

University of the Future: A New Paradigm

Azrina Wahi Ridwan, Nurul 'Atiqah Mohamed Yusof, Abdul Rahman Ahmad Dahlan

Abstract— The challenges ahead for higher education not just in Malaysia but around the world appears driven by disruptive change in the forces of technology, economic, political and education sector which threaten to undermine its business model, governmental support and operating mission. Thus, the purpose of this paper is to build a successful future business model canvas for university of the future while addressing a number of challenges in the coming years. A total of 20 respondents were interviewed encompassing two customer profiles which are endowment contributors and investors. Based on the analysis, a more comprehensive business model canvas (BMC) and value proposition design (VPD) were established fit the upcoming higher education system's environment. The number of respondents was rather small due to time limitation. The results are predominantly beneficial to universities, policy makers, business organizations and students by offering a comprehensive understanding into the new practical business model into the future. This study offers a beneficial source of information to each party to produce incredible strategies for higher education sector that meet global needs.

Index Terms— *Business Model Canvas, Higher Education Sector, Value Proposition Design*

I. INTRODUCTION

Under the rapid developments that have occurred and still occur in higher education locally and globally, and with the great attention and demanding care of the government of Malaysia for higher education; it became imperative that the quality and outputs of education should be a key element for the success of various universities and institutions of higher education. Malaysia is committed to enhance its human capital by transforming the nation into a prosperous and developed nation and ensure that the higher education has a strong, stable and effective foundation. Knowledge is the key of advancement and growth and thus education development is crucial for the sustainability of progress in the nation. The government of Malaysia has embarked on the National Higher Education Strategic Plan Beyond 2020 with the objective to meet the nation's developmental needs and raise its standing in the international arena. In addition, the development of Islamic education in Southeast Asia is tremendous and receiving an overwhelming support from the community. More Muslim parents are convinced that an educational institution which covers both

parameters of education in their content and environment offers a better option for their children. Interestingly, many Islamic universities and colleges were established in Malaysia that employs a distinctive approach in its education system, having Islam at the core of its foundation. The approach is more synergistic and diverse in nature. Presently, many universities aspire to anchor excellence to be the premier global university and produce better quality intellectuals, professionals and scholars by integrating the qualities of faith, knowledge and good character so that they would be able to serve as agents of comprehensive and balanced progress as well as sustainable development locally and globally.

While this purpose may have remained the core interest of the university, the world around higher education is undergoing significant change and transformation would be on the agenda for the next decades. The emergence of new business model of higher education leads higher educational institutions to enhance modernization strategy to tie all of the dynamic environment surrounds them today. Looking at contemporary challenges ahead, universities felt the necessity to have in hand a foresight plan that looks forward to its future and determines its priorities and objectives which it aspires to achieve in order to reach its rightful place in the ranks of distinguished universities locally and globally. Thus, this concept paper lays out the drivers of change in accelerating the transformation of the university, new Business Model Canvas and Value Proposition Design to be achieved in enhancing the quality, creativity, competitiveness and innovativeness in higher education and literally the roadmap to the future that will assure the health and vitality of generations to come.

II. PROBLEM STATEMENT

The challenges ahead for higher education not just in Malaysia but around the world appears driven by disruptive change in the forces of technology, economic, political and education sector which threaten to undermine its business model, governmental support and operating mission. These forces further include dramatic new types of economic competition, difficulties in growing revenue streams as we had in the past, relative decline in government support, actual and likely future political turmoil and some outdated methods of teaching and learning that have been unchanged for years [1]. The world around higher education sector is undergoing significant change and it is under pressure to meet greater expectations including number of students' enrolment, educational preparation, workforce and market needs or even economic development. Meanwhile, the resources available are likely to decline and reaching scarcity [2].

Information technology advances, the emergence of big data and the computer revolution have massively reinvented or disrupted many information-based businesses and higher education is also in the business of creating and distributing

Manuscript received March 23, 2016

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knowledge. Preparing youth to thrive in this complex and ever-changing future will require fundamental transformation of how higher learning institutions currently operate [3]. Everyone must engage in this issue to understand the situation, study the effects of governmental and economic forces on universities, analyse the fragile political situation and help to design new strategies and institutions to respond. If universities fail to rethink their strategic situations and business models, they may fall to the coming educational “tsunami” [1]. Thus, great transformation is required to build a successful future business model with a chance to provide value propositions that meet the needs of students, parents, businesses, policy makers and community members.

III. LITERATURE REVIEW

The purpose of higher education is to equip students for success in life either in their personal life, workplace and in the societies. Though this purpose has remained constant for centuries, the world around higher education undergoes constant change. The campus, the library, the classroom and the traditional-age student may be common features of higher education yet might not adequately describe higher education’s future. Hence, the next part will discuss the drivers of change, the enablers and the implications of transforming the higher education sector.

A. Drivers of Change

1) *Global Shifts in Education and Research*

Demand for higher education continues to upsurge due to government policies, a growing population and increasing wealth. The labour market trends around the world are expected to change, with shortages in area that demand higher education and advanced skills. In addition, rapid changes in the environment, fields of study and new discoveries will result in more knowledge creation, necessitating additional education as well. Higher educational institutions play a critical role in society, making substantial intellectual, social, cultural and economic contributions. Countries around the world are now heavily investing in higher education sector and research as a way of building social and economic prosperity. It is widely known that university research yields answers to some of the immediate questions our society faces. Society will also gain benefits from a community educated in the broad array of disciplines represented by the modern arts and sciences [4].

2) *Economic Recovery and New Economic*

The unending economic uncertainty in the global economy affects the financial as well as the policy environment around universities operation. During economic difficulties, with government revenues tight and cost pressures from inflation, the exploration of other alternatives to revenue sources is crucial. Although economies may improve, competing demands for funds from healthcare sector and retirement will continue to squeeze higher education funding. These challenges will affect the well-being of higher education sector in the future and efforts need to be made in order to maintain the strategic focus on the quality of the learning environment [4].

3) *Global Mobility*

The international student market is growing rapidly and will fundamentally change in structure in the coming decade and beyond as traditional source markets like China, South Korea, Malaysia and others increasingly become global-scale destinations for international students. The emerging markets of academic talent become increasingly mobile and in demand, providing a growing source of talent for universities in both developed and developing economies alike. International branch campuses and MOOC-based distribution of content are parts of global mobility. Over the next 10-15 years, the emergence of a small number of elite, global university brands is said to emerge with adequate resources, government support and intent to achieve global elite status [5].

4) *Integration with Industry*

Many higher educational institutions are establishing alliances and rapport to gain access to expertise, experiences, facilities and funds. Industry and higher education sector have long supported each other, however the relationship is changing and deepening. Industry is now increasingly emerge as a competitor. For universities to survive and thrive, significant deeper relationships with industry is crucial in the coming decade. The integration with industry will not just enable depth industry based learning and internships, but to enable spreading out higher education’s fixed cost for research program, education, infrastructure and services as well as commercialization will bring together a win-win situation for both institutions and industry as source of revenue [5].

5) *Digital Technologies*

New technologies are revolutionizing the way we carry out our lives as well as disrupt all manner of established industries [4]. The pace and disruptiveness of change has really accelerated these days though online education has been around since the 1990s. Digital technologies will not cause the disappearance of the campus-based university but will transform how the education is delivered, supported and accessed, enable real-time student feedback and enrich on-campus experience. People all over the world can access to education in remote and regional areas both in developed and developing world [5]. Public and private providers will be able to specialize in parts of the value chain such as content generation, content aggregation, mass distribution and commercialization. Moreover, the so-called Massive Open Online Courses (MOOCs) offers lower cost online classes to people around the world [5]. Universities must take full advantage of these emerging trends, integrating the new tools and technologies in their administrative systems, research and communications both on and off campus. Universities continually have to update the technology infrastructure and communication systems in ways that best support the academic and research mission [4].

B. Enablers of the Future

The combination of economic and social forces enabled by new IT tools and capabilities will provide higher education sector with golden opportunities and possibilities for

addressing its future challenges. As organizations anticipate the future, there are several essential areas of focus that could be considered as the 'game changer' [2].

1. New Structures, New Business Model

New structures and new business model are necessary in shaping higher education sector in the future. These models are enabled by information technology (IT), driven by cost, access or new approaches. Increasingly, technology and its associated services are provisioned beyond the campus, an emerging model that can be applied to sourcing, services, expertise and even students. Transparency and openness are the key features of developing structures and sustainability models. Internet makes information almost universally available throughout the world which leads to the growth of opportunities for meaningful local, regional and international collaboration around the creation of a diversity of resources [2].

2. Educational Experience

The educational experience is increasingly connected, experiential and flexible which is driven by individual preferences and needs. The focus of education is shifting from instruction to discovery because of rapid changes in technology, increase in complexity and the need for skill renewal. Students must develop the skills to discover the nature, sources and validity of information-wide to solve problems. They can search for the information from variety of sources, on any device, at any time, in their preferred medium. Students are no longer limited to access information by location or library collections, but they can access to greater amount of the world's literature and archive online. Sophisticated search tools, students' network of peers, mentors and experts can lead them to information and insight. In addition, networks enable collaborative activities through various social networking sites) and tools on the web (Google Docs, Wiki, etc.). These highly interactive platform support immersive experiences which enable students to engage in role playing, scenario building and assuming different roles in learning. These online learning and accelerated programs provide greater flexibility than traditional campus programs [2].

3. Innovation and Economic Vitality

Innovation can be defined as successful development of new ideas which is essential to success for individuals and economies. Universities as the sources of innovative and creative thinking ought to conduct more research which creates the foundation for new industries and technologies. Research and innovation are increasingly interdisciplinary, inter-institutional and international, generating vast amounts of data. Universities innovations can be diffused through patents, start-ups companies and consulting. For innovation to fuel economic vitality and social progress, it must go beyond typical promises, for instance creating new jobs, companies, industries or solving social or environmental challenges. As a result, innovation is increasingly tied to entrepreneurship and turning novel ideas into feasible business models in public and private sectors. Collaboration activities in higher educational sectors with other counterparts including

government, business, industry and nongovernmental organizations ensure local, national and international communities gain exceptional benefits from innovation [2], [6].

C. Implications of the New Shifts

1. Universities

Every graduate will have relevant disciplinary knowledge and skills, ethics and morality as well as strong mind sets, cultural and civilizational literacy to advance them to a high level of personal being. Besides, universities are able to attract, recruit and retain the best talent, through specialized and diversified pathways and different models of institutional excellence, enabling them to meet changing responsibilities and expectations [3]. Commitment to research and innovation culture will be instilled amongst the staff, students and academicians, driving the Research & Innovations (R&I) activities and outputs towards the realization of the university vision. The ideas, discoveries and innovations originating from universities profoundly affect the well-being of society as well as its international competitiveness [4]. Over the next decade, as costs continue to rise, it is essential for university to ensure adequate financial resources available to support the university's operations and development activities [3]. The accumulation of wealth from various revenue generating activities will ensure its continuity in realizing its vision of becoming a leading international centre of educational excellence in all branches of knowledge [7].

2. Policy Maker

Lifelong learning will become a new trend in the next decade. Every single individual of all ages is seen as potential customers, seeking out learning opportunities to enrich themselves. There will be learning communities in every organization, with formal mechanisms to recognize prior experience and learning. Everyone will have access to these opportunities, regardless of income level or background [3].

3. Business Organizations

Private sector as one of the ambitious players will need to move fast to establish new models and secure partnerships with leading incumbents. Different range of industry groups have the opportunity to create value providing services within the higher education value chain, such as content distribution, commercialization, industry placements and certification. Given the growing markets of higher education system, potential private sectors are encouraged to put serious resources into establishing new models and to start securing partnerships with leading incumbents [5].

4. Students

In the past, students have been passive players on an education pathway meanwhile in the future, they will need to be more proactive to take responsibility for their own learning and skill development. They will need to understand how to create value to receive and act as entrepreneur of their own career. They should be innovative in every aspects to solve the challenges of the 21st century [8].

IV. METHODOLOGY

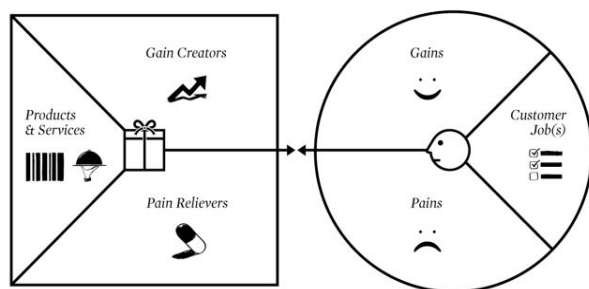
For the purpose of gathering the data, the researchers carried out one-to-one interviews in which a set of questions was developed from initial value map and customer profile. The researchers focuses the questions on two customers segment which are endowment contributors and investors. The subjects for this study are local and international students as well as business owners and working adults of aged 19 years old and above. In order to invite participation in this study; the respondents are asked if they could be interviewed. Once they had agreed, the researchers then asked them several questions on each customer segment. The interview was carried out in February 2016 with a total of 20 interviewees around IUM and Klang Valley. The interview was conducted by firstly asking the respondents' demographic profile and then the customer profiles as in value proposition design (VPD) suggested in the study.

V. CONCEPTUAL MODEL OF UNIVERSITY OF THE FUTURE (UOTF)

The initial BMC for University of the Future (UOTF) as shown in Fig. 1, would have four customer segments which are students, the endowment contributors, investors and the government. The students would obtain higher learning education in the university as well as experiencing a conducive learning environment. The university will conduct research and produce the research publications accordingly. Mainly, the students will be taught in a classroom setting or lecture theatre by their lecturers. In order to widen the communication channel, the university utilizes email and in-house magazine.

In maintaining customer relationship, having a good CRM and continuous marketing efforts are important

Fig. 2: Value Proposition Design (VPD)



to ensure consistent revenue for the university. Amongst the revenue stream for the university would be tuition fees, government funds and endowment funds from the public and private sectors. Furthermore, the key partners for the university are the student's parents, both international and local alumni and not forgetting the community in the area. Lectures, research and development for would be university's key activities. On the cost structure, the university mainly spends on fixed, services and maintenance costs. The essential key resources would be students, lecturers, fixed assets and its other employees.

VI. ANALYSIS AND FINDINGS

Based the interview conducted, the initial BMC blocks has transformed to the new BMC as illustrated below. The interviewees contributed their opinions and provide constructive feedbacks on the new transformation. As a result, the initial customer segments namely students, endowment contributors, investors and government are no longer relevant. The new BMC customer segment block now consists of students (Domestic, International, and Virtual), waqf contributor, industry professionals and other education providers. Both investors and government has been shifted to the key partners block because in the future, these two are regarded to play a role in partnering with the university instead of being a customer. Moreover, the endowment contributors has been changed to waqf contributors as one of the new value proposition for UOTF is Islamization of knowledge.

Customer Segments

Four customer segments identified namely students, waqf contributors, industry professionals and other education providers. For UOTF, there are a few sub-categories of students which have been identified which is domestic, international, undergraduate, post-graduate and virtual. Students have the option of attending lectures in the university premise and also through online. As the funding from government for the university is getting slimmer, the UOTF would depend on the waqf contributors. Since the early days of Islamic education, the existence of waqf contribution is an important element in the expansion of Islamic education worldwide. This contribution will be utilized for sustaining the university as well as used for expansion and not forgetting to provide scholarship for underprivileged students. Nevertheless, we could enhance the student learning experience by expanding industry collaboration in the design and delivery of programmes [3]. UOTF will provide workshops and seminars together with doing research on the industry and in return the organization could engage with UOTF for workshops and trainings. In order for UOTF to expand, it needs to establish alliances with other education providers. This is crucial for UOTF to achieve its mission of internalization. This makes it possible for students to be transferred to one institution to another. Moreover, having an ally beyond our borders will make it convenient for UOTF to open a new branch overseas.

Value Proposition

The value that the UOTF would create for the students is Islamization of knowledge which it will be the pioneer university in Malaysia that integrates the qualities of "iman", "ilm" and "akhlaq" through education. In addition, the value proposition for the students is digitalization of learning that takes the students to a different method of learning as compared to the traditional way. The virtual students can now learn through online using their gadgets and computers at the convenience of their home. Lectures can be conducted at any location in the world and numerous students can watch it online. The UOTF will also focus on research and publication with a special attention in the crucial areas and topics. The university will need to integrate with the industry as innovation is now essential to success for individuals and economies. The university will stand as a hub for massive collaboration between the students, lecturers, industry professional and other education providers. There will be

many possibilities and positive outcome from this collaboration.

Customer Relationship

In order to maintain smooth relationship with the students, UOTF will outsource its administrative division. The cost efficiency and good service quality by outsourcing will surely benefit the university and its students. Furthermore, UOTF will conduct vigorous marketing activities for the ground level and through digital media to attract the students to enrol in the university's programs. In order to ensure the student is equipped with employment after graduation, the university will setup a career centre to assist students in their future career. The industry professionals that engages with the university are also welcome to the career centre to select their future potential employee. To ensure there is growth in student enrolment, the university will appoint recruitment agents in selected countries. For maintaining the relationship for all the customer segments, UOTF will setup the Customer Relationship Management system through cloud computing [9]. An efficient CRM system will help to maintain a positive relationship with all the customers. However, for the waqf contributors, there will be a waqf centre to ease their transactions. This will ensure that all contributor's welfare is taken care and their contributions are channelled to the rightful path

Channels

UOTF deliver its value proposition mainly through digital as all the customer segments will be able to communicate with the university using this tool. Furthermore, there will be learning lab integrated with seamless access to information and presentation technologies replacing the conventional classrooms [10]. The learning lab will be useful for both students and industry professionals. Courses can also be conducted in a mobile learning lab at the convenience of the professionals as it will be in their office building.

Revenue Streams

Tuition fees paid by students is one of the revenue streams for UOTF. However, from the funds of waqf contributors the university will be able to provide free education to underprivileged students who are qualified. As UOTF aims to conduct numerous research for the industry, having this collaboration will create new revenue stream for the university. Building research centres will be favourable as this could be used by the university and industry professionals. In the future, faculties will be revenue-oriented and generate income for the university. Furthermore, UOTF will publish physical and digital books which is useful for internal and external users. Workshops and trainings by the university lecturers will be another revenue stream for the university. UOTF would provide 'freemiums' to these group of people which means that the university will offer free training session and for an intense course on the topic, the participants will have to pay for the service [11].

Cost Structure

The cost incurred to sustain UOTF would be fixed costs that consists of building, employee wages, utilities and etc. There will also be service, maintenance and outsourcing cost involved. This is comparable to the report by Ernst & Young in University of the Future evolution model 'Transformers' where student services is outsourced, while the university retains ownership of their customer relationships by using cloud-based customer relationship management tools and

techniques [5]. The university will also need to pay for intellectual properties fees for having the digital tools in place.

Key Partners

Most of the university course enrolment will be from the younger students. As such, one of the key partner for the university is student's parents. The government also plays an important role as a partner as all the materials and courses offered must be approved by the government. Research in a variety of fields and industry that is crucial for the country's economy will be performed in the university. Hence, the industry will be another key partner to ensure the success and usefulness of these research. The university will work closely with the content wholesalers to ensure that the education content is frequently updated and beneficial to the students. Word of mouth can be a powerful marketing tool and partnering with the international and domestic university alumni is highly recommended. Moreover, building relationship with prospective student are necessary and having schools as its partner is essential for UOTF.

Key Activities

The main activities in the university will be lectures regardless whether it is conducted in the premise of the university or through digital. There will also be workshops and trainings conducted and not forgetting research and development. The university will engage in fundraising activities for it to obtain the external funding from others. Furthermore, other activities would be the development waqf financing.

Key Resources

The final building block is on key resources. The key resources are the most important assets for UOTF which are their lecturers and university buildings. Furthermore, the university IT infrastructure and digital content is crucial for UOTF as it will be highly dependable on these assets.

VII. CONCLUSION AND FUTURE WORK

Higher education is an enormous national asset and its contribution to the economic and social wellbeing of the nation is of vital importance. The challenges ahead for higher education not just in Malaysia but around the world appears driven by disruptive change in the forces of technology, economic, political and education sector which threaten to undermine its business model, governmental support and operating mission. Faced with this dynamic industry landscape, universities should critically examine their existing model and develop an extensive transformation plan. Many universities are seeking to position themselves in what is described as "blue oceans" of differentiation in applying knowledge, engagement, partnership, learning and enterprise [12]. The new business model canvas (BMC) proposed in the study is still lacking but somehow it still relevant for UOTF. The new era of big data, mobility, globalization and Islamization of knowledge are taken into account in developing the new model. The items recommended will require significant policy and strategy changes, productivity enhancement and investments on the part of each community of the university. Yet, the new BMC also comprise a favourable revenue streams that will generate substantial returns to a stronger UOTF.

Despite the attempts to rigorously present and objectively organize the new business model, the study comes with

several limitations. Future research should seek to overcome these limitations and improve the subject matter of the paper. One first area for future work is to consider different population groups of potential customers for the university. A more detailed result can be achieved if other customer segments are deliberated in details in the study including working adults, specialized students, parents, entrepreneurs and organizations. A second area for future research is to expand and amplify how the new business model canvas works among universities in different countries. Universities across the world have diverse attributes that will be able to

foresee the effectiveness of the new model. Finally, a third area is to further examine the shifts of research-intensive universities in this 21st century. The so called knowledge-based economies rely heavily on scientific research and a trained workforce. As such, nations no longer compete for industrial capacity or access to natural resources, but rather for skilled workers, intellectual property and knowledge. UOTF must increasingly focused their resources on higher education and establishing an impactful research institute in the universities.

Fig. 1: Initial Business Model Canvas (BMC)

<p><i>Key Partners</i></p> <ul style="list-style-type: none"> Parents International alumni Domestic alumni Community 	<p><i>Key Activities</i></p> <ul style="list-style-type: none"> Lectures Administration Research and Development (R&D) 	<p><i>Value Proposition</i></p> <ul style="list-style-type: none"> Higher learning Research Publication Conducive learning environment 	<p><i>Customer Relationships</i></p> <ul style="list-style-type: none"> CRM Marketing Activities 	<p><i>Customer Segments</i></p> <ul style="list-style-type: none"> Students Endowment contributors Investors Government
	<p><i>Key Resources</i></p> <ul style="list-style-type: none"> Students Lecturers Fixed Assets Supporting staffs 		<p><i>Channels</i></p> <ul style="list-style-type: none"> Classroom Email LMS University magazine 	
<p><i>Cost Structure</i></p> <ul style="list-style-type: none"> Fixed cost Services cost Maintenance cost 			<p><i>Revenue Streams</i></p> <ul style="list-style-type: none"> Tuition fees Government funds Endowment funds 	

Table. I: Initial Value Proposition

CUSTOMER SEGMENTS	CUSTOMER JOBS	GAINS	PAINS	GAIN CREATORS	PAIN RELIEVERS	PRODUCTS & SERVICES
Students	<ul style="list-style-type: none"> *Attend lectures *Purchase academic materials *Curriculum involvement 	<ul style="list-style-type: none"> *Academic qualifications * Knowledge 	<ul style="list-style-type: none"> * High tuition fees * Expensive academic materials * Longer time to complete 	<ul style="list-style-type: none"> * Recognized qualification * Quality education 	<ul style="list-style-type: none"> * Student scholarship * Study loan * Short semester option 	<ul style="list-style-type: none"> * Qualified lecturers *Recommendations on scholarships * Good campus amenities & facilities
Endowment Contributors	<ul style="list-style-type: none"> * Donate cash * Donate assets 	<ul style="list-style-type: none"> * Feel good factor * Making others happy * Building reputation 	<ul style="list-style-type: none"> * Do not know who to channel funds to * Not knowing where the funds will go to 	<ul style="list-style-type: none"> * Social Responsibility * Civic engagement * Relationship building * Mutual respect 	<ul style="list-style-type: none"> * Tax exemption * Endowment centre 	<ul style="list-style-type: none"> * Improvement in university assets * Student scholarship
Investors	<ul style="list-style-type: none"> * Investment * Do research on the university * Evaluate the potential gains 	<ul style="list-style-type: none"> * Financial gains * Shareholder value 	<ul style="list-style-type: none"> * Monetary investment * Key personnel involvement * Bad ROI 	<ul style="list-style-type: none"> * A stake in the university * Evolve with the university 	<ul style="list-style-type: none"> * Diversified portfolio * New learning curve 	<ul style="list-style-type: none"> * R&D * University sustainability performance

Government	<ul style="list-style-type: none"> * Financial support * Grants scheme * Regulatory body * Evaluate university results 	<ul style="list-style-type: none"> * Improve nation's economic growth * Education opportunities * Educated citizens 	<ul style="list-style-type: none"> * Financial constraint * Availability of subject expert to approve programmes 	<ul style="list-style-type: none"> * Good education system * Better society & nation * Highly skilled workforce 	<ul style="list-style-type: none"> * Rationalize expenditure * University produce more experts 	<ul style="list-style-type: none"> * R&D * Produce graduates
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Fig. 3: New Business Model Canvas (BMC)

The Business Model Canvas

<p>Key Partners</p> <ul style="list-style-type: none"> • Parents • Government • Industry • Content wholesalers • International & domestic alumni • Agent • Local, Islamic and global universities 	<p>Key Activities</p> <ul style="list-style-type: none"> • Lectures • Administration • Conduct workshop & training • R&D • Fundraising initiatives • Waaf financing 	<p>Value Proposition</p> <ul style="list-style-type: none"> • Islamization of knowledge • Digitalization of learning • Integration with industry • Research and publication • Massive collaboration 	<p>Customer Relationships</p> <ul style="list-style-type: none"> • CRM (cloud) • Admin (outsourced) • Recruitment agents • Marketing activities • Career centre • Waqf centre 	<p>Customer Segments</p> <ul style="list-style-type: none"> • Students (Domestic, International, Virtual) • Waqf Contributor • Industry professionals • Other education providers
<p>Key Resources</p> <ul style="list-style-type: none"> • Lecturers • Univ. building • IT infrastructure • Content 		<p>Channels</p> <ul style="list-style-type: none"> • Learning lab • Digital • Mobile learning lab 		<p>Revenue Streams</p> <ul style="list-style-type: none"> • Tuition fees • Research and book publishing • Free short courses (freemium) • Workshop and training fees
<p>Cost Structure</p> <ul style="list-style-type: none"> • Fixed cost • Services cost • Outsourcing cost • Intellectual properties fees • Maintenance cost 		<ul style="list-style-type: none"> • Research centres • Faculties • External funding • Waqf Fund • Free education 		

the university will be able to provide free education to underprivileged students who are qualified. As UOTF aims to conduct numerous research for the industry, having this collaboration will create new revenue stream for the university. Building research centres will be favourable as this could be used by the university and industry professionals. In the future, faculties will be revenue-oriented and generate income for the university. Furthermore, UOTF will publish physical and digital books which is useful for internal and external users. Workshops and trainings by the university lecturers will be another revenue stream for the university. UOTF would provide 'freemiums' to these group of people which means that the university will offer free training session and for an intense course on the topic, the participants will have to pay for the service [11].

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Higher education is an enormous national asset and its contribution to the economic and social wellbeing of the nation is of vital importance. The challenges ahead for higher education not just in Malaysia but around the world appears driven by disruptive change in the forces of technology, economic, political and education sector which threaten to undermine its business model, governmental support and operating mission. Faced with this dynamic industry landscape, universities should critically examine their existing model and develop an extensive transformation plan. Many universities are seeking to position themselves in what is described as “blue oceans” of differentiation in applying knowledge, engagement, partnership, learning and enterprise [12]. The new business model canvas (BMC) proposed in the study is still lacking but somehow it still relevant for UOTF. The new era of big data, mobility, globalization and Islamization of knowledge are taken into account in

developing the new model. The items recommended will require significant policy and strategy changes, productivity enhancement and investments on the part of each community of the university. Yet, the new BMC also comprise a favourable revenue streams that will generate substantial returns to a stronger UOTF.

Despite the attempts to rigorously present and objectively organize the new business model, the study comes with several limitations. Future research should seek to overcome these limitations and improve the subject matter of the paper. One first area for future work is to consider different population groups of potential customers for the university. A more detailed result can be achieved if other customer segments are deliberated in details in the study including working adults, specialized students, parents, entrepreneurs and organizations. A second area for future research is to expand and amplify how the new business model canvas works among universities in different countries. Universities across the world have diverse attributes that will be able to foresee the effectiveness of the new model. Finally, a third area is to further examine the shifts of research-intensive universities in this 21st century. The so called knowledge-based economies rely heavily on scientific research and a trained workforce. As such, nations no longer compete for industrial capacity or access to natural resources, but rather for skilled workers, intellectual property and knowledge. UOTF must increasingly focused their resources on higher education and establish an impactful research institute in the universities.

Table. II: New Value Proposition

CUSTOMER SEGMENTS	CUSTOMER JOBS	GAINS	PAINS	GAIN CREATORS	PAIN RELIEVERS	PRODUCTS & SERVICES
Students	<ul style="list-style-type: none"> *Obtain internet access *Obtain digital devices *Allocate their time *Purchase reading materials *Graduate *Expand skillset knowledge 	<ul style="list-style-type: none"> *Cheaper cost for digital students *Time saving *Flexible (time, place) *Easy access *Create your own pace *Unique knowledge *Campus engagement 	<ul style="list-style-type: none"> *Tuition fees *Application process *Education materials *Static education system *Student debt 	<ul style="list-style-type: none"> *Access to advanced material *Well-equipped faculty *Islamization of knowledge 	<ul style="list-style-type: none"> *Student scholarship *Waqf funds *Outsource admin division *Digital learning 	<ul style="list-style-type: none"> *University to sell books that includes multimedia tool *Open access publication *Open source software *Tailored content *Unique programmes *Leading academics & practitioners as lecturers *Accredited university
Waqf Contributors	<ul style="list-style-type: none"> *Ensure asset is Halal *Legal transactions *Providing contributions in form of cash, building or land 	<ul style="list-style-type: none"> *Fulfilling religious beliefs *Seeing the development of the university 	<ul style="list-style-type: none"> *Not knowing where the funds are channeled *Fixed asset is difficult to liquidate 	<ul style="list-style-type: none"> *Islamization *Islamic Heritage Center 	<ul style="list-style-type: none"> *Yearly accreditation list *Waqf center to manage the funds 	<ul style="list-style-type: none"> *Scholarship for students *Improvement in university assets
Industry Professionals	<ul style="list-style-type: none"> *Identify crucial fields for R&D *Expand skillset knowledge 	<ul style="list-style-type: none"> *More insight about the industry *Convenience *Unique knowledge 	<ul style="list-style-type: none"> *Financial cost *Upfront investment 	<ul style="list-style-type: none"> *Learn faster *Wiki *Electronic publishing 	<ul style="list-style-type: none"> *Freemium for short courses *Student employment 	<ul style="list-style-type: none"> *Mobile learning lab *Research centers

Other Education Providers	*Productivity *Recruiting students *Recruiting lecturers *Maintain good name	*Prestige *Access to syllabus	*Scalability *Fixed cost	*Learn faster *Overseas branch	*Joint venture / collaboration *Audit	*Tailored content *Engaging partnership *Updated with the latest content *Internalization
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REFERENCES

- [1] King, G. & Sen, M. (2013). A symposium: The troubled future of colleges and universities. *PS: Political Science and Politics*.
- [2] Caudit, Educause, JISC and Surf Foundation (2010). The future of higher education: Beyond the campus. Retrieved from <https://net.educause.edu/ir/library/pdf/PUB9008.pdf>
- [3] *Malaysia Education Blueprint* (2015). Retrieved from <http://www.moe.gov.my/userfiles/file/PPP/Preliminary-Blueprint-Eng.pdf>
- [4] University of Victoria (2013). A vision for the future: Building on excellence. Retrieved from <https://www.uvic.ca/strategicplan/assets/docs/strategicplan.pdf>
- [5] Ernst & Young (2012). University of the future. Retrieved from [http://www.ey.com/Publication/vwLUAssets/University_of_the_future/\\$FILE/University_of_the_future_2012.pdf](http://www.ey.com/Publication/vwLUAssets/University_of_the_future/$FILE/University_of_the_future_2012.pdf)
- [6] Hasan, M.R., Moses, G., Maulid, S. & Dahlan, A.R.A. (2011). Collaborative information system: Connecting the government, university and industry. *Innovation and Knowledge Management: A Global Competitive Advantage*. Proceedings of the 16th International Business Information Management Association Conference, (208-216).
- [7] IIUM 2013-2020 Strategic Plan (2013).
- [8] Barber, M., Donnelly, K. & Rizvi, S. (2013). An avalanche is coming: Higher education and the revolution ahead. *Institute for Public Policy Research*. Retrieved from [http://med.stanford.edu/smili/support/FINAL%20Avalanche%20Paper%20110313%20\(2\).pdf](http://med.stanford.edu/smili/support/FINAL%20Avalanche%20Paper%20110313%20(2).pdf).
- [9] Saleh, B., Ma-Key, N., Ahmad Dahlan, A.R. & Osman, R.A.H. (2013). MyMukim2Cloud collaborative system: A mosque collaborative network for serving the societal needs in Malaysia. The 5th International Conference on Information and Communication Technology for the Muslim World.
- [10] Harrison, A., & Hutton, L. (2014). Design for the changing educational landscape: Space, place and the future of learning.
- [11] What is freemium? (n.d.). Retrieved from <http://www.freemium.org>
- [12] Kim, W.C. & Mauborgne, R. (2005). *Blue ocean strategy: How to create uncontested market space and make the competition irrelevant*. Boston: Harvard Business Review Press