University of the Future: A conceptual Model of University of The Future

Prilly Noverina Sondria, Nadia Maneechayangkoon, Abdul Rahman bin Ahmad Dahlan

Abstract— **Stephens (2013) explains higher education is being challenged to meet inflated expectations and that creating the future requires collaboration across organizational and national boundaries. Moreover, Tight (2004) also explains that higher education research has grown substantially in importance over the last two decades. These statements emphasize higher education to change. In addition (Abeles, 2006,p.41 in Stephen, 2013) tells us that universities change continually. The purpose of this study is find out what is university of the future will be like. The methodology use the business model canvas (BMC) and value preposition design (VPD) canvas to analyze the results. The finding of the study shows that student would like to have quality knowledge with they apply it into real life.**

Index Terms— **University of the Future, BMC, VPD canvas**

I. INTRODUCTION

In this era globalization, change is a must. You need to change in order to survive in this era. Nowadays everything is fast moving, if you late in adapting in fast changing era you will lose with other competitor. This fast changing era also apply to university, they urgently need to change. Stephens (2013) explains higher education is being challenged to meet inflated expectations and that creating the future requires collaboration across organizational and national boundaries. Moreover, Tight (2004) also explains that higher education research has grown substantially in importance over the last two decades. These statements emphasize higher education to change. In addition (Abeles, 2006, p.41 in Stephen, 2013) tells us that universities change continually. All of these statements affirm the need of changes for universities.

In the next 10 to 15 years universities will face many challenges. The first challenge is money. As time goes by the funding that is given by government will be reduced, this is happened as a result of the economic slow. It has been reported that Malaysia's public universities are reeling after higher education appeared to bear the burden of cuts

announced in the 2016 budget. Malaysia's economy has come under pressure from lower oil and commodity prices and the need to reduce a yawning budget deficit has led to the cuts, according to Higher Education Minister Idris Jusoh. With limited fund from the government, universities must accommodate not only the growing campus but also the inflation cost, the inflation cost itself is around 2 until 4 percent per year. The only way to solve the problem is increase the revenue by taking more students both locals and international students. Another way is university need to consider cutting the administrative cost such as salaries instead of raising the tuition cost of the students, but of course universities will prefer to increase tuition fee instead of cutting their administration cost since it is easier. But if universities want to increase the tuition fee, they also need to improve the quality. Increasing the price must be balance with the quality.

The evolution process transformation is ongoing, digital transformation has become stronger. The metaphorical walls and gates that have defined higher education are falling down. The literal walls and gates, the physical campus, will need to be rethought to avoid a similar fate. They may be beautiful, historic and evocative, but these attributes will not be sufficient. (Hagganas, 2015). Until recently the need for a physical campus was based on several assumptions: physical class time was required, meaningful exchanges occurred face to face, the value of an institution was tied to a specific geography, books were on paper, an undergraduate degree required eight semesters, research required specialized locations, interactions among students and faculty were synchronous. These assumptions are now either obsolete or optional. As the result physical changes are beginning to be made. Classrooms and libraries are being retooled. Student housing and campuses are evolving in response to social media and the changing use patterns of the campus community. From classrooms to libraries to residence halls, digital transformation is changing the physical presence and requirements for institutions that choose to remain competitive (Hagganas, 2015).

II. PROBLEM STATEMENT

    The challenges faced by universities around the world have become more and more serious. According to Ernst & Young (2012), digital technologies will transform the way education is delivered, supported and accessed, and he way value is created in higher education and related industries. All of the changes happened mostly driven by technology and economic that means the technology is one factor to drive the changes in the world because when there is an advance in technology, we will learn and practice more and move ahead in many ways. One of the problem from the changes that driven by technology and economic is the cost of universities is

becoming more and more expensive. (Ernst & Young, 2012) University must be ready with the fact that from time to time price will increase. Universities must be ready to face this challenge and find the concrete solution to survive in this industry.

Another challenge must be faced by university is rigid education system, (Claudio Zaki Dib Institute of Physics University of São Paulo, Brazil) Rigid education system here means the learning system is not following what industry need. Education system which recently applied in universities is not fulfilling what industry need, it only consist of one way learning and without direct practice.

III. METHODOLOGY

In order to get the result of future business model canvas (BMC), environmental scanning map (EM) and value preposition design (VPD), we conducted the survey and interview to the selected respondents consists of local students, international students, and part time students. We conducted interview to 10 international students and 10 local students, can divide as 5 local students form undergraduate student and 5 international students from undergraduate students, besides for post graduate students we spilt to 5 local students and 5 international students. So, the total of respondents is 20 students. From the interview, we get the result for our future university.

Business Model Canvas: The Business Model Canvas is a strategic management and lean startup template for developing new or documenting existing business models. It is a visual chart with elements describing a firm's or product's value proposition, infrastructure, customers, and finances. It assists firms in aligning their activities by illustrating potential trade-offs. The Business Model Canvas was initially proposed by Alexander Osterwalder in 2008.

Environmental scanning: In the environmental scanning, we are using futures approaches to integrate strategic thinking into strategy development and planning. Environmental scanning is the art of systematically exploring and interpreting the external environment to better understand the nature of trends and deep drivers of change and its likely future impact on our university. As a result, our environmental scanning is the foundation of high quality strategic thinking and transform to the future ready strategy for our future university

Value preposition design: According to Peter J Thomson, a value preposition is where your company's product offer intersects with your customer's desires. It's the magic fit between **what** you make and **why** people buy it.

IV. LITERATURE REVIEW

University's purpose is to prepare students for success in their life, workplace, and communities. These purposes will be remained for centuries because the world around universities experience constant changes. Therefore we will discuss the drivers of the change in universities.

Ernst and Young (2012) have summarized the drivers of change of this brave new world into five new key trends:

1. Democratisation of knowledge and access — The massive increase in the availability of 'knowledge' online and the mass expansion of access to university education in developed and developing markets means a fundamental change in the role of universities as originators and keepers of knowledge.
2. Contestability of markets and funding — Competition for students, in Australia and abroad, is reaching new levels of intensity, at the same time as governments globally face tight budgetary environments. Universities will need to compete for students and government funds as never before.
3. Digital technologies — Digital technologies have transformed media, retail, entertainment and many other industries — higher education is next. Campuses will remain, but digital technologies will transform the way education is delivered and accessed, and the way 'value' is created by higher education providers, public and private alike.
4. Global mobility — Global mobility will grow for students, academics, and university brands. This will not only intensify competition, but also create opportunities for much deeper global partnerships and broader access to student and academic talent.
5. Integration with industry — Universities will need to build significantly deeper relationships with industry in the decade ahead — to differentiate teaching and learning programs, support the funding and application of research, and reinforce the role of universities as drivers of innovation and growth.

Above all of the drivers of the change that we have mentioned, there is another element that is also important in student education which is strategic plan of the university. The University of Texas at Dallas in 2007 has mentioned about the future strategic plan of the university, the four areas targeted for special attention are:

1. The Education of Leaders
   Focus on curricular elements for developing leadership skills and create a Center for Excellence in Learning and Teaching.
2. Living-Learning Communities
   Integrate learning experiences into the residential life via living-learning communities focused on topics such as pre-law and pre-medicine.
3. Investment in People
   Recognize and reward excellence at all levels. Investments in people will require new resources, such as endowment gifts for professorships and scholarships.
4. Enhancement of Diversity and Inclusion
   Hire a Vice President for Diversity and Community Engagement, strengthen programs that will attract a diverse array of talented people at all levels, and create a culture that celebrates diversity.

Universities provide opportunities for students of all backgrounds to increase standards of living for themselves and future generations. But, to succeed, universities will need to forge new business models that are dynamic, modern and fit for the decades ahead. We see university business models becoming more diverse, and anticipate three broad lines of evolution (Universities Committed with Innovation and Internationalisation, Prof. Fernando Galván).

1. 'Streamlined Status Quo' — Some established universities will continue to operate as broad-based teaching and research institutions, but will progressively transform the way they deliver their services and administer their organisations — with

major implications for the way they engage with students, government, industry stakeholders, TAFEs, secondary schools, and the community.

2. 'Niche Dominators' — Some established universities and new entrants will fundamentally reshape and refine the range of services and markets they operate in, targeting particular 'customer' segments with tailored education, research and related services — with a concurrent shift in the business model, organisation and operations

3. 'Transformers' — Private providers and new entrants will carve out new positions in the 'traditional' sector and also create new market spaces that merge parts of the higher education sector with other sectors, such as media, technology, innovation, venture capital and the like. This will create new markets, new segments and new sources of economic value. Incumbent universities that partner with the right new entrants will create new lines of business that deliver much needed incremental revenue to invest in the core business — internationally competitive teaching and research.

V. FRAMEWORK MODEL

In this paper, we use three initial frameworks to explain university of the future. First is nine building blocks of BMC and second is the environmental scanning (EM) and third is value proposition design (VPD) canvas.
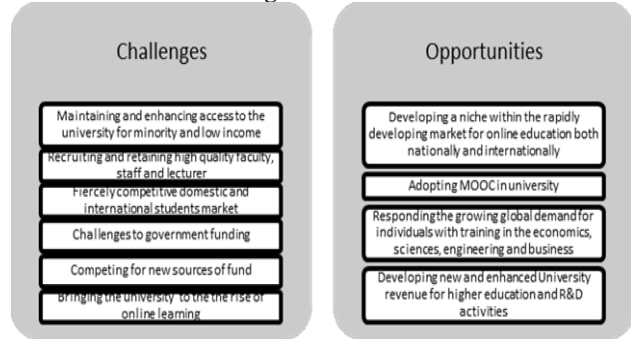
The initial nine building blocks of BMC for University of the Future:
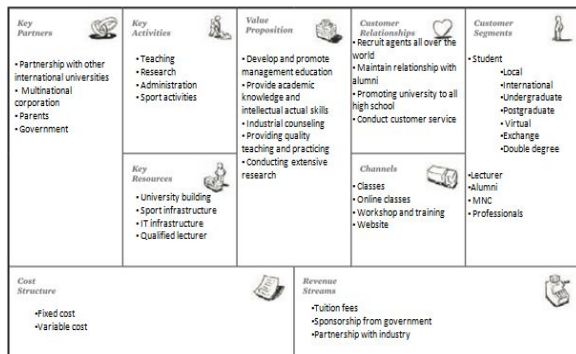
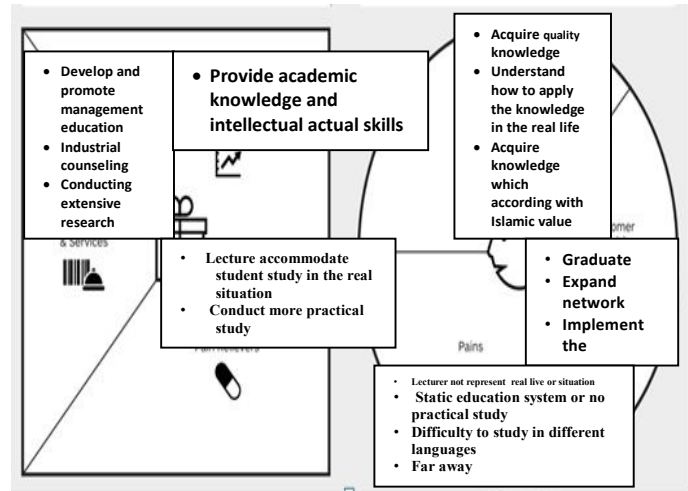The final nine building blocks of BMC for University of the Future:
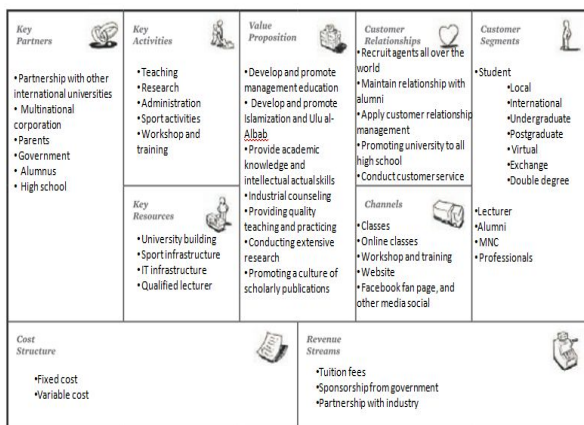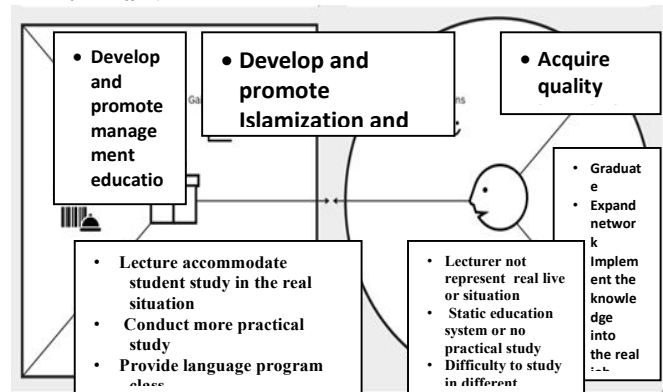

Environmental Scanning

Value Proposition Design (VPD) Canvas for University of the Future:

1. Initial VPD

2. Final VPD

VI. ANALYSIS AND FINDING

1. Nine building blocks of BMC

Customer Segments

Based on initial BMC above, there are five customer segments identified. First, students consist of local, international, undergraduate, postgraduate, virtual, exchange and double degree. We categorized the students into seven categories because we would like the University of the Future become diversify in various aspects, especially in terms of nationality. We sincerely wish University of the Future is free from racism. Second is lecturer. Third are alumni. Fourth is

MNC and lastly are professionals. In this customer segments, there is no change in before and after interview.

From time to time, prices keep increasing and government also cut some amount of fund for University. This condition forces university to seek for alternative funding to support the university. There are two alternatives way to solve financial problem in university first is to cut some operating cost and second is to recruit more student in order to get more fund from tuition fees.

Value Proposition

In the initial model of BMC, in value proposition we have identified there are five points. There are developing and promoting management education, provide academic knowledge and intellectual actual skills, industrial counseling, providing quality teaching and practicing, conducting extensive research. We proposed those five points, because we thought those five points are the most important for University of the future. But after we did interview, they proposed two adjustments. There are developing and promoting Islamization and the concept of Ulu al-Albab, and promoting culture of scholarly publications.

The concept of Ulu al-Albab is still odd for us. Ulu al-Albab is the minds which embody the Qur'anic paradigm. Another definition Ulu al-Albab is people who use their reason to study and contemplate on the multitude of Allah's creation in nature who understand the modern realities and changes and know how the changes impose on moral, ethic, spiritual values and norms (Hassan, 2010). The concept of Ulu al-Albab is a perfect education system. If University of the Future adopt the concept of Ulu al-Albab surely, graduate students will be the best student who has norms and values.

Key Partners

Key partners refer to the networks that make the business model effective. For the purpose of make the University of the Future business model become more effective, we have identified four points. There are partnership with other international universities around the world, partnership with Multinational Corporation and parents. We propose partnership with other international universities for the purpose of exchanging knowledge and also getting more international students. The illustration of exchanging knowledge between international universities is doing a collaboration research with other top universities. If we accomplished the collaboration research it will increase the rating of the university and also increase the quality of our university research and as the result it will attract more international students to study in this university. In another point, we proposed partnership with Multinational Corporation. The example of partnership with Multinational Corporation is conducting the training for the employee of the corporation and we can also do research by request. Research by request is done if the corporate is requesting the research in order to improve the productivity in the company or to analyze the employee's performance. These activities will increase the income of the university and also increasing the brand of the university.

The result after did interview is we added two more points. There are alumnus and high schools. For the sake of getting more students, university must play active role. We should be careful to identify the opportunity key partners. In this context alumnus and high schools may be the hidden opportunity for the University of the Future. We should utilize the advantage of having alumnus. The satisfied alumnus can be the secret weapon for university of the future, because they will spread good information to their friends, parents, children, etc. in another point, we can also use high schools as our key partners. We can conduct seminars in high schools and market our university to them.

Customer Relationship

In the initial model BMC for customer relationship, we have identified four points which in maintaining the customer relationship. There are recruits agents all over the world, maintain relationship with alumni, promoting university to high school and conduct customer service. Maintaining the relationship in order to get good impression on customer is one of the most important things in marketing university. Leaving a good impression can lead to good word of mouth. Word of mouth is an unpaid form of promotion in which satisfied customers tell other people how much they like a business, product or service. Word of mouth is important in every business, because happy customer can bring thousand of new customers to come again. Therefore, maintaining good relationship can be categorized as important factor in University.

Moreover, the result after did interview. We have found one more important point in customer relationship, which is applying customer relationship management system. A CRM system can provide "powerful competitive advantage for organizations to enable them to survive in today's market. It helps management track customers' interactions with the organization and allows the organization's employees to pull up all past information about the customers. Competitive advantages that organization could gain from CRM systems include the following: increase in customer loyalty, superior service, superior information gathering and knowledge sharing and organizational learning" (Nguyen, Sheri & Newby, 2007, p.113 in Tinnsten, 2013).

Channels

Channels define how an organization communicates with and provides value to the chosen customer segment or we can say channels are how company connect with its target customer segment. In the initial BMC, we have identified four points of channels. There are classes, online classes, workshop and training and website. In our point of view, those points are the most important to connect with the customers. Classes are for local and international students who are willing to come regularly to attend the class. Online classes are for international student and local student who are busy or not willing to attend the class regularly. Workshop and training are for professionals. And lastly website is to facilitate the future applicant the information about university. The result after did the interview, we add one more point which is social medias. Social media is one of the best ways in marketing the business, if we can apply it to university of the future undoubtedly our university will be noted by many people. These are some benefits of social media for university of the future: increase brand recognition, improve brand loyalty, and decrease marketing cost, richer customer experiences and improved customer insight.

Key Activities

Key activities are the most important tasks university must carry out in order to fulfill its business purpose. In order to achieve their goals in business, university must perform the main activity which the university want to focus on and

improve. In key activities initial BMC, we have identified four points which university of the future want to focus on and improve. There are teaching, research, and administration and sport activities.

After did the interview, we got one more point which is workshop and training for professionals. Workshop and training can increase our university of the future value for professionals.

Key Resources

Key resources are the main inputs that your company uses to create its value proposition, service its customer segment and deliver the product to the customer. Key resources are basically the main assets that university of the future need to create the goals. We have identified four points in key resources. There are university building, sport infrastructure, IT infrastructure and qualified lecturer. In key resources, there is no additional point.

Cost Structure

In this building block represents all the cost of university of the future will incur. Cost will always remain the major concern in all types of business, including university of the future. We have indentified two points in cost structure. There are fix cost and variable cost. In cost structure, there is no additional point as well.

Revenue Streams

Revenue streams elaborate the earning a business gets by subtracting the costs from the revenue generated from each customer segments, where the customers are mostly considered the heart of the business. Revenue streams need to be clear defined because it is important to evaluate, whether it is profitable or not. In this revenue streams, we have identified three points. There are tuition fees, sponsorship from government and partnership with industry.

2. Environmental Scanning

In the environmental scanning, we are looking for challenges and opportunities. There are six challenges which are maintaining and enhancing access to the university for minority and low income that is means try to optimize the cost, recruiting and retaining high quality faculty, staff and lecturer it means we will recruit the high quality of teacher to make a better teaching quality to the students, fiercely competitive domestic and international students market, challenges to government funding, competing for new sources of fund means looking for other funds and resources to enhance, and bringing the university to the rise of online learning. Next for the opportunities is can explain as developing a niche within the rapidly developing market for online education both nationally and internationally, adopting MOOC in university it means adopt the massive open online class since in University of Indonesia there are not much familiar to use high technology so it will be good for them to practice and use the advance technology such as online classes, responding the growing global demand for individuals with training in the economics, sciences, engineering and business, developing new and enhanced University revenue for higher education and R&D activities means looking for other funds and resources to enhance and develop the university .

3. Value Proposition Design (VPD) Canvas
Customer Jobs

In customer jobs box, we gather all the customer needs, the problem that they are trying to solve and the tasks they are trying to perform or complete. We have indentified three main customer jobs of university of the future, there are: graduate, expand network, and implement the knowledge into the real job.

Gains

In the box customer gains, we gather all the customer benefits and desires. We have identified three points of customer gain, there are acquire quality knowledge, understand how to apply the knowledge in the real life and acquire knowledge which according to Islamic values and norms.

Pains

In customer pain, we have gathered all the negative emotions and undesired costs, situations and risk which the customer could experience before. We have identified four points, there are lecturer not represent real life or situation, static education system or no practical study, difficulty to study in different language and faraway.

Products and Services

In products and services, we have listed all the products and services which your value proposition is build around. We have identified four points in product and services, there are develop and promote management education, industrial counseling, conducting extensive research and promoting a culture of scholarly publications.

Gain Creator

In the gain creator's box, we have described what customers' of university of the future will gain. There are developing and promoting Islamization and Ulu al-Albab, provide academic knowledge and intellectual actual skills and providing quality teaching.

Pain Reliever

In the box pain relievers, we described how university of the future address the challenges needs and the pains of the customers, how university of the future eliminate the negative emotions and avoidable situations. We have identified for points in pain relievers box, there are lecture accommodate student to study in the real situation, conduct more practical study, provide language program class and conduct virtual classes.

CONCLUSION

In this era globalization, change is a must. You need to change in order to survive in this era. Tight (2004) also explains that higher education research has grown substantially in importance over the last two decades. Keep improving the quality of university is a compulsory job for university. In order to survive, university must change. In this paper we have figured out what the student really need in University of the Future. And the most needed are quality education which they can apply in real life, more over students in the future also need more flexible time for classes.

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Author Profile

Prilly Noveirna Sondria received from University Utara Malaysia in 2013 and her B.E. (Honours) from Universitas Jendral Soedirman. She is currently doing M.Mgt at CRESENT, International Islamic University Malaysia

Nadia Maneechayangkoon received from BEc University Malaya in 2013 and currently doing M.Mgt at CRESENT, International Islamic University Malaysia

Abdul Rahman is a Senior Academic Fellow in the Department of Information Systems, Faculty of Information and Communication Technology, International Islamic University Malaysia (IIUM). Currently, he is the Deputy Director, Office of Corporate Strategy, IIUM