

Entrepreneurship Educational Offerings: An Examination of Module Design and Its Challenges

Wejdan Alakaleek¹, Yousra Harb², Ayman Harb^{3} , Hadeel Al-Maaitah⁴*

ABSTRACT

This study aims to examine the state of entrepreneurship educational offerings within Jordanian universities. First, it investigates the relationships between the main elements of entrepreneurship module design (module content, pedagogy, audience and educators' characteristics). Second, the study explores some factors that shape entrepreneurship module design. Both quantitative and qualitative methods were utilised to collect the data from entrepreneurship module educators. The research findings concluded that the educational offerings are characterized by focusing on the theoretical side of entrepreneurship and the high usage of traditional teaching methods. The university educational system (grading system, number of students, and support for curriculum activities) and educators' experiences (entrepreneurship teaching and research background and design of a practically-based curriculum) are among the main challenges encountered by Jordanian entrepreneurship educators. The study's findings provide insights for stakeholders to make better-informed decisions in relation to the entrepreneurship educational offerings.

Keywords: Entrepreneurship education, Entrepreneurship modules, Entrepreneurship module design, Jordan.

- 1 Associate Professor, Department of Business Administration, Business School, The Hashemite University, Zarqa, Jordan.
- 2 Associate Professor, Department of Information Technology, Yarmouk University, Irbid, Jordan.
- 3 Associate Professor, Department of Hotel Management, The University of Jordan, Amman, Jordan. a.harb@ju.edu.jo
- 4 Assistant Professor, Department of Business Administration, The Hashemite University, Zarqa, Jordan.

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تعليم ريادة الأعمال: بحث واقع وتحديات تصميم مساقات ريادة الأعمال

وجاد العكاليك¹، يسري حرب²، أيمن حرب³، هديل المعايطة⁴

ملخص

يهدف هذا البحث إلى دراسة واقع مساقات ريادة الأعمال المقدمة في الجامعات الأردنية. أولاً، يركز البحث على دراسة العلاقات بين العناصر الرئيسية لتصميم مساقات ريادة الأعمال (المحتوى، وطرق التدريس، وخصائص المتعلمين والمدرسين). ثانياً، تسنكشف الدراسة بعض العوامل التي تلعب دوراً في تصميم مساقات ريادة الكمية والنوعية لجمع البيانات من مدرسي مساقات ريادة الأعمال. وخلصت نتائج البحث إلى أن مساقات ريادة الأعمال المقدمة في الجامعات الأردنية تتميز بالتركيز على الجانب النظري لريادة الأعمال والاستخدام العالي لأساليب التدريس التقليدية. أيضاً، يعد النظام التعليمي الجامعي (نظام الدرجات، وعدد الطلاب، ودعم الأنشطة المنهجية) وخبرات المدرسين (الخلفية التدريسية والبحثية في ريادة الأعمال وتصميم المنهج على أساس عملية) من بين التحديات الرئيسية التي يواجهها مدرسون مساقات ريادة الأعمال في الجامعات الأردنية. هذه الدراسة تطمح إلى تقديم رؤى لأصحاب المصلحة لاتخاذ قرارات تساعد في تطوير مساقات ريادة الأعمال المقدمة في الجامعات الأردنية.

الكلمات الدالة: تعليم ريادة الأعمال، مساقات ريادة الأعمال، تصميم مساقات ريادة الأعمال، الأردن.

1 أستاذ مشارك، قسم إدارة الأعمال، كلية الأعمال، الجامعة الهاشمية، الزرقاء، الأردن.

2 أستاذ مشارك، قسم تكنولوجيا المعلومات، جامعة اليرموك، إربد، الأردن.

3 أستاذ مشارك، قسم إدارة الفنادق، الجامعة الأردنية، عمان، الأردن.

4 أستاذ مساعد، قسم إدارة الأعمال، الجامعة الهاشمية، الزرقاء، الأردن.

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INTRODUCTION

Entrepreneurship education plays an important role in stimulating the start-up intention and activities, where graduates with self-employment education better are equipped to face the high unemployment rates (Paray and Kumar, 2020; Badawi et al., 2018). Universities and schools contribute to the development of their students' entrepreneurial intention through entrepreneurship education (Badawi et al., 2018; Ni and Ye, 2018; Davey et al., 2016).

Entrepreneurship education literature discusses topics that mainly cover three sub-domains of entrepreneurship. These sub-domains are: educational offerings (describing entrepreneurship modules), the entrepreneurial universities (reflecting the characteristics of entrepreneurial institutions) and provisions of entrepreneurship education (examining the influence of entrepreneurship education on students' attitudes, knowledge and skills) (Kabongo and Okpara, 2010). Studies from these three areas of research increase the understanding of the impact that entrepreneurship education might have on the development of entrepreneurship, particularly the socio-economic and political contexts (Kabongo and Okpara, 2010). In addition, an examination of the educational offerings represents a starting point to enhance the understanding of the entrepreneurship education and, therefore, its potential impact on its development.

Research on entrepreneurship educational offerings usually focuses on various educational elements: the number and variety of entrepreneurship modules (Iacobucci and Micozzi, 2012; Kabongo and Okpara, 2010; Solomon, 2007); their content and pedagogy (Maritz et al., 2015; Fulgence, 2015); educators' characteristics and the learning audience (Gerba, 2012). Some studies from different contexts have focused on reflecting on some of these elements, but few studies have focused on deepening the understanding of all these elements together. For example, research in the context of sub-Saharan African universities (Kabongo and Okpara, 2010) and Italian universities (Iacobucci and Micozzi, 2012) focused investigation only on

the modules offered, their number and variety. In fact, these educational elements are interrelated and represent the core for designing effective modules.

The existing literature lacks a collective examination of all elements relevant to entrepreneurship educational offerings, particularly in an unexplored educational context, such as Jordanian higher education institutions. The outcomes of this examination should contribute to the definition of effective design for entrepreneurship modules. To fill this gap, this study aims to investigate the current status of entrepreneurship educational offerings within Jordanian universities. More specifically, it addresses the following main questions: First, what is the current state of all elements of the entrepreneurship educational offerings, including module content, pedagogy, audience and educator characteristics? Second, how do these elements relate to each other? Third, how have various factors shaped the design of these educational offerings?

Using quantitative and qualitative approaches, the research findings indicated that the educational offerings in Jordanian universities mainly target business students and are characterized by focusing on the theoretical side of entrepreneurship and the high usage of traditional teaching methods. In addition, the main factors that shape the experience of Jordanian entrepreneurship educators in designing the entrepreneurship modules are related to the university educational system (grading system, number of students, and support for curriculum activities) and educators' experiences (entrepreneurship teaching and research background and design of a practically-based curriculum). This study, therefore, contributes to the literature through reporting on the depth of the educational offerings of entrepreneurship measured through analyzing the different elements related to the design of these modules. It also explores some factors influencing the design of these educational offerings.

Literature Review and Theoretical Framework

Entrepreneurship Educational Offerings

The increase in entrepreneurship modules has intensified the debate regarding the best way of designing effective modules (Jiang and Xie, 2018). After defining why, a module should be taught (objective), the process of module design includes decisions mainly related to what to teach (content) and how to teach it (pedagogy) (Betts and Liow, 1993). Other decisions include defining to whom this is taught (learning audience) and by whom (educator) (Jiang and Xie, 2018; Gerba, 2012).

Module Content

The content of entrepreneurship modules is structured usually to cover a group of entrepreneurial topics. These topics include opportunity identification and feasibility analysis, new venture planning, financing and operating, new market development and expansion strategies, and institutionalizing innovation (McMullan et al., 1985). Based on an analysis of syllabuses of 18 entrepreneurship modules, Fiet (2001a) found six leading topics covering areas related to creativity, discovery/idea generation, strategy/competitive analysis, financing, managing growth, risk and rationality. Another view from some other scholars focused on the importance of covering theoretical and practice content (Maritz et al., 2015; Fiet, 2001b).

On the one hand, theoretical content is seen to help learners understand entrepreneurial decision process and outcomes (Fiet, 2001a and b). This content seeks to develop knowledge about concepts related to entrepreneurship, including the nature of self-employment and start-ups, business opportunities, entrepreneur's profile, principles of creativity and innovation (Alberti et al., 2004). On the other hand, the practical content focuses on discussion of topics related to writing a business plan and to learning functional skills related to marketing, financial and accounting issues (Alberti et al., 2004). Other topics might include the commercialization process and building a business model (Solomon, 2014). Ideally, it can be argued that

entrepreneurship modules should have a focus on building entrepreneurial competencies and allow students to “create multiple venture plans, practice identification of opportunities and have extensive exposure to entrepreneur role models” (Solomon, 2007: 172). The most covered topics in the entrepreneurship modules defined in the literature and representing the focus of this research include the nature of self-employment, start-ups decision, commercialization process, ways of identifying business opportunity, principles of creativity and innovation, writing an effective business plan, entrepreneur's profile and building a business model.

Module Pedagogy

Delivering the desired competencies for entrepreneurship, students require a suitable pedagogy (i.e., teaching methods) to be adopted in designing modules (Akinbami, 2016; Gerba, 2012). Generally, two pedagogical approaches have been adopted in entrepreneurship education: the traditional approach and the non-traditional approach (Maritz and Brown, 2013). The traditional approach is a more lecture-based method designed to pass knowledge on to learners (Pittaway and Cope, 2007). This approach has been criticized, as it focuses on theory rather than practical activities (Fulgence, 2015) using methods that are more theoretical in nature (Akinbami, 2016; Ahmad and Buchanan, 2015; Rideout and Gray, 2013; Pittaway and Cope, 2007).

A teaching pedagogy, including guest speakers and interviews with real entrepreneurs, has introduced a less traditional approach and would help students learn from other experiences (Maritz and Brown, 2013). The non-traditional, experiential approach employs action-oriented, skill-based and interactive learning methods that adopt the learning perspective (Ahmad and Buchanan, 2015; Rideout and Gray, 2013; Pittaway and Cope, 2007; Solomon, 2007). The experiential

approach focuses on creating actual experience (Mandel and Noyes, 2016) which employs learner-based methods focussing on activities whereby learning is developed by the learners themselves (Lourenço and Jones, 2006). The teaching methods of this approach consist of developing business plans, inviting guest speakers and government agencies (Ahmad and Buchanan, 2015), mentoring, competitions (Maritz and Brown, 2013), internships, management simulation and role-play (Fulgencio, 2015). Non-traditional methods have been expanded in order to accommodate non-business students and the growth of technopreneurial education (Rideout and Gray, 2013; Solomon, 2007) and appeared to include in addition consulting, live-case presentation, practical applications, projects based on real ventures, fundraising simulation, prototyping, and monitoring (Rideout and Gray, 2013).

Some authors argue that to teach modules that aim to motivate students to realize their potential as entrepreneurs, it is important to use both traditional and experiential approaches (Lourenço and Jones, 2006). For example, for teaching entrepreneurship theory and building cognitive skills, the 'theory-based activity approach' provides a good opportunity for the students to acquire competencies through involvement in theory-based activities (Fiet, 2001b). Pittaway and Cope (2007) argued that the form of education, either about or for entrepreneurship, would affect the chosen methods. They explained that those modules aiming to teach about entrepreneurship and equip students with theoretical knowledge tend to use traditional pedagogy, such as lectures and seminars, whilst the methods of the experiential approach are more adapted to modules tending to focus on providing learners with entrepreneurial skills. In this context, there is an agreement among entrepreneurship education researchers that the experiential approach is wide spread and advocated for such education (Fulgencio, 2015; Pittaway and Cope, 2007; Solomon, 2007; Gartner and Vesper, 1994).

Entrepreneurship Module Educators

Examining the background of entrepreneurship

educationalists includes their educational level, primary teaching area, research interests and entrepreneurial experience (Kabongo and McCaskey, 2011). Studies that have focused on producing a systematic analysis of entrepreneurship educators' characteristics are still few in number and are most US-based studies (Steiner, 2014). These US-based studies (Kabongo and McCaskey, 2011; Brush et al., 2003) indicated some improvement in the profiles of entrepreneurship educators. This improvement was expected, as the number of PhD programs has increased since the beginning of the 21st century (Brush et al., 2003). There is an ongoing debate regarding who should be teaching entrepreneurship, educators who are specialists or generalists (Steiner, 2014), or those who have entrepreneurship and business or interdisciplinary backgrounds. Under these conditions, studies still need to deepen the investigation into the relationship between educators' profiles and the quality of entrepreneurship educational offerings including content and education methodology. This investigation into the educationalists' profiles is important, as it has a high impact on educational content and methodologies (Alberti et al., 2004; Fiet, 2001a).

Entrepreneurship Learning Audience

Recently, many higher education institutions focused on developing blended entrepreneurial programs located out-side business schools and merging entrepreneurship with non-business disciplines (Turner and Gianiodis, 2018; Thom, 2017). It is argued that there is still a demand for embedding such education in other schools, including those of engineering, agriculture, art, education and science. Although some countries have shown some good progress in offering such education for non-business students, this is still underdeveloped even within some contexts where entrepreneurship education is

considered to be at a good level of development. For example, recent reviews in the US show progress in offering modules in entrepreneurship outside business schools, such as in art schools (Essig, 2017). Comparing universities in the US with universities in the UK and Germany, entrepreneurship education is still restricted to business and engineering students (Thom, 2017).

It seems that across the world, entrepreneurship education in higher academies is still under-represented in non-business schools. Moreover, the challenge is not only to expand entrepreneurship educational offerings into new schools, but also to design modules which provide a practical content and utilize active methods particularly for non-business students as they try to implement entrepreneurship principles in their own fields (Rideout and Gray, 2013; Solomon, 2007). In line with this, the learning audience to whom entrepreneurship modules are offered is an important element in designing entrepreneurship modules, and thus affects the process of defining the module content and pedagogy (Maritz and Brown, 2013; Othman and Nasrudin, 2016; Alberti et al., 2004).

Jordanian Higher Education and Entrepreneurship Education

Since the establishment of the first university in Jordan in 1962, currently, there are 34 universities and university colleges; 10 publics and 19 private universities, as well as 5 private university colleges (MHESR, 2021). Many of these institutions, 2 publics and 13 private, and all of the 5 university colleges are located in the country's capital Amman. Generally, all public universities in Jordan are recognized as research, teaching and community service institutions and offer both undergraduate and graduate programs.

Jordan's economy currently needs more innovative and youth entrepreneurs, where the country's biggest challenge lies in the high unemployment rates especially among qualified graduates and which exacerbated during Covid-19 pandemic (Harb et al., 2022). Jordan's higher

education faces different challenges that require structural changes particularly with the current changing market, and the '21st century skills'. To tackle the high unemployment rate and meet the new needs of the labor market-oriented skills for the 21st century, more calls from different stakeholders appeared recently for a significant paradigm shift in the country's education system to be a more practice-based education (Bataineh and Zecca, 2016; Mehtap et al., 2016). Universities in Jordan need to make changes in their structures and capacities to teach the new market-oriented skills that are vital for graduates to succeed in their careers and generate start-ups. Thus, embedding entrepreneurship education and training for graduates in Jordan to promote skills, such as creativity, critical thinking, communication, leadership, and initiative, is crucial in generating employers of labour rather than adding new unemployed graduates to the market (Alakaleek, 2019; Bataineh and Zecca, 2016).

In reflecting the universities efforts in Jordan for supporting the students' entrepreneurship, students are not aware of the opportunities and support available for them (Mehtap et al., 2016). Although recently universities have different activities in entrepreneurship, most of these activities are based on personal initiatives and not sustainable. In Jordan, students indicate that access education in entrepreneurship is one of the main factors that affect their decisions to engage in entrepreneurial activities (Mehtap, 2017). It appears that having a supportive system for entrepreneurial and innovation capacities and access to entrepreneurship education in Jordanian higher education would act as a main motivation to encourage graduates, both male and female graduates, for entrepreneurship (Mehtap et al., 2019; Mehtap et al., 2017).

Entrepreneurship education in Jordanian universities is structurally underdeveloped and lacks a clear strategy and institutionalisation of a supportive environment for

students' entrepreneurship. Entrepreneurship and business-development education are at a very early stage of development in Jordan (Alakaleek, 2019) and focus more on business and technology disciplines with a scarcity of programs and training for other fields, such as agriculture (Bataineh and Zecca, 2016), science and art. Entrepreneurship education mainly provides modules on entrepreneurship topics: small-business management was the first entrepreneurship course introduced in Jordanian universities and until 2010, it was the first introductory course in entrepreneurship and innovation offered at an undergraduate level in the country's universities (Alakaleek, 2019). At the study program level, there are four programs in entrepreneurship, with one at the bachelor level, Business Entrepreneurship at Irbid National University, and three at the graduate level: Business Entrepreneurship offered at Princess Sumaya University for Technology; Leadership and Entrepreneurship at Yarmouk University and an

Entrepreneurship and innovation MBA program at Talal Abu-Ghazaleh University College for Innovation (Ministry of Higher Education and Scientific Research).

Therefore, Jordanian universities, as a part of their educational curricula, have been delivering entrepreneurship modules for almost a decade. However, literature pertaining to entrepreneurship has not yet critically analyzed these modules' offerings. This study contributes to the literature through investigating the states of all elements of the existing entrepreneurship educational offerings in unexplored Jordanian higher education. This includes analyzing what is the current status of different elements related to the design of the modules, including module content, pedagogy, learning audience and educators' characteristics, and how different factors are influencing these modules' design, see Figure (1).

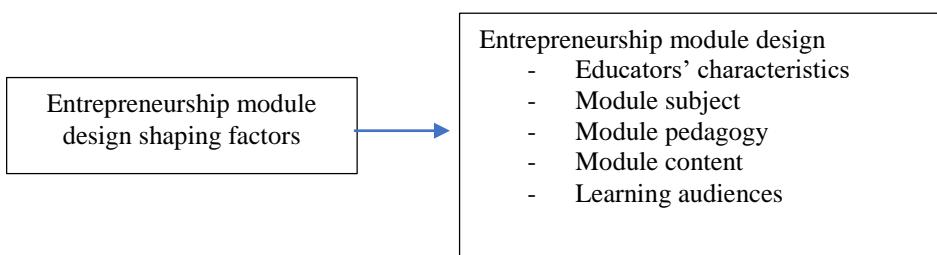


Figure (1)
Research framework

Research Methodology

Research Design

This study employed both quantitative and qualitative methods. A quantitative descriptive approach was used involving a questionnaire completed by the entrepreneurship educators to examine module subjects and their content, pedagogy, learning audience and educators' characteristics. The qualitative method used semi-structured interviews to explore the main factors that affected the entrepreneurship educational offerings in Jordanian universities.

Research Sample and Data Collection

The research participants were entrepreneurship educators at Jordanian universities. It should be noted that in Jordan, there are not many educators who teach entrepreneurship modules and this affected the number of the research participants. A census of the study plans of the programs within Jordanian universities showed that Jordanian universities offered 88 modules in entrepreneurship at an undergraduate level during the academic year 2015/2016 (Alakaleek, 2019). These

modules are defined in Table 1 and are used to identify the sample of this study and analyse the module design. The number of potential research participants was influenced by two factors: first, the limited number of entrepreneurship courses offered at Jordanian universities, which, in total is approximately 88 modules (Alakaleek, 2019); second, some

of these modules were never offered and are just listed among the modules in the study program and some modules were not offered while the current study was being conducted during the first and second semester of 2020/2021 academic year.

Table 1
Entrepreneurship modules in Jordanian universities

| Subject | Number of the offered courses | Number of respondents |
|---|-------------------------------|-----------------------|
| Small business management and entrepreneurship | 21 | 14 |
| Entrepreneurship/ entrepreneurship and innovation | 20 | 12 |
| Small business/entrepreneurial finance | 12 | 9 |
| Leadership | 7 | 5 |
| Creativity thinking/management | 5 | - |
| Innovation technology | 6 | 2 |
| Product development/design | 3 | 2 |
| Marketing for small business | 2 | 1 |
| Economics of small business | 2 | - |
| Entrepreneurship in engineering | 2 | 2 |
| Entrepreneurship in IT | 2 | - |
| Entrepreneurship in hospitality | 2 | 1 |
| Entrepreneurship in biotechnology | 1 | 1 |
| Communication skills and entrepreneurship | 1 | - |
| Entrepreneurship and professional ethics | 1 | - |
| Social entrepreneurship & enterprises | 1 | - |
| Total | 88 | 49 |

Research Method

The questionnaire was distributed to the entrepreneurship educators *via* e-mail in order to examine the context of entrepreneurship educational offerings in Jordanian universities. The questionnaire was developed and designed in a way that would help extract detailed data about the module design. The questionnaire had five parts: *First*, there is a question about the learning audience (Do you teach this module to business students/ non-business students?). *Second*, five questions were used to reflect the characteristics

of the module educators, including gender, educational level, primary teaching area, research interests and having entrepreneurial experience (i.e., industry experience: Do you have experience in running/managing a business? If any, this experience in running/managing was gained by: having (had) a business or consulting for, or initiating, entrepreneurial initiatives). *Third*, there is a question about module content (which of the following topics are covered in this module?). Entrepreneurship educators were

provided with a list of module content, eight entrepreneurship topics,¹ to define what topics are covered in their modules. Finally, there is a question to measure the frequency of using different pedagogies (How frequently do you use these teaching methods?). This part used Likert-scale items (with scores ranging from 1 'Not Applicable' to 6 'Very Frequent').

The questionnaire was sent to a total of 76 entrepreneurship educators (participants) *via* e-mail. Three reminders were sent to each participant in order to stimulate the response rate to the questionnaires. Out of the distributed questionnaires, 49 were returned and were presumed to constitute a usable sample for the study, representing a recovery rate of 64%. The respondents were educators for different modules from 20 Jordanian universities (see Table 1). The data collected was analyzed using SPSS computer software.

To aid in the interpretation of the questionnaire findings and to enrich understanding of the main factors that affect the content and pedagogy decisions of entrepreneurship educational offerings, 11 interviews were conducted with educators teaching entrepreneurship modules, during the second semester of 2020/2021 academic year, at four public Jordanian universities; namely, The University of Jordan, Yarmouk University, the Hashemite University, and Al Balqa Applied University. Participants who matched the participation criteria were invited to an interview. The sampling criteria focused on identifying educators who were teaching at one of the Jordanian universities, who were educators of one of the entrepreneurship, creativity and innovation modules, and who have been teaching a module during the 2020/2021 academic year. The interviews were semi-structured in nature, where all participants discussed a common set of questions relating to their teaching approach on entrepreneurship modules and the university's role in

shaping the nature of entrepreneurship education. The interviews were conducted in English, lasted between 40 and 50 minutes and were audio-recorded and transcribed. The data analysis consisted of single and across-interview analysis: first, we read through each individual interview and make notes regarding potential factors shaping educator experiences in designing their entrepreneurship courses. Second, we read across interviews to identify themes and sub-themes, where two main themes have been identified at the end.

Results

Module Educators and Learning Audience

The data indicated that 69.4% of the entrepreneurship modules were mostly offered to business students, while 30.6% of the modules were offered to non-business students. Regarding the characteristics of entrepreneurship educators (i.e., their educational level, primary teaching area, research interests and having entrepreneurial experience), the questionnaire results, presented in Table 2, indicated that 67.3% of the entrepreneurship educators were male, which reflects the male-dominated academic environment in Jordan, particularly in business schools. 51% of the educators had industry experience, mainly in consultancy of entrepreneurial activities. The background of those entrepreneurship educators also showed that (73.5%) hold a PhD degree. However, only (4%) of them have areas of specialization in entrepreneurship and small-business management and (36.7%) conducted research in entrepreneurship topics. This reflects the lack of educators who are specialised in entrepreneurship, creativity and innovation in Jordan.

¹ The most covered topics in the entrepreneurship modules defined in the literature (McMullan et al., 1985; Fiet, 2001a and b; Alberti et al., 2004) and listed in the questionnaire are: The Nature of Self-employment; Start-up Decisions; the Commercialization

Process; Ways of Identifying Business Opportunity; Principles of Creativity and Innovation; Writing an Effective Business Plan; an Entrepreneur's Profile; and Building a Business Model.

Table 2
Entrepreneurship educators' background

| | <i>Items</i> | <i>Number</i> | <i>Percentage</i> |
|--|--------------|---------------|-------------------|
| Gender | | | |
| Male | | 33 | 67.3 |
| Female | | 16 | 32.7 |
| Qualification | | | |
| Master | | 13 | 26.5 |
| PhD | | 36 | 73.5 |
| Area of specialization | | | |
| Business management (general) | | 20 | 40.8 |
| Business management - marketing | | 3 | 6.1 |
| Business management - Entrepreneurship and small business | | 2 | 4.0 |
| Economics | | 5 | 10.2 |
| Finance | | 10 | 20.4 |
| Engineering | | 5 | 10.2 |
| Others (e.g. linguistics, biology, mathematics) | | 4 | 8.1 |
| Have conducted research in entrepreneurship subjects | | | |
| Yes | | 18 | 36.7 |
| No | | 31 | 63.7 |
| Have an experience in entrepreneurship (running/ consulting a business) | | | |
| Yes | | 25 | 51.0 |
| No | | 24 | 49.0 |
| Entrepreneurship experience gained by | | | |
| Having had a business | | 6 | 24.0 |
| Consulting for entrepreneurial activities | | 19 | 76.0 |

Module Content

All eight topics listed in the questionnaire were taught by the educators. However, the following are percentages relevant to the most covered topics: 73.5% of the covered topics were related to Principles of Creativity and Innovation, followed by Ways of Identifying a Business Opportunity with a percentage of 67.3% and 65.3% were related to the Nature of Start-ups. The least entrepreneurial topics covered were Building a Business Model with a

percentage of 30.5% and the Commercialization Process, at 24.5% (see Figure 2). From this, it can be concluded that theoretical content based on the principles of creativity and innovation, business opportunity and the nature of start-ups received greater coverage in entrepreneurship modules than content focus on skill based content (i.e., building entrepreneurial competencies), such as business modeling and commercialization process.

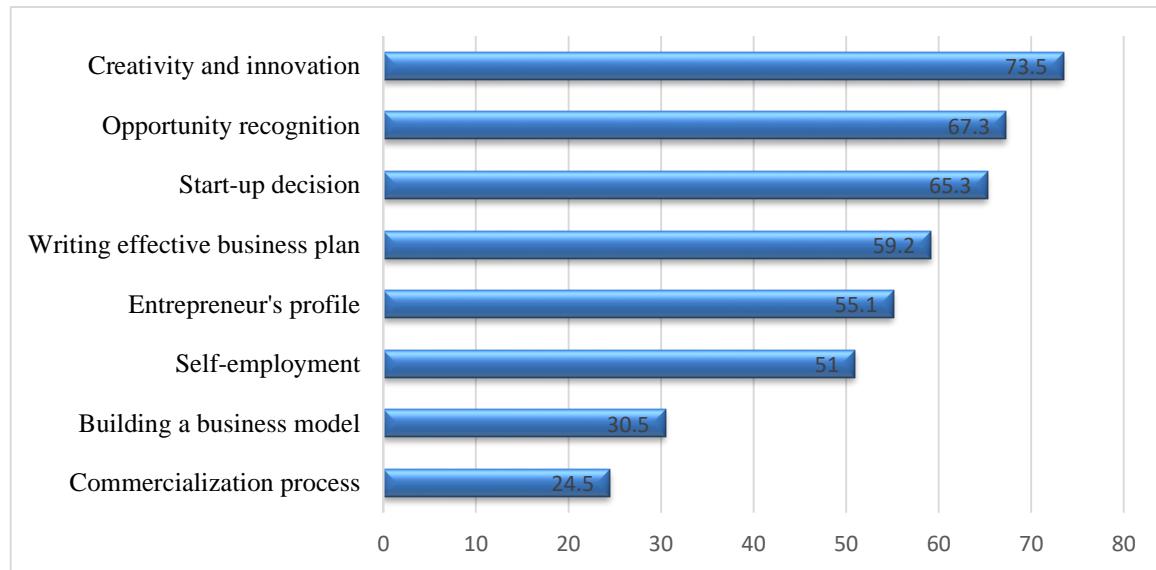


Figure (2)
Entrepreneurship module content

Module Pedagogy

The data presented in Table 3 shows the teaching methods used to teach entrepreneurship modules in Jordanian universities ranked by their popularity. On a scale of 1-6, entrepreneurship educators were asked to indicate the frequency of use from a list of teaching methods. The results indicated that the most frequently used teaching method was In-class Discussion, with a mean score of 5.65, followed by

case studies with the mean score of 4.5, whereas On-site Visits and Mentoring were the least used teaching methods with a means of 2.38 and 2.34, respectively. This suggests that traditional teaching methods including discussion, case studies and research seem to be more popular than non-traditional methods, including business planning, guest speakers, business simulation, mentoring and on-site visits.

Table 3
Teaching methods

| Teaching method | Mean | Std. Deviation |
|------------------------|-------------|-----------------------|
| In-class discussion | 5.6531 | .48093 |
| Case studies | 4.5306 | 1.29264 |
| Research papers | 4.2041 | 1.29067 |
| Business plan | 3.9592 | 1.85920 |
| Guest speakers | 2.9592 | 1.74355 |
| Business simulation | 2.4286 | 1.45774 |
| On-site vists | 2.3878 | 1.52502 |
| Mentoring | 2.3469 | 1.78595 |

Entrepreneurship Module Design: Relationships and Indicators

To produce some indicators around entrepreneurship module design, further analysis examining some components of entrepreneurship educational offerings was conducted. This analysis involved an examination of the relationships between the entrepreneurship module subject and some other elements related to the module design; namely, the teaching methods used, the learning audience and educator characteristics (i.e., having entrepreneurship industry experience).

In examining the relationship between the module subject and entrepreneurship learning audience in Jordanian

universities, Table 4 shows that the most popular module subject for business students was Small-business Management, followed by Financing Small Business, whereas Entrepreneurship/Innovation was the most popular subject for non-business students. Table 5 shows the association between module subject and entrepreneurship learning audience. The chi-square test results indicated that there is a significant association ($p= 0.001$, which < 0.05) between entrepreneurship module subject and the learning audience (business and non-business students).

Table 4
Cross-tabulation of entrepreneurship learning audience and module subject

| Entrepreneurship Learning Audience | | Module Subject | | | | | | | | | | Total |
|------------------------------------|-----------------------|---------------------------|------------------------------|--------------------------|---------------------------------|---------------------------------|-----------------------------------|---------------------------|------------|---------------------|------------------------------|-------|
| | | Small Business Management | Entrepreneurship/ Innovation | Financing Small Business | Entrepreneurship in Hospitality | Entrepreneurship in Engineering | Entrepreneurship in Biotechnology | Innovation and Technology | Leadership | Product Development | Marketing for Small Business | |
| Business Students | Non-business Students | 1 | 7 | 0 | 1 | 1 | 1 | 2 | 0 | 2 | 0 | 15 |
| Total | | 13 | 5 | 9 | 0 | 1 | 0 | 0 | 5 | 0 | 1 | 34 |
| | | 14 | 12 | 9 | 1 | 2 | 1 | 2 | 5 | 2 | 1 | 49 |

Table 5
Chi-square tests of the association between entrepreneurship learning audience and module subject in Jordanian universities

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-square | 28.543 ^a | 9 | 0.001 |
| Likelihood Ratio | 34.086 | 9 | 0.000 |
| Linear-by-Linear Association | 1.295 | 1 | 0.255 |
| Number of Valid Cases | 49 | | |

Further analysis was conducted of the correlation between educators with entrepreneurship experience and teaching methods. Spearman's test results presented in Table 6 indicate that having entrepreneurship experience is

significantly associated with the following teaching methods: In-class Discussion, Guest Speakers and Business Simulation, where the p-values are less than 0.05.

Table 6
Entrepreneurship experience and teaching methods

| Spearman's rho | Entrepreneurship experience | Correlation coefficient sig. (2-tailed) N | Entrepreneurship experience | Case studies | In-class discussion | Business plan | Guest speakers | Business simulation | Research papers | Mentoring | On-site visits |
|----------------|-----------------------------|---|-----------------------------|--------------|---------------------|---------------|----------------|---------------------|-----------------|-----------|----------------|
| 1.000 | 0.156 | 0.315* | 0.274 | 0.411** | 0.359* | 0.103 | 0.207 | 0.217 | | | |
| . | 0.283 | 0.027 | 0.056 | 0.003 | 0.011 | 0.483 | 0.154 | 0.133 | | | |
| 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |

Entrepreneurship Module Design Shaping Factors

An analysis to produce some indicators around the main factors that shape the experience of entrepreneurship module educators in Jordanian universities in designing and delivering their modules was conducted. This analysis was built on the interviews with some educators of entrepreneurship modules and involved an examination of entrepreneurship module design and delivery. Two main issues influencing the entrepreneurship educational offering were evident: the university education system and educational support, and the educators' experiences.

University Educational System and Educational Supports

In relation to the university education system and educational support, three main factors affecting the entrepreneurship modules' design and delivery in Jordanian universities were defined.

First, regarding the grading system, it appears that the

universities' policies regarding the course type of assessment and mark distribution limited instructors' abilities to adopt an action-based approach. Participants explained: '*the mark distribution focuses primarily on exams, mid and final, and instructors are not allowed to give more than 10% for projects and activities, despite the fact that projects and activities are considered part of the 10% student participation*' (RS); '*the university marking policy obliges the instructor to assign the majority of points to traditional methods of evaluation like exams, quizzes and traditional straightforward assignments. And since the culture among students in Jordan is more about marks and getting a degree rather than learning, students are normally focused on evaluation methods which are not action-based*' (HK).

Second, the number of students in each class was addressed as another main challenge affecting introducing more practical approaches in teaching

entrepreneurship modules. YH stated that '*the most challenging thing is the large number of students in each class, we have 80-100, it is really difficult to ask for projects, ideas and mentor them*'. Jordanian universities systems do not allow a tutoring system, especially in humanities and business disciplines. AW explained that a '*tutoring system is not an option for us to deal with large classes; let's say to have lectures for concepts and theoretical background then tutorials or workshops for applied topics, where we can divide students into two or three tutorial groups and allow them to develop a business idea and work on it through the semester*'.

Third, the lack of educational support for curriculum activities affected educators' abilities to introduce more applied topics and teaching methods. The appropriate infrastructure and technology are not available to support the educational process in universities. As AH stated, '*the university lacks appropriate infrastructure and technology*'. RS also explained that '*the main challenge is that the infrastructure at the university does not support many practical techniques; for example, many of the simulation games are expensive, especially for large numbers of students in each class*'.

Educators' Experience

The lack of educators' background in entrepreneurship and experience in designing a practice-based curriculum were considered among the other factors that influence the entrepreneurship education offering at Jordanian universities. Educators with no research and specialization in entrepreneurship or relevant disciplines might be chosen to teach entrepreneurship. AC stated that '*instructors for entrepreneurship courses are not chosen based on relevant criteria*'.

In addition, entrepreneurship instructors lack experience in developing a practice-based curriculum. Participants clarified that there was a '*lack of practical experience of the instructors and professors*' (BA); another participant, clarified: '*the required knowledge that the instructors should*

have in order to transmit the theoretical knowledge into practical skills. Specifically, entrepreneurship courses are offered by multiple departments in different colleges. Thus, the instructors do not necessarily master all entrepreneurship skills' (YH).

Discussion and Conclusion

This research provides an analysis of the entrepreneurship educational offerings at Jordanian universities. It concluded that these educational offerings are theoretical and traditional in terms of covered content and teaching methods. Such education in Jordan is mostly available for business students and delivered by educators with a limited entrepreneurship background. The research findings also identified the university education systems and educators' experience as the main factors influencing the entrepreneurship educational offerings within Jordanian universities.

Comparing the investigation results of the entrepreneurship educational offering elements, in the context of the Jordanian universities with the findings reported in other studies conducted in different contexts, the research findings indicate the following: *First*, the entrepreneurship modules available in Jordanian universities cover theoretical topics and are traditional in terms of employed teaching methods. Most modules cover topics emphasising theoretical aspects, where the principles of creativity and innovation are among the most discussed topics. Although creativity and innovation appeared among the most covered entrepreneurship topics, for example, in Australian (Maritz et al., 2015) and Tanzanian universities (Fulgence, 2015), the topics that build skills, such as marketing skills, business plan write-ups and opportunity evaluation featured more in those universities. Content focusing on topics related to business planning, functional skills (Alberti et al., 2004), the commercialization process and building a

business model (Solomon, 2014) are limited in the Jordanian education offerings. From a pedagogical point of view, the most popular teaching methods employed to deliver entrepreneurship modules in Jordanian universities are the traditional methods of in-class discussion and case-study analysis, whereas the most popular teaching methods, for instance, in the US universities are discussions, creation of business plans, in-class exercises and guest speakers (Solomon, 2014; Solomon, 2007). In addition, some European universities are able to include more innovative practical methods and create a supportive environment for entrepreneurship programs (Volkmann and Audretsc, 2017). The difference in the teaching methods employed lies in the strong presence of non-traditional methods. To meet their objectives, entrepreneurship educational offerings need to deliver modules with skill-building content and practical teaching methods. In addition, expert coaching and support services for business creation and career development are considered to be crucial for students to benefit from the universities entrepreneurship educational offerings for stimulating entrepreneurial spirit and developing entrepreneurial skills (Ferreira et al., 2021). Thus, action learning is an effective paradigm to build and improve students' attitudes in problem solving and to foster their entrepreneurial competencies (Iacobucci and Micozzi, 2012). This is highly challenging in some contexts, such as Jordanian universities, with many traditions that reduce the ability of the education system to adopt more practice-based education.

Second, Jordan's entrepreneurship educational offerings are essentially targeting business students with only limited modules usually offered to non-business students. It seems that there is still a demand worldwide for more entrepreneurship educational offerings outside business schools, such as in schools of engineering, agriculture, tourism and hospitality, and art (Turner and Gianidis, 2018; Essig, 2017; Alhammad et al., 2021; Thom, 2017). Further, these offerings are delivered by educators with limited specialization in entrepreneurship and small-business

management fields, with many entrepreneurship module instructors coming from other business areas and even from other disciplines. Similarly, for example, within Ethiopian universities, there is a lack of educators who are specialists in entrepreneurship. In contrast, countries with the most developed context in entrepreneurship education have more educators who have a specialization and/or PhD degree in entrepreneurship, as evidenced in the US-based studies (Kabongo and McCaskey, 2011; Brush et al., 2003).

Third, reflecting on the depth of the entrepreneurship educational offerings, a number of indicators relevant to module design have emerged of the association between module subjects, teaching methods, learning audience and educator characteristics. Interestingly, this study highlights some indicators reflecting the relationship between the targeted learning audience and the effect of the characteristics of entrepreneurship educators on used teaching methods. It appears that small-business management and financing small business are mainly offered to business students, while the introductory modules to entrepreneurship, under which come the subjects of Entrepreneurship/Innovation, Entrepreneurship in Hospitality, IT, Engineering and Biotechnology are mostly offered to non-business students. Moreover, there was an indicator that those educators who have entrepreneurship experience are more likely to employ practical education by incorporating some non-traditional experiential teaching methods. This could be interpreted as an effective design for entrepreneurship educational offerings. In fact, introductory modules in entrepreneurship are recent features of programs in Jordanian universities and providing them outside business schools is also a new phenomenon (Alakaleek, 2019). This might suggest that the new offerings could be considered a response to criteria for effective entrepreneurship education.

Reflecting on the main factors that influence entrepreneurship educational offerings at Jordanian universities, the university education system and educators' experience appeared to play important roles. Universities' education systems, including restrictions in the grading system, the large number of students per class and limited support for curriculum activities, influenced the module-design decisions of entrepreneurship educators; i.e., the content and teaching methods. Henry (2020) found that educational environment, especially the teaching environment of higher-education institutes and regulatory requirements, exerts the most influence on the content decisions of entrepreneurship educators. For example, considering entrepreneurship education as a strategic priority by a higher-education institute influences its decision to offer entrepreneurship as a new course of study as well as impacts educators' decisions relating to content that they choose to focus on and their chosen pedagogical approach. Focusing on innovation and entrepreneurship education in the high educational institutions' strategies enabled entrepreneurship educators to have some flexibility in their teaching practices without too many institutional constraints (Wraae and Walmsley, 2020; Al-Rawadiah, 2022). The goal of entrepreneurship education is to influence students' entrepreneurial behaviour, with entrepreneurship-related offerings that employ an experiential approach which is considered more effective (Shirokova et al., 2018). To achieve its goal, in practice, entrepreneurship education needs greater human, financial and physical resources, which higher-institution management may not support, such as "more teaching hours to accommodate the smaller class sizes best suited to EE, more tutorial hours, guest speaker costs, and start-up seed monies" (Henry, 2020: 666). The limited availability of these resources for entrepreneurship educators at Jordanian universities appear to affect their decisions regarding entrepreneurship education content and pedagogy.

The decisions regarding entrepreneurship education within Jordanian universities have also been influenced by

educators' entrepreneurship experience, including having no entrepreneurship background and the lack of skills in designing a practice-based curriculum. Educator training in entrepreneurship appears to be important (Ruskovaara et al., 2016) and entrepreneurship education needs educators who possess good transformational-leadership attributes (Sarfraz et al., 2018). The content decisions of entrepreneurship educators and their decisions about what to teach are influenced by different factors, with their entrepreneurship background and entrepreneurial experience being crucial (Henry, 2020). As such, effective entrepreneurship teaching can be achieved through combining educators' practical experiences with theoretical teaching practices (Sarfraz et al., 2018).

Research Implications and Limitations

This study contributes to existing knowledge through providing an analysis of entrepreneurship education at the undergraduate level within Jordanian higher-education institutions. This analysis informs the literature for the first time about entrepreneurship educational offerings in the Jordanian higher-education context through critically evaluating different elements of the offered entrepreneurship modules. The study also provides substantial practical insights for different stakeholders, mainly university policy-makers and entrepreneurship lecturers. This includes, on the one hand, an expansion of the breadth of universities' entrepreneurship educational offerings through embedding more specialized entrepreneurship modules and training across disciplines, as well as offering more advanced practice-oriented modules, such as lean start-up, venture creation, entrepreneurial thinking and feasibility analysis. On the other hand, universities need structural changes to promote more practice-oriented teaching methods in their entrepreneurship education. Infrastructure and

professional support are necessary to create a sustainable entrepreneurship culture and enable entrepreneurship educators to enhance their teaching practices, content and pedagogy.

This study is limited to the context of Jordanian universities. Given that the breadth of entrepreneurship education in Jordanian universities is limited, this study calls for further research in a context where the curriculum is broader. Such research is vital in order to generate a clearer picture of the relationship between elements of the module

design; i.e., the module subject and other elements, including module content, pedagogy, learning audience and educator characteristics. Also, this study focused on the entrepreneurship module educators' experience. However, to build a robust understanding about the entrepreneurial educational offerings in the Jordanian context, students' perspectives need to be studied to explore the main factors that shape their entrepreneurial intentions.

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