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## Towards a Sustainable Entrepreneurial Ecosystem in Higher Learning Institutions: The Case of RIZQ4U Apps

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### Article Information

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### Abstract

The Menu Rahmah meal program introduced by the government aims to make affordable meals accessible to the disadvantaged. However, our research conducted at UiTM has unveiled notable obstacles that impede its effectiveness. A prominent issue is the lack of awareness among students, leading financially strained Asnaf and B40 students to miss out on these meals. Moreover, the program's participating restaurants encounter losses due to surplus unsold food and limited innovation in distribution methods. In such a scenario, the need for a dependable tool adaptable to students' requirements becomes crucial. Considering the ubiquity of mobile phones, mobile applications emerge as a potential platform for a personalized support tool that is readily accessible. This study offers an overview of available mobile applications, particularly focusing on those designed to aid students, entrepreneurs, and donors. In response to these challenges, we introduce the Rizq4u mobile app. Rizq4u is designed to streamline access to Menu Rahmah meals by integrating with zakat and alms, offering Free Meal Vouchers specifically catering to Asnaf and B40 students. This application empowers students to procure meals either free of charge or at discounted rates. Furthermore, Rizq4u promotes community engagement by facilitating donation opportunities and Infaq initiatives, encouraging entrepreneurial ventures among UiTM residents within the food industry. Through the utilization of Rizq4u, students not only gain easier access to meals but also nurture entrepreneurial competencies. Ultimately, this initiative endeavors to foster a sustainable entrepreneurial ecosystem within higher education institutions.

## INTRODUCTION

The term "entrepreneurship" typically directs attention towards the pivotal role of the "entrepreneur" who acts not only as the architect of business ventures but also embodies the aspirations for substantial growth and future advancements in business (Papulová & Papula, 2015). When conceptualizing entrepreneurship within the societal context, it encompasses a spectrum of themes including self-employment, management of small-scale enterprises, phased models of growth, and complexities inherent in family-run businesses. In essence, entrepreneurship encapsulates the realm of independently owned enterprises, frequently characterized by their modest scale, and the individuals who manage and drive these ventures forward. The online business in Malaysia is thriving, attributed to the widespread use of the internet and advancements in information communication technologies. The COVID-19 pandemic has notably accelerated this trend, catalyzing shifts in consumer behavior towards increased online shopping, a transformation with enduring implications (Gohain, M. (2021) and (United Nations, 2020). This evolution has presented opportunities for individuals to build wealth by venturing into online entrepreneurship. The attraction of conducting an online business is further bolstered by the government's concerted efforts to enhance internet infrastructure and utilization. Concurrently, the government has instituted various entrepreneurship programs aimed at providing robust support for aspiring entrepreneurs in the digital realm. Especially, this urgency in online entrepreneurship has led to heightened competition for well-established larger corporations, as emerging startups led by young founders, influenced by a distinct mindset shaped by their digital upbringing, pose considerable competition.

Traditional educational methods have led to a divergence between the skills imparted to students and the actual demands of industries (Wahid, 2016). Consequently, numerous institutions are shifting towards problem-based learning methodologies to cultivate graduates with enhanced creativity, critical thinking, and analytical skills, enabling them to effectively tackle complex problems. The landscape of entrepreneurship training is evolving significantly. Conventional approaches to entrepreneurship education, primarily focused on supporting business ventures, are being supplemented by novel frameworks that prioritize the significance of business in different contexts (Hoppe, 2016). This expansion signifies a departure from established notions, indicating a need to explore and embrace innovative settings in entrepreneurship education. Entrepreneurship involves a complex social endeavor that encompasses the exploration, evaluation, and exploitation of opportunities, requiring a diverse range of resources distributed among governmental entities, organizations, and individuals. In this landscape, universities are increasingly acknowledged as vital establishments in fostering national entrepreneurship through their contributions in teaching, research, and community outreach. Hence, there exists an urgent necessity to revamp the entrepreneurial learning program, considering the substantial shift to online teaching and the potential offered by digital technologies (Ratten, 2020) (Secundo, G., 2021).

In the body of existing literature, there has been an increasing amount of focus on the idea of the entrepreneurial ecosystem as an interaction between individual actors, institutions, and civil society involved in entrepreneurial activity (Audretsch et al., 2019; Kansheba & Wald, 2020; Scott et al., 2021). Ecosystems of entrepreneurs are essential for fostering innovative and destructive creativity (Filser et al., 2021; Ritala et al., 2018; Stam & van de Ven, 2021). The idea of sustainable entrepreneurial ecosystems (SEE) is introduced by Cohen (2006), who claims that their main objective is sustainable development. Instead of focusing on social, economic, or environmental objectives separately, SEE methodically takes sustainability into account. According to (Jones et al. 2010) Learning is regarded as being particularly significant and one approach to improve organizational and individual entrepreneurial success since it involves both the acquisition and application of new information to new settings. According to the social pillar, social justice, human well-being, and social stability are among the things that sustainable development must consider. The environmental pillar emphasizes that to provide the resources and environmental foundations required for future growth, sustainable development must preserve, enhance, and attain ecological equilibrium. Entrepreneurial ecosystems represent a renewed interest in localized conditions for entrepreneurship aligned with a focus on the agency of entrepreneurial actors to create and transform their own contexts. Some even claim that ecosystem policy is the "New Industrial Policy" (Startup Genome, 2020).

Universities, as hubs for education and research globally, particularly within evolving higher education models, have significantly contributed to integrating entrepreneurship as an integral component of academic programs (Wright 2017). Over time, a growing number of academic qualifications explicitly incorporate coursework related to establishing businesses. This knowledge is progressively disseminated across various academic disciplines, and supplementary initiatives are introduced to instill an entrepreneurial mindset throughout university education. In Universiti Teknologi MARA (UiTM), the Malaysian Academy of SME & Entrepreneurship Development (MASMED) plays a pivotal role in managing entrepreneurship initiatives at Universiti Teknologi Mara (UiTM). MASMED offers a range of e-commerce courses and training programs, such as the Unicorn Scholarship Program (USP) and Post-Graduate Training in Innovation & Entrepreneurship Exploration (TIE2). Furthermore, MASMED facilitates collaborations between emerging young entrepreneurs and industry stakeholders.

Supporting and fostering an environment conducive to student entrepreneurship, including access to resources, mentorship, funding, and education, can further amplify their impact on the economy. Initial findings suggested that numerous students engage in entrepreneurship at the university level, seeking a competitive edge in business (Iglesias-Sánchez, 2019). These students actively enroll in entrepreneurship courses and training programs offered both internally by the university and externally by industry partners. Entrepreneurship education plays a pivotal role in addressing unemployment by encouraging individuals to pursue entrepreneurship, fostering the creation of their own businesses, and thereby generating employment opportunities. It is recognized as a cross-disciplinary skill aimed at enhancing employability and adapting to the dynamic job market. Despite the availability of these courses and programs, there lacks a systematic measurement and analysis of current data to evaluate the effectiveness of commerce courses and training initiatives. Consequently, the actual efficacy of entrepreneurship courses within the university system remains unverified. Within Higher Learning Institutions, the entrepreneurial ecosystem serves as a nurturing space that cultivates and propels the growth and achievement of both entrepreneurial ventures and innovative practices. Research conducted by Lu (2021) demonstrated that the support universities offer for entrepreneurship positively influences students' tendencies to pursue entrepreneurship, although the connection between these factors is not strong. The evolution from simple entrepreneurship education to comprehensive support structures like incubators and accelerators reflects universities' commitment to fostering an entrepreneurial mindset and providing practical resources for students to launch successful ventures. These initiatives not only contribute to the growth of student-led startups but also foster a culture of innovation and entrepreneurship within academic institutions, driving economic development and creating a conducive environment for future entrepreneurial endeavors. By fostering an entrepreneurial culture and providing education and training in entrepreneurship, societies can benefit from increased economic activity, job creation, innovation, and solutions to pressing social and environmental challenges. (Miller, 2017) and Rashid (2019).

The government recently initiated the Menu Rahmah meal program, aiming to provide affordable lunch or dinner options primarily to aid the underprivileged. Initial feedback on the program has been largely positive. Our research highlights specific challenges in accessing and delivering Menu Rahmah meals, particularly within UiTM. Foremost among these challenges is the lack of student awareness regarding Menu Rahmah and its associated restaurants. Consequently, financially disadvantaged Asnaf and B40 students, unable to afford campus living expenses, including meals, often miss out. Additionally, while restaurants offer a diverse range of meals each day, the limited quantities occasionally lead to losses when unsold. The absence of an effective platform to address these issues stems from inadequate innovation in transaction and delivery channels, creating a barrier to efficient resource distribution. The Rizq4u application will create a more caring environment for B40 group and Asnaf students at UiTM, providing them access to nutritious meals and connecting them with NGOs, zakat, and the public. This app ensures fresh, high-quality food with easy access. Ordering from the Rizq4u app's high-quality "rahmah" menu will make food ordering easier for UiTM students, promoting their safety, health, and meal quality. Through this app, zakat and alms partners can directly interact with students, allowing Asnaf and B40 group students to access meals, reducing their financial burden and enabling better focus swiftly and conveniently on studies. Moreover, the app aims to boost students' awareness of social issues by connecting zakat with charitable deeds, encouraging compassion and solidarity among students toward societal concerns. The primary focus of this paper revolves around developing a mobile application serving as a platform to enhance access for underprivileged students and entrepreneurs specifically within UiTM. Governments, NGOs, and educational institutions play a crucial role in supporting entrepreneurship through policies, funding, mentorship programs, and incubation centers. These initiatives not only empower individuals to start their ventures but also contribute to the overall economic and social development of communities and nations.

This paper begins with an introduction of existing literature focused on student entrepreneurship and reviewing government initiatives toward entrepreneurship. Secondly, the methodology used is discussed in the development of RIZQ4U mobile application. Thirdly, the proposed framework and solution are presented. The results obtained is the prototype of the proposed apps. The paper ends with the main conclusions and their implications in the field of entrepreneurship.

## METHODOLOGY

This section aims to explain the outcomes and analyses conducted during this study. The initial phase involved planning, wherein the researcher comprehended prevailing issues by delving into literature and conducting preliminary studies sourced from various outlets like journals, articles, books, and websites. Qualitative and quantitative analyses were employed in the preliminary investigation, focusing on businesses, restaurants, aspiring student entrepreneurs, and individuals seeking to sponsor meals. The findings derived from this preliminary exploration will be deliberated upon, and potential solutions will be suggested to address the identified problems.

To ensure accuracy in understanding stakeholder requirements, data collection was performed to gather the necessary information crucial for this project.

#### *Requirement Gathering Phase and Analysis Phase*

The second phase of this project was the requirement gathering phase. In this phase, there were activities that must be done to achieve the research objectives. The first objective is to identify and understand problems faced by the student in getting Menu Rahmah food. The activities include interviews and observation. In this phase, the researcher will use a Qualitative Analysis since the data requirements are interviewed. Ten respondents chosen are the students from UiTM Puncak Alam and 5 restaurants. After the data collection is complete, the researcher conducts a descriptive and narrative analysis of the user requirement interviews to begin analysing the requirements. The researcher will use the User Goal technique to analyze data. The researcher conducts a descriptive and narrative analysis of the user requirement interviews to begin analysing the requirements. The purpose of this descriptive analysis is to analyse data from various sources, such as information gathered via questionnaires given to respondents. Based on the interview session, there are three actors that will be used in the system which are students, donors, and administrative (Zakat). Therefore, the researcher looks at the user's requirement to identify the use cases for the functionality of the system.

#### *System Design and Development*

Mobile application development life cycle (MADLC) is a framework created by Intel IT to define particular activities, tools and resources, to support the planning, development and deployment of mobile applications (Vithani, T., & Kumar, A. (2014). MADLC has seven phases which are identification, design, development, prototyping, testing, deployment, and maintenance.

##### **Identification Phase:**

This stage involves gathering and categorizing ideas, aiming to generate new concepts or enhancements for the current application. Ideas from both clients and developers are collected and further scrutinized through brainstorming sessions to explore novel features for the new application.

##### **Design Phase:**

Ideas from the identification phase are transformed into visual representations, including storyboards, paper prototypes, and user interfaces. The feasibility of developing the application across various mobile platforms is assessed. Additionally, decisions are made regarding whether the app will be released as a free version, a trial version with limited features, or a premium version.

##### **Development Phase:**

This stage initiates the coding process for the application. It involves two primary stages: coding to meet functional requirements as outlined in the prototype, and coding to meet user interface specifications. Functional requirements are coded according to the prototype, while the user interface is designed based on the storyboard and adapted to function across multiple mobile operating systems.

##### **Prototyping Phase:**

Prototypes are tested for their functional requirements and sent to clients for feedback. Adjustments based on received feedback are implemented during the development phase. The integration of the first and second prototypes occurs once the second prototype is ready for testing and client review. The final prototype undergoes testing on various devices and operating system versions to ensure compatibility.

##### **Deployment Phase:**

After completion of the previous stages and finalization of the application, it is uploaded to the relevant application marketplace for users to download and use. Testing is performed on emulators and real devices across different operating system versions and device models to ensure functionality. The final phase of the development process is deployment. After the previous phase is done and completed, the application is uploaded to the appropriate application market for users to download and use.

#### **RESULT AND FINDINGS**

As part of our efforts to support the sustainability of entrepreneurial ecosystems within higher learning institutions, we propose RIZQ4U as an initiative. The app aims to address three primary issues. Firstly, it targets Asnaf students who encounter financial difficulties in covering on-campus expenses, including food costs. Despite the high living expenses, certain university students continue to grapple with financial challenges. Therefore, there's a necessity to improve access to food for both asnaf students and the B40 group through the provision of zakat and alms. Secondly, many individuals would like to sponsor a meal and give donations. Currently there is no unified

platform to adequately address these requirements within university settings. Thirdly, the distribution of donations sometimes is not transparent and suffers from a deficiency in channeling donations effectively. RIZQ4U apps architecture are depicted in Fig 1 below. The payment or e-wallet platform can be from different sources such as business, university, sponsor, zakat, alumni and NGO. By tapping into diverse funding sources, a payment or e-wallet platform aimed at supporting entrepreneurship and social needs can broaden its financial base, ensuring sustainability, and expanding its reach to serve a wider audience. Moreover, leveraging multiple sources of funding can reduce dependency on a single funding stream and create a more resilient financial model.

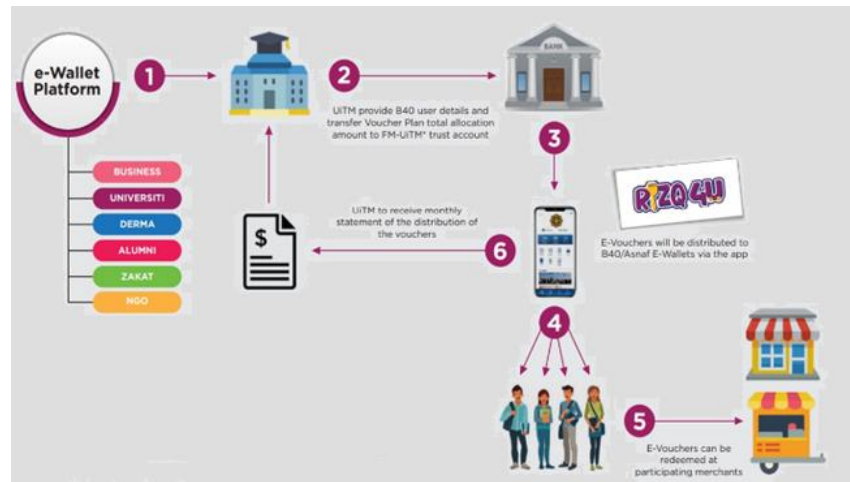


Fig. 1. RIZQ4U Architecture

The figures below (Fig. 2, Fig. 3 and Fig. 4) shows that main page of the RIZQ4U application. The application's front page is intentionally designed with a simplistic layout, featuring universally recognized icons for easy navigation and search functionality. There are four options (Food delivery, Mart, Finance and Rider). The search bar allows users to type in the required word (search for restaurant). After the user presses the search icon, the results will be displayed. For example, if students type the restaurant name, the list of restaurants that offers Menu Rahmah will be displayed.

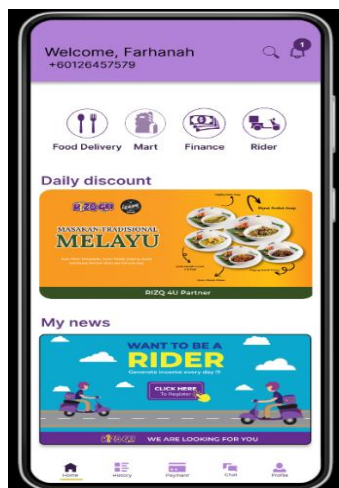


Fig. 2. Homepage

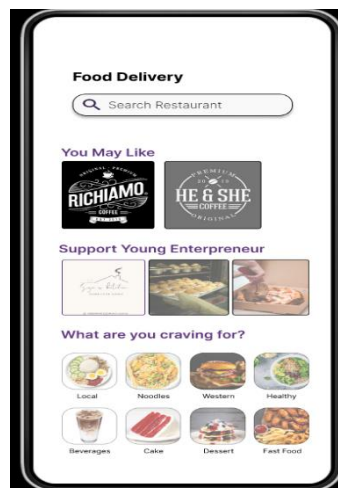


Fig. 3. Restaurant Option Screen

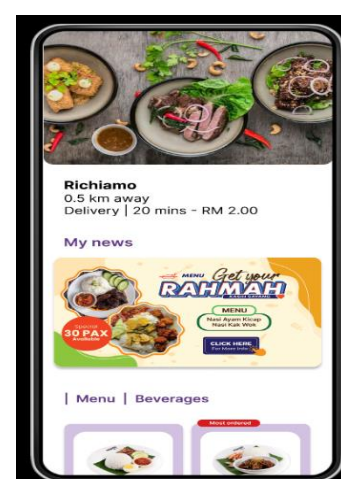


Fig. 4. Menu Rahmah from restaurant

The figures below are the screens for the admins (zakat). The admin can see the number of zakat and infaq recipients. The admin can assign the vouchers or donations to the students based on the list of students from the databases integrated. There are two databases that will be integrated into the apps. The databases are Database from Department of Statistics Official Portal (*Bilangan-Asnaf-Fakir-Dan-Miskin-Mengikut-Daerah*) and Data Pelajar Miskin (B40) Dan Penerima Zakat Uitm 2020 Hingga 2023 (Uitm Shah Alam). As per current trends, there is a growing inclination among users for cashless transaction, RIZQ4U has the feature of using e-voucher, QR Code and e-wallet as options for donors to sponsor a meal.

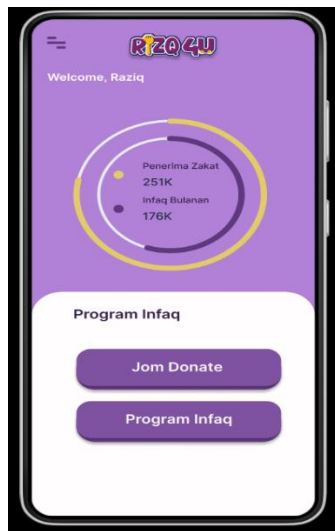


Fig. 5. Zakat Homepage

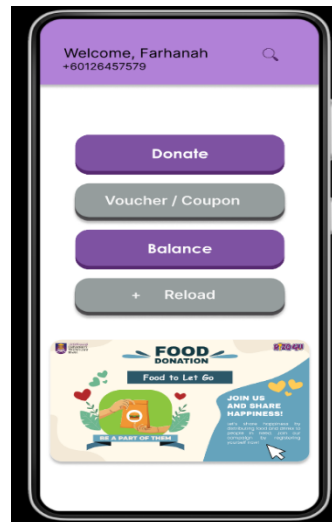


Fig. 6. Donation Option Screen

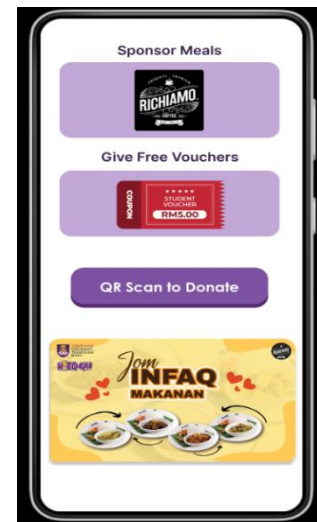


Fig. 7. Sponsor Meal page

The Rizq4u application not only aims to make it easier for students at UiTM to get quality food, but also has a strong entrepreneurial component. This application encourages students, staff, and alumni in the UiTM campus to participate in the food business by becoming partners in preparing the rahmah menu. This can provide opportunities for them to develop business skills and become successful young entrepreneurs. Rizq4u application uses the latest technology in its development and operation. By leveraging features such as online ordering, digital payments and delivery tracking, the app provides a more efficient and practical experience for its users. Consumers can easily order food, pay electronically and track delivery status quickly and easily. Moreover, this app uses the latest technology in its development and operation. By leveraging features such as online ordering, digital payments and delivery tracking, the app provides a more streamlined and practical experience for its users. Consumers can easily order food, pay electronically and track delivery status quickly and easily. Overall, Rizq4u's application innovation in the culture of entrepreneurship among students, staff, and alumni in the UiTM campus has the potential to create a significant impact in developing business skills, creating job opportunities and improving the economy (Fig. 8). In addition, the use of the latest technology and unique new ideas in this application also provide a better and efficient user experience.

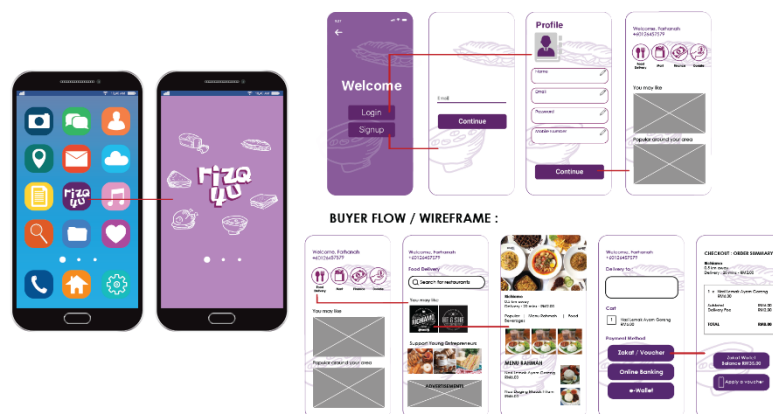


Fig. 8. RIZQ4U Wireframe

## CONCLUSION

In conclusion, the Rizq4u application showcased its potential not only in aiding the target demographic but also in fostering the continuity of entrepreneurial endeavors within university precincts. Its scalability through supply-chain management stands as a testament to the sustainability of entrepreneurial operations within academic environments. By addressing basic needs such as access to nutritious food, the application emerges as a sustainable entrepreneurial platform that contributes to food security while bolstering the local



entrepreneurial ecosystem. Aligning with the DKN 2030 policy, this initiative indirectly empowers the community and aligns with broader sustainability goals. While the significance of university entrepreneurship in fostering firm growth is widely acknowledged in literature, there remains a paucity of evidence concerning student start-ups. This paper, utilizing an entrepreneurship ecosystems framework, sheds light on the pivotal role of university accelerators in nurturing entrepreneurial development among U of T graduates. However, it highlights a dearth of information regarding the dynamics of networks formed by firms within accelerators and emphasizes the need for enhanced support from universities and policymakers to foster the growth of start-ups. This study aims to serve as a catalyst for further research in understanding and fortifying the ecosystem supporting student-led entrepreneurial ventures, encouraging a deeper exploration of accelerator-based networks and the means to bolster start-up development.

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