years, 21-30 years, 31-40 years, 41-50 years, 51-60 years, and 60 years and older. The final sample size consisted of 126 valid age responses, of which 49,2% were 31-40 years old; 22,2% were 21-30 years old; 20,6% were 41-50 years old; 4,8% were 51-60 years old; 0,8% were younger than 20 years old; and 2,4% were 60 years and older.

### ***Factor Analysis***

Factor analysis was conducted to establish the dimensions of the data. Table 1 presents the factors that were extracted from the data. The Kaiser-Meyer-Olkin (0.864) and Bartlett's Test of Sphericity ( $\chi^2 = 8332$ ,  $df = 1830$ ,  $p < .001$ ) demonstrate sample adequacy to run the factor analysis. The rotated component matrix resulted in six factors, which were experiential learning (Factor 1), opportunity recognition (Factor 2), business performance (Factor 3), financial capabilities (Factor 4), networking (Factor 5), and market analysis (Factor 6). Once the factors were extracted, the validity tests were performed. The composite measures for experiential learning, networking, financial capabilities, opportunity recognition, and business performance exceeded the expected 0.7 level. These variables also had convergent and discriminant validity within the expected values above 0.5 and 0.70. Market analysis capabilities had slightly lower values for composite reliability, convergence, and discriminant validity. However, these values are similar to those of the original scale, with a discriminant validity of 0.61 (Kyndt & Baert, 2015). Overall, the results show that the instruments used to collect data were valid.

**Table 1: Factor Analysis**

	1	2	3	4	5	6	$\alpha$	CR	AVE	AVE
EL14s	.943						0.98	0.97	0.74	0.86
EL28s	.942									
EL18s	.941									
EL21s	.939									
EL17s	.924									
EL22s	.924									
EL25s	.921									
EL26s	.914									
EL13s	.908									
EL20s	.903									
EL16s	.895									
EL24s	.894									
EL19s	.877									
EL7s	.876									
EL11s	.869									
EL6s	.867									
EL12s	.860									
EL1s	.854									
EL2s	.749									
EL10s	.728									
EL5s	.545									
EL8s	.542									
EC3s		.805					0.91	0.79	0.52	0.72
EC5s		.802								
EC6s		.756								
EC4s		.751								
EC2s		.704								
EC1s		.642								
EC7s		.561								
BP3s			.849				0.91	0.82	0.57	0.76
BP2s			.849							
BP5s			.769							
BP1s			.758							
BP4s			.672							
BP6s			.640							
EC16s				.804			0.90	0.80	0.55	0.74
EC19s				.787						
EC18s				.747						
EC20s				.741						
EC17s				.725						
EC21s				.658						
EC10s					.785		0.88	0.77	0.55	0.74
EC9s					.769					
EC12s					.744					
EC11s					.735					
EC8s					.684					
EC24s						.697	0.84	0.6	0.4	0.6
EC23s						.666				
EC28s						.658				
EC22s						.635				
EC27s						.563				
EC26s						.542				

## Correlations

Table 2 shows the correlations that were computed. Experiential learning positively and significantly correlates with some elements of entrepreneurial competencies, except for opportunity recognition ( $r = 0.144$ ;  $p > 0.05$ ). These are financial capabilities ( $r = 0.299$ ,  $p < 0.01$ ), networking ( $r = 0.231$ ,  $p < 0.05$ ), and market analysis ( $r = 0.273$ ,  $p < 0.05$ ). There is a positive and significant correlation between entrepreneurial learning and business performance ( $r = 0.257$ ,  $p < 0.01$ ). Lastly, the results show that all the elements of entrepreneurial competencies, such as opportunity recognition ( $r = 0.500$ ,  $p < 0.01$ ), financial capabilities ( $r = 0.365$ ,  $p < 0.01$ ), networking ( $r = 0.314$ ,  $p < 0.01$ ), and market analysis ( $r = 0.492$ ,  $p < 0.01$ ) correlate with business performance.

**Table 2: Correlations**

	Mean	Std. Deviation	Experiential Learning	Opportunity	Financial	Networking	Market	Performance
Experiential Learning	5.9217	1.39519	1					
Opportunity	4.3961	.95933	.144	1				
Finance	4.6165	.98345	.299**	.549**	1			
Networking	4.4797	1.05201	.231*	.531**	.521**	1		
Market	4.5339	.90811	.273**	.601**	.533**	.527**	1	
Performance	3.5935	.82981	.257**	.500**	.365**	.314**	.492**	1

Correlation is significant at the 0.01 level (2-tailed).\*\*

Correlation is significant at the 0.05 level (2-tailed).\*

## Hypotheses Testing

The testing results of these hypotheses are shown in Table 3 and Figure 2. The results of the first hypothesis show that there is a relationship between experiential learning and some elements of entrepreneurial competencies. Experiential learning has a positive and significant impact on financial capabilities ( $p < 0.001$ ,  $\beta = 0.299$ ), networking ( $p = 0.010$ ,  $\beta = 0.231$ ), and market analysis ( $p = 0.002$ ,  $\beta = 0.273$ ). Opportunity recognition has a positive relationship with experiential learning, but this is insignificant ( $p = 0.113$ ,  $\beta = 0.144$ ). The regression analysis shows a positive and significant relationship between experiential learning and total

entrepreneurial competencies ( $p = 0.001$ ;  $\beta = 0.291$ ). Therefore, there is support for Hypothesis 1, except for opportunity recognition.

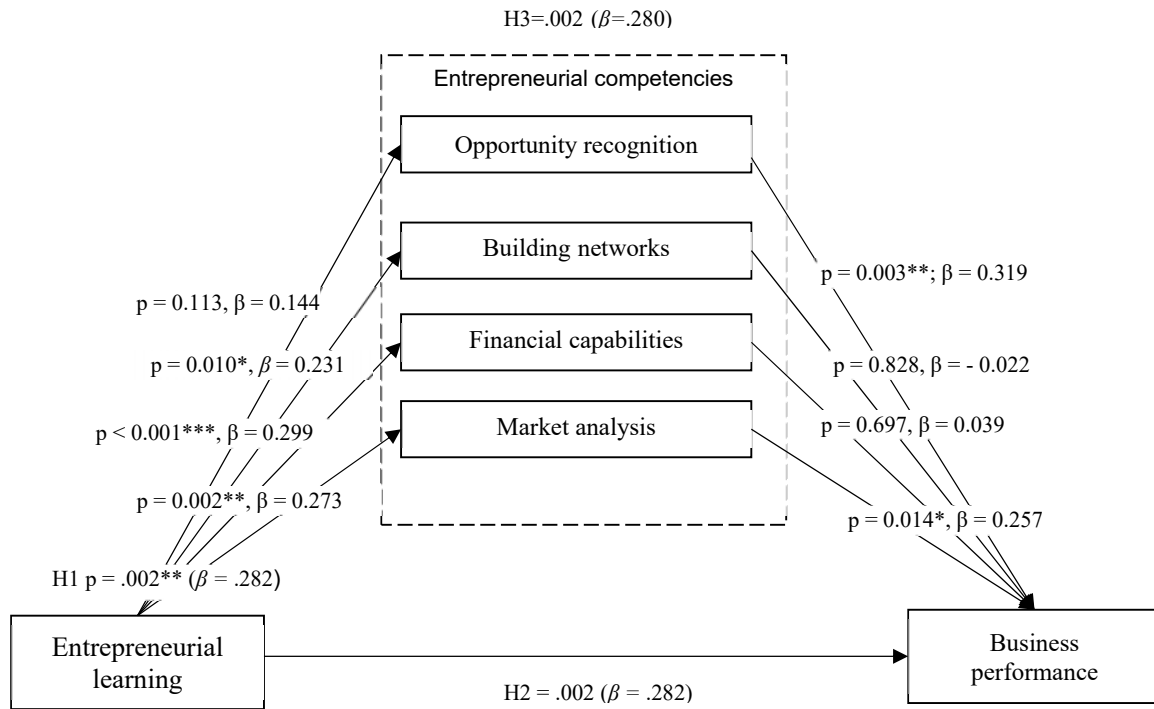
**Table 3: Multiple Hierarchical Regression**

	Mediator (Entrepreneurial Competencies)		Dependant Variable (Innovation Performance)		Collinearity Statistics	
	$\beta$	$p$	$\beta$	$p$	Tolerance	VIF
<b>Model 1</b>						
Age	.055	.545			.911	1.098
Gender	-.185	.043*			.911	1.097
Education	.072	.418			.951	1.051
Experiential learning	.280	.002**			.951	1.051
R		.347				
R-Square		.120				
<b>Model 2</b>						
Age			-.067	.465	.911	1.098
Gender			-.066	.476	.911	1.097
Education			-.123	.173	.951	1.051
Experiential learning			.282	.002**	.951	1.051
R				.305		
R-Square				.093		
<b>Model 3</b>						
Age			-.098	.218	.905	1.105
Gender			.035	.666	.867	1.153
Education			-.113	.161	.900	1.111
Experiential learning			.155	.061	.852	1.174
Opportunity identification			.319	.003**	.508	1.968
Financial			.039	.697	.564	1.772
Networking			-.022	.828	.585	1.710
Market analysis			.257	.014*	.536	1.867
R				.589		
R-Square				.347		

Correlation is significant at the 0.01 level (\*\*) and 0.05 level (\*).

Hypothesis 2 states that there is a relationship between experiential learning and business performance. Table 3, Model 2 shows a positive and significant relationship with  $p = 0.002$  and  $\beta = 0.282$ . The last hypothesis (H3) tests the mediating role of entrepreneurial competencies on the relationship between experiential learning and business performance. The results show that some dimensions of experiential learning play a mediating role, while other dimensions do not mediate experiential learning and business performance. Table 3, Model 3 shows that opportunity recognition ( $p = 0.003$ ;  $\beta = 0.319$ ) and market analysis ( $p = 0.014$ ,  $\beta = 0.257$ ) significantly predict business performance and experiential learning ceases to predict business performance ( $p = 0.061$ ,  $\beta = 0.155$ ). These results suggest that opportunity

recognition and market analysis mediate the relationship between experiential learning and business performance. The financial capabilities ( $p = 0.697, \beta = 0.039$ ) and networking ( $p = 0.828, \beta = -0.022$ ) do not mediate experiential learning and business performance. The regression results show that the control variables, age, gender, and education, do not affect the hypotheses tested in the study.



**Figure 2: Summary of the results**

Correlation is significant at 0.001 level (\*\*\*) ; 0.01 level (\*\*) and 0.05 (\*).

## Discussion

The first hypothesis tested the relationship between experiential learning and entrepreneurial competencies, which is positive and significant for three dimensions of entrepreneurial competencies (market analysis, financial capabilities, and networking), apart from opportunity recognition. The findings of this study corroborate those reported by Kozlinska et al. (2020), who state that experiential learning is associated with superior entrepreneurial development. Bell and Bell (2020) state that experiential pedagogy in

entrepreneurship education aims to provide delegates with key skills that will help them succeed as entrepreneurs. Also, Kyguolienė and Švipas (2019) claim that an entrepreneurial experiential training program contributes to personal competencies.

However, it must be noted that this study shows that experiential learning does not significantly build entrepreneurs' ability to see opportunities. Since the participants of this study are already running businesses, perhaps the programs they attended focused more on developing or enhancing existing business opportunities than teaching entrepreneurs how to identify new concepts (Shepherd & Patzelt, 2021). Such limited focus on continuous opportunity identification in existing businesses could explain why entrepreneurial businesses in the emerging market context – such as South Africa – fail to grow (Bosma et al., 2020; Bowmaker-Falconer et al., 2023). Only businesses that continuously look out for and identify new and better business opportunities, as well as gaps in the market and growth opportunities, will survive. However, this study shows that experiential learning impacts entrepreneurs' entrepreneurial competencies, essential to their current business needs or stage and success.

The results from testing Hypothesis 2 show a significant relationship between experiential learning and business performance. These findings support the notion that the ELT (Kolb & Kolb, 2009) is an important theoretical lens for entrepreneurship development because entrepreneurs 'learn by doing', making cognitive connections between what they are learning in theory and what they are implementing in practice (Bell & Bell, 2020; Kolb & Kolb, 2009). The findings are aligned with Kakouris (2015), who argues that learning by doing is fundamental to entrepreneurship development, because it enhances creativity and broadens perspectives, which results in the desired learning outcomes. Therefore, experiential learning influences the SMEs' performance outcomes.

The last hypothesis (H3) tested the mediating role of entrepreneurial competencies on experiential learning and business performance. Opportunity recognition has a significant

mediating role in the relationship between experiential learning and business performance. This is due to the notion that there was a stronger correlation between opportunity recognition and business performance than experiential learning. According to Gunday et al. (2011), spotting new opportunities is one of the most important capabilities to improve an enterprise's short- and long-term performance, resulting in a larger market share, higher profits and sustainability. These results match those of a study conducted by Kamuri (2021), who states that opportunity recognition is one of the six competencies that have a significant relationship with innovation performance. Thus, opportunity recognition explains how experiential learning can result in better and appropriate business performance.

The results show that market analysis capabilities mediate the relationship between experiential learning and business performance. The study aligns with the report by Kyndt and Baert (2015), who state that market analysis significantly and positively correlates with entrepreneurship. Our study also aligns with a study by Bhuian et al. (2005), who stated that the best combination is when the entrepreneur has a high market- and moderate entrepreneurial orientation. Participants in this study claim that they have a market-oriented approach to gathering and responding to market intelligence to meet their customers' needs, which provides them with a competitive advantage, as demonstrated by al Mamun et al. (2019). Policymakers, industry leaders, and educators need to recognize that SMEs' development should also focus on understanding their markets, enabled by regularly gathering market intelligence.

The study's findings show that networking capabilities do not mediate the relationship between entrepreneurial learning and business performance. Although market analysis capabilities were obtained from experiential learning, these capabilities did not have a significant impact on business performance. Chell and Baines (2000) found that because of dynamism and fluidity, as well as the difficulty of capturing every instance of contact, quantitative studies provide only partial insight into networking behavior. This study's findings

contradict Tehseen et al. (2019), who state that networking is a strategic asset for SMEs. We observed that data was collected when there was a decline in physical networking, and entrepreneurs had to leverage online meetings. Anakpo and Mishi (2021) found that entrepreneurs who used virtual connections to reach different stakeholders had better business outcomes. A recent study also shows that the majority (66,5%) of the entrepreneurs in a nationwide study showed they did not know any entrepreneurs personally who started a business in the last two years (Bowmaker-Falconer et al., 2023). This demonstrates that building networks that contribute to business performance is a challenge. The findings demonstrate that more research is required to understand how entrepreneurs build and leverage networks for profitability.

The highly skewed profile of women in this study coincides with women having fewer business-oriented networks than their male counterparts. This may lead them to network primarily for business survival rather than growth (Bosma et al., 2021). Watson (2017) states that networking does not significantly affect profitability, regardless of the size of the business, its age or industry. Our study showed that it could depend on the type of networks and their usefulness to the enterprise's market assessment, access to funding and access to markets as to whether such networks were necessary or cultivated. Thus, the entrepreneur should consider the intensity and range of connections required to build social capital for their enterprise's survival and success.

We found that financial capabilities did not predict business performance; as a result, they were not a mediator of experiential learning and business performance. Two reasons could explain these findings. First, entrepreneurs in South Africa, especially female entrepreneurs, have limited financial access to formal funders when developing their businesses (Bowmaker-Falconer et al., 2023). Fatoki (2021) found that financial capabilities enable individuals to

access finance, resulting in improved SMEs. This means that although experiential learning leads to better financial capabilities, it will have a limited impact on business performance without access to finance. As much the role of the entrepreneurial programs is to teach entrepreneurial competencies; there should be mechanisms to make entrepreneurs finance-ready and provide them with platforms to access funding.

Second, the insignificant findings regarding potential financial returns could be explained by the notion that during the Covid-19 pandemic, entrepreneurs experienced significant financial constraints and, therefore, found optimizing their return on investments challenging (Klyver & Nielsen, 2021). Therefore, these findings demonstrate that the impact of competencies on performance is also affected by contextual conditions.

In sum, this study demonstrates that experiential learning builds some elements of entrepreneurial competencies. Also, the specific elements of entrepreneurial competencies impact the enterprises' performance. The same can be said with mediation because only specific elements of entrepreneurial competencies mediate experiential learning and business performance. Therefore, competencies should not be studied from a unidimensional but multi-dimensional perspective.

### **A reflection on the study's contributions**

Our study makes three contributions to the existing research focusing on experiential learning and action, experiential learning according to the specific stage of development, and contextual considerations for experiential learning. First, the study expands experiential learning outcomes beyond entrepreneurial intentions to action (Reis et al., 2021). We build on Motta and Galina's (2023) idea that experiential learning in entrepreneurship should focus on individuals who participated in activities for developing and implementing a business. This means that the samples for experiential learning should also focus on entrepreneurs who attend

training offered by universities, business schools, and other entrepreneurship support programs. Understanding the effectiveness of experiential learning programs in developing entrepreneurial competencies could lead to the essential entrepreneurial competencies and inform the teaching practices of facilitators to train students based on those practical competencies required for successful business venturing. Doing this would bridge the gap between competencies obtained in higher education institutions and those required in entrepreneurial practice (Ferrerias-Garcia et al., 2021).

Second, understanding how experiential learning is conducted beyond the graduate level is essential for developing interventions suitable for entrepreneurs at the different stages of business development (Martin et al., 2013). For example, in our study, experiential learning did not significantly impact opportunity recognition due to the notion that the delegates who are part of the program focused on developing the business rather than identifying new opportunities (Shepherd & Patzelt, 2021). Upon completion of the program, delegates are expected to produce the business development plan and business model innovation based on an existing idea.

Our study demonstrates that experiential learning should be mapped according to the program goals and the stage of the entrepreneur's development. In that way, the entrepreneurial competencies developed will align with the program's goals and help the entrepreneur navigate the challenges in their development phase. Our study demonstrates that future studies should look at experiential learning according to the stage of development or the needs of the entrepreneurs. Some of those longitudinal studies could explore how entrepreneurs engage in the experiential learning circle (concrete experience, reflective observation, abstract conceptualization, and active experimentation) (Morris, 2020) as the entrepreneurial action unfolds.

Lastly, our study provides a perspective of the emerging market context characterized by low entrepreneurial activity and education levels. Several scholars argued that context can influence experiential learning (Morris, 2020; Motta & Galina, 2023). The study demonstrates that although entrepreneurial education is developing in emerging market contexts (Bowmaker-Falconer et al., 2023), the existing programs are promising to be impactful. However, the findings indicate that challenges such as finance and access to entrepreneurial networks could minimize the impact of experiential learning on entrepreneurial outcomes. Future research studies should map the contextual factors that impact teaching and learning entrepreneurial competencies.

## **Conclusion**

The study aimed to determine the impact of experiential learning on entrepreneurial competencies that enable entrepreneurs to achieve business performance. The study found that experiential learning was positively associated with some entrepreneurial competencies, which influenced business performance.

The findings of the research provide valuable insights into the field of entrepreneurship education and SME development. Moreover, academia, relevant government departments, and industries worldwide are looking to invest in the human capital development of entrepreneurs. Entrepreneurial university departments and industries can provide a supportive environment for competence development. The results show that opportunity recognition is not adequately covered in the experiential learning programs for entrepreneurs in the business development stage. Therefore, training institutions should emphasize teaching opportunity recognition throughout the different entrepreneurial phases. This will ensure entrepreneurial ventures' long-term success and sustainability in an increasingly competitive environment.

The study also demonstrated a limited impact of networking and financial capabilities on experiential learning and business performance. Therefore, efforts should be made to provide entrepreneurs with alternative online platforms that could substitute for the lack of meeting their potential networks in person. These online platforms could be used to develop the entrepreneurs' investment and financial competencies. Lastly, the findings suggest that training institutions should adapt their training, as it influences the specific learning outcomes. Such training programs should also consider the contextual factors influencing the desired learning outcomes.

Our study led to aspects that could be explored in future studies. The first is how entrepreneurial competencies change over time, following experiential learning. Our study did not show a change in entrepreneurial competencies during the experiential learning program. Therefore, future research should conduct experimental designs demonstrating how entrepreneurial competencies change throughout their programs. The experimental studies could be conducted before the experiential learning program, during, and after to determine its impact on competencies and business performance. Some designs could be longitudinal methods, exploring how entrepreneurial competencies develop. Such studies could also show how other experiential learning outcomes change over time.

Second, a study should test the role of facilitators and the type of experiential learning or training used to train entrepreneurs. Our study did not show how the different training methods contribute to developing entrepreneurial competencies. In addition, there was limited information on the facilitators. Future research should focus on specific learning interventions rather than experiential learning as a constellation of practical activities. In doing so, aligning the entrepreneurial outcomes to specific training methods would be possible.

Third, a study should identify the moderators between experiential learning and business-related outcomes. This study's non-aligned results could be due to contextual factors

not identified. For example, the implications of conducting the study during the Covid-19 pandemic could mean that people had limited mobility, therefore negatively affecting their ability to function normally. Future research should explore moderators of the relationship between experiential learning and outcomes. Context-based studies could also explore the effectiveness of experiential learning activities in helping emerging market entrepreneurs deal with resource scarcity and uncertain entrepreneurial environments.

Finally, a study should be conducted to assess how entrepreneurial experiential learning is mapped against the program and learning outcomes. Future research should investigate the design of experiential learning activities against the program's goals.

## References

- Aidara, S., Mamun, A. al, Nasir, N. A. M., Mohiuddin, M., Nawi, N. C., & Zainol, N. R. (2021). Competitive advantages of the relationship between entrepreneurial competencies and economic sustainability performance. *Sustainability (Switzerland)*, *13*(2), 1–19. <https://doi.org/10.3390/su13020864>
- Aidis, R., & van Praag, M. (2007). Illegal entrepreneurship experience: Does it make a difference for business performance and motivation? *Journal of Business Venturing*, *22*(2), 283–310.
- Anakpo, G., & Mishi, S. (2021). Business response to COVID-19 impact: Effectiveness analysis in South Africa. *The Southern African Journal of Entrepreneurship and Small Business Management*, *13*(1), 7.
- al Mamun, A., Fazal, S. A., & Muniady, R. (2019). Entrepreneurial knowledge, skills, competencies and performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, *13*(1), 29–48.
- Baduel, B., Cuevas, F., & Fengler, W. (2021). Building back better from Covid-19, with a special focus on jobs. South Africa Economic Update. Edition 13. In *South Africa Economic Update; Edition 13 Washington, D.C.: World Bank Group*. [www.worldbank.org](http://www.worldbank.org)
- Baker, W., & Sinkula, J. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management*, *47*(4), 443–464.
- Barazandeh, M., Parvizian, K., Alizadeh, M., & Khosravi, S. (2015). Investigating the effect of entrepreneurial competencies on business performance among early-stage entrepreneurs Global Entrepreneurship Monitor (GEM 2010 survey data). *Journal of Global Entrepreneurship Research*, *5*(1). <https://doi.org/10.1186/s40497-015-0037-4>
- Bell, R., & Bell, H. (2020). Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education. *Journal of Small Business and Enterprise Development*, *27*(6), 987–1004.
- Bhuian, S. N., Menguc, B., & Bell, S. J. (2005). Just entrepreneurial enough: The moderating effect of entrepreneurship on the relationship between market orientation and

- performance. *Journal of Business Research*, 58(1 SPEC.ISS), 9–17.  
[https://doi.org/10.1016/S0148-2963\(03\)00074-2](https://doi.org/10.1016/S0148-2963(03)00074-2)
- Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., & Tarnawa, A. (2020). *GEM - Global Entrepreneurship Monitor*.
- Bosma, N., Hill, S., Kelley, D., Guerrero, M., Schott, T., & Ionescu-Somers, A. (2021). *GEM Global Entrepreneurship Monitor 2020/2021*. In *GEM Global Entrepreneurship Monitor*.  
<https://www.gemconsortium.org/report/gem-20202021-global-report>
- Bowmaker-Falconer, A., Meyer, N. & Samsami, M. (2023). *GEM Global Entrepreneurship Monitor South Africa 2022/2023*. GEM South Africa.  
<https://www.gemconsortium.org/economy-profiles/south-africa>
- Castaldi, L., Sepe, E., Turi, C., & Iscaro, V. (2020). An experiential learning program for entrepreneurship education. *Global Business and Economics Review*, 22(1–2), 178–197.
- Chell, E., & Baines, S. (2000). Networking, entrepreneurship and microbusiness behaviour. *Entrepreneurship and Regional Development*, 12(3), 195–215.
- Cho, Y. H., & Lee, J.H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(2), 124–134.
- Clem, J. M., Mennicke, A. M., & Beasley, C. (2014). Development and validation of the experiential learning survey. *Journal of Social Work Education*, 50(3), 490–506.
- Corbett, A. C. (2005). Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship: Theory and Practice*, 29(4), 473–491.
- Fatoki, O. (2021). Access to finance and performance of small firms in South Africa: The moderating effect of financial literacy. *WSEAS Transactions on Business and Economics*, 18(9), 1-10.
- Ferreras-Garcia, R., Sales-Zaguirre, J., & Serradell-López, E. (2021). Developing entrepreneurial competencies in higher education: a structural model approach. *Education+ Training*, 63(5), 720-743.
- Gümüşay, A. A., & Bohné, T. M. (2018). Individual and organizational inhibitors to the development of entrepreneurial competencies in universities. *Research Policy*, 47(2), 363–378.
- Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, 133(2), 662–676.
- Haase, H., & Lautenschläger, A. (2011). The "Teachability dilemma" of entrepreneurship. *International Entrepreneurship and Management Journal*, 7(2), 145–162.
- Hägg, G., & Gabrielsson, J. (2020). A systematic literature review of the evolution of pedagogy in entrepreneurial education research. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 829-861.
- Hwang, W. S., Choi, H., & Shin, J. (2020). A mediating role of innovation capability between entrepreneurial competencies and competitive advantage. *Technology Analysis and Strategic Management*, 32(1), 1–14.
- Jena, S., & Sahoo, C. K. (2014). Improving managerial performance: A study on entrepreneurial and leadership competencies. *Industrial and Commercial Training*, 46(3), 143–149.
- Kakouris, A. (2015). Entrepreneurship pedagogies in lifelong learning: Emergence of criticality? *Learning, Culture and Social Interaction*, 6, 87–97.  
<https://doi.org/10.1016/j.lcsi.2015.04.004>
- Kamuri, S. (2021). Creating an entrepreneurial competence, innovation and performance of value-system actors in Kenya's leather industry. *Scientific African*, 11, e00664.  
<https://doi.org/10.1016/j.sciaf.2020.e00664>
- Klyver, K., & Nielsen, S. L. (2021). Which crisis strategies are (expectedly) effective among SMEs during Covid-19? *Journal of Business Venturing Insights*, 16, e00273.

- Kolb, A. Y., & Kolb, D. A. (2009). Experiential learning theory: A dynamic, holistic approach to management learning, education and development. *The SAGE Handbook of Management Learning, Education and Development*, May 2015, 42–68. <https://doi.org/10.4135/9780857021038.n3>
- Kozlinska, I., Rebmann, A., & Mets, T. (2020). Entrepreneurial competencies and employment status of business graduates: The role of experiential entrepreneurship pedagogy. *Journal of Small Business and Entrepreneurship*, 0(0), 1–38. <https://doi.org/10.1080/08276331.2020.1821159>
- Kyguolienė, A., & Švipas, L. (2019). Personal entrepreneurial competencies of participants in experiential entrepreneurship education. *Management of Organizations: Systematic Research*, 82(1), 37–51. <https://doi.org/10.1515/mosr-2019-0012>
- Kyndt, E., & Baert, H. (2015). Entrepreneurial competencies: Assessment and predictive value for entrepreneurship. *Journal of Vocational Behavior*, 90, 13–25. <https://doi.org/10.1016/j.jvb.2015.07.002>
- Loi, M., Fayolle, A., van Gelderen, M., Riot, E., Higgins, D., Haloub, R., Salusse, M., Lamy, E., Verzat, C., & Cavarretta, F. (2019). Entrepreneurship education at the crossroads: Challenging taken-for-granted assumptions and opening new perspectives. *Journal of Management Inquiry*. <https://eprints.whiterose.ac.uk/>
- Man, T. W. Y., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2), 123–142.
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211–224.
- Minai, M. S., Raza, S., Bin Hashim, N. A., Md Zain, A. Y., & Ali Tariq, T. (2018). Linking entrepreneurial education with firm performance through entrepreneurial competencies: A proposed conceptual framework. *Journal of Entrepreneurship Education*, 21(4).
- Morris, T. H. (2020). Experiential learning—a systematic review and revision of Kolb’s model. *Interactive learning environments*, 28(8), 1064-1077.
- Moshi, R., & Matotola, S. (2023). Entrepreneurial Competence and Small and medium enterprises’ Profitability: A Case of sunflower oil processing enterprises in Tanzania. *Cogent Business & Management*, 10(2), 2208431.
- Motta, V. F., & Galina, S. V. R. (2023). Experiential learning in entrepreneurship education: A systematic literature review. *Teaching and Teacher Education*, 121, 103919.
- Murray, A., Crammond, R. J., Omeihe, K. O., & Scuotto, V. (2018). Establishing successful methods of entrepreneurship education in nurturing new entrepreneurs: Exploring entrepreneurial practice. *Journal of Higher Education Service Science and Management*, 1(1), 1–11.
- Pamungkas, S. F., Widiastuti, I., & Suharno, S. (2019). Kolb's experiential learning as an effective learning model in creative product and entrepreneurship subjects. *Journal of Mechanical Engineering and Vocational Education (JoMEVE)*, 2(1), 27.
- Ramchander, M. (2019). Reconceptualizing undergraduate entrepreneurship education at traditional South African universities. *Acta Commercii*, 19(2), 1-9.
- Reis, D. A., Fleury, A. L., & Carvalho, M. M. (2021). Consolidating core entrepreneurial competences: toward a meta-competence framework. *International Journal of Entrepreneurial Behaviour and Research*, 27(1), 179–204.
- Rehman, S. U., Elrehail, H., Nair, K., Bhatti, A., & Taamneh, A. M. (2023). MCS package and entrepreneurial competency influence on business performance: the moderating role of business strategy. *European Journal of Management and Business Economics*, 32(1), 1-23.

- Ritter, T., Wilkinson, I. F., & Johnston, W. J. (2002). Measuring network competence: Some international evidence. *Journal of Business and Industrial Marketing*, 17(2–3), 119–138.
- Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse Researcher*, 25(4), 14–20.
- Saunders, M. N. K., & Lewis, P. (2012). *Doing research in business & management: An essential guide to planning your project*. Pearson.
- Scott, J., Penaluna, A., & Thompson, J. L. (2016). A critical perspective on learning outcomes and the effectiveness of experiential approaches in entrepreneurship education: Do we innovate or implement? *Education and Training*, 58(1), 82–93.
- Silveyra, G., Herrero, Á., & Pérez, A. (2021). Model of teachable entrepreneurship competencies (M-TEC): Scale development. *International Journal of Management Education*, 19(1). <https://doi.org/10.1016/j.ijme.2020.100392>
- Taneja, M., Kiran, R., & Bose, S. C. (2024). Assessing entrepreneurial intentions through experiential learning, entrepreneurial self-efficacy, and entrepreneurial attitude. *Studies in Higher Education*, 49(1), 98-118.
- Tehseen, S., Ahmed, F. U., Qureshi, Z. H., Uddin, M. J., & Ramayah, T. (2019). Entrepreneurial competencies and SMEs' growth: The mediating role of network competence. *Asia-Pacific Journal of Business Administration*, 11(1), 2–29.
- Thomsen, B., Muurlink, O., & Best, T. (2021). Backpack bootstrapping: Social entrepreneurship education through experiential learning. *Journal of Social Entrepreneurship*, 12(2), 238-264.
- Trailer, J. W., Hill, R. C., & Murphy, G. B. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36(1), 15–23.
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341-358.
- Watson, J. (2007). Modeling the relationship between networking and firm performance. *Journal of Business Venturing*, 22(6), 852–874.
- Zhao, Y. L., Song, M., & Storm, G. L. (2013). Founding team capabilities and new venture performance: The mediating role of strategic positional advantages. *Entrepreneurship: Theory and Practice*, 37(4), 789–814.
- Zizile, T., & Tendai, C. (2018). The importance of entrepreneurial competencies on the performance of women entrepreneurs in South Africa. *Journal of Applied Business Research*, 34(2), 223–236.

## **Appendix A: Survey Questionnaire**

### **Entrepreneurial Learning**

- The setting where I learn helps me understand the material better.
- I expect real-world problems to come up during this learning experience.
- The environment I learn in does not enhance the learning experience.
- The learning experience requires me to interact with people other than students and lecturers.
- I expect to return to an environment similar to the one where this learning experience occurs.
- I am stimulated by what I am learning.
- The learning experience requires me to do more than just listen.
- The learning experience is presented to me in a challenging way.
- I find this learning experience boring.
- I feel like I am an active part of the learning experience.
- The learning experience requires me to really think about the information.
- I am emotionally invested in this experience.
- I care about the information I am being taught.
- The learning experience makes sense to me.
- This learning experience has nothing to do with me.
- This learning experience is enjoyable to me.
- I can identify with the learning experience.
- This learning experience is applicable to me and my interests.
- My lecturer encourages me to share my ideas and past experiences.

### **Entrepreneurial competencies**

#### *Opportunity identification capabilities*

- I provide an original answer to what the market needs.
- I know what is (not yet) for sale in my sector.
- I have original ideas for new products or services for the market.
- I know when my (future) clients want new products or services.
- I can think ahead about new developments that will occur in the sector I am active in.
- I know which needs and requirements exist in my environment.
- I can respond creatively to opportunities.

#### *Networking capabilities*

- I talk to other people on numerous occasions. I do not do this solely because I want something done.
- I approach other people spontaneously.
- I attend events where I can meet interesting people.

I like meeting new people.  
I do what is necessary to maintain my contacts with others.  
I know who I can talk to when I need help.  
I dare to approach others when I need something.  
I help other by referring them to people I know.

#### *Financial capabilities*

I monitor my budget constantly when I am working on something.  
Before I invest money, I examine other possibilities.  
I reflect about how I am going to use my resources. I try to use my resources in the best possible way.  
Before I start something, I try to think about what it will cost me and what I can gain from it.  
I know how I can keep the costs under control.  
I can get an advantage out of what I do.

#### *Market analysis*

I know who my competitors are.  
I know who could become my competitors.  
I try to collect information about my competitors.  
I dare to make contact with my competitors.  
I make sure that I am aware of the technological developments.  
I visit exhibitions in my field.  
I talk to others to know what is going on and what is needed.

#### **Innovation Performance**

Ability to introduce new products and services to the market before competitors.  
Percentage of new products in the existing product portfolio.  
Number of new product and service projects.  
Innovations introduced for work processes and methods.  
Quality of new products and services introduced.  
Number of innovations under intellectual property protection.  
Renewing the administrative system and the mind-set in line with firm's environment.