Online Brands: A Comparative Study of World Top Ranked Universities with Science and Technology Programs

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Abstract—University websites are considered as one of the brand primary touch points for multiple stakeholders, but most of them did not have great designs to create favorable impressions. Some of the elements that web designers should carefully consider are the appearance, the content, the functionality, usability and search engine optimization. However, priority should be placed on website simplicity and negative space. In terms of content, previous research suggests that universities should include reputation, learning environment, graduate career prospects, image destination, cultural integration, and virtual tour on their websites. The study examines how top 200 world ranking science and technology-based universities present their brands online and whether the websites capture the content dimensions. Content analysis of the websites revealed that the top ranking universities captured these dimensions at varying degree. Besides, the UK-based university had better priority on website simplicity and negative space compared to the Malaysian-based university.

Keywords—Science and technology programs, top-ranked universities, online brands; university websites.

I. Introduction

SINCE the late of 20th century, university ranking published by education consultants has received a lot of attention by the academics and the stakeholders. QS World University Rankings 2012 revealed that there is "a global trend which is seeing technology-focused universities perform increasingly well in the rankings". [1] For example, in the 2012 overall assessment, Massachusetts Institute of Technology (MIT) gained the first place whilst the ETH Zurich (Swiss Federal Institute of Technology) took the 13th place in the rankings. However, a researcher claimed that the published rankings were caused by a halo effect of information about students, the facilities, the classes and curriculum, the faculty and placement [2]. In other words, rankings represent biased evaluators' perceptions which are

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developed from processing standardized and systemized information about universities [3]. Global university rankings are also subject to peer review, language and regional biases [4]. They tend to guide students with high ability or high income families to make a choice, but are not the only basis for decision making for most students [5]. Obsession in improving university rankings may alienate financially disadvantaged, low-income and first-generation college students, and may not supply the right pool of specialists for highly regarded professions [6]. Most students' decisions may subject to brand experience which refers to what information has been communicated through interactions with influencers such as parents, peers, high school teachers, university staff and alumni, and media.

Brand experience often communicates what the brands stand for or what the brands promise to stakeholders (i.e. brand identity) and intends to create a desired brand image among stakeholders. A brand refers to a "name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers" [7]. For a university, a favorable brand would enable it to recruit and retain the best and brightest students, faculty, and staff, and build and maintain widespread public, legislative; alumni and donors' support [8]. The brand images can be promoted through online and/or offline brand experience.

Some studies have investigated on how universities should portray brands to their primary stakeholders (i.e. existing and prospective students) and their influencers. A number of surveys revealed that international universities in Asian markets should use a standardized media mix, namely, web pages, newspapers, TV ads, news stories, trade shows, and open days [9]. These media can provide the optimum brand experience to prospective students and their parents. Should the universities present their brands online, the web pages should present six dimensions of brand identities—learning environment, reputation, graduate career prospects, destination image, and cultural integration—and include virtual tours [9]. Similarly, a case study suggests that higher education should communicate their brands through web administration, program marketing, and corporate brand positioning [10]. Other studies investigated the relationship between university brands and stakeholders' brand experiences. For example, the interview and survey research at University of Virginia investigated whether the University brand identity elements presented on the web page, brochures and booklets were congruent with the brand experience of its current undergraduates and prospective students [11]. The

findings suggest that most of the elements, which were organized into the brand identity model [12], resonated with both groups of the stakeholders' overall brand experience. A study on the university visual identity (UVI) of a US university communicated through various sources suggests that UVI has a close link with the University's reputation [13]. Specifically, a distinct UVI has favorable image or reputation for a particular university, and vice versa. This notion is consistent with one of criteria, namely, uniqueness, for describing client-focused organizational brand identity [14]. In the context of higher learning institutions (HLI), this uniqueness refers to how stakeholders can differentiate one university from other universities.

Studies using established dimensions or scales such as personality [15], brand architecture [16], and corporate character scales [17] to differentiate or brand HLI tend to focus on branding business schools. A study on the brand of a South African business school suggests that dimensions describing a university program should be similar to the dimensions of the brand personality [18]. A study modeled on the brand architecture revealed that business school brand identities tend to represent either the university or the benefactor [19]. A review on the visual identity of a US business school suggests that a business school should adopt the University logo as part of their visual identity [20]. Another study suggests that both core and supporting value-creating activities could simultaneously create student brand experiences which contribute to a strong university brand [21].

Though some studies provide insights on how universities with business schools (e.g. 17, 18, and 19] and any university (e.g. 20, 21, 22, 23, 24, 25] should communicate their brand identities, little is known to how universities with science and technology programs communicate their brand identities online. In fact, though university websites are considered as one of the primary touch points for multiple stakeholders, most of them did not have great designs [26]. This suggests that low value may have been placed in developing great websites for universities. Let alone no effort has been made to capitalize the electronic media in creating favorable impression among stakeholders. Overly focus on securing a place in world rankings appears to misplace the significance of incorporating the six dimensions found relevant among prospective students in choosing the best universities for them online [9]. In order to address this gap, this study attempts to determine whether universities with science and technology programs capture the identified dimensions online and to what extent the online brand of two universities listed among the top 200 QS World University Rankings 2011capture the identified dimensions. In short, the study poses two research questions as follows:

Research questions

i. What brand identities are projected online by top 200 world ranked university(es) with science and technology programs?

ii. To what extent do online brand identities of top 200 world ranked university (es) with science and technology programs capture the six dimensions.

II. METHODOLOGY

This study used information available on two international universities with science and technology programs' web pages to identify their brand identity. One of the universities represents a university in the United Kingdom and Ireland which was the second preferred country for overseas education among Malaysians in 2010. Besides, Malaysia is the fourth non-EU country which has the highest number of students studying in this region. For comparison, a public university in Malaysia was selected. These two universities represent two of the top 200 ranked in QS World University Rankings 2011. These universities offer science and technology programs. The websites of each university were content analyzed. The print, audio and visual information viewed included the first frame uploaded on the official website of each university, and links listed in the first frame. The information was analyzed based on six dimensions: reputation, learning environment, graduate career prospects, virtual tours, cultural integration, and destination image [6].

III. RESULTS AND DISCUSSION

TABLE I
SUMMARY OF THE 6 DIMENSIONS FOR EACH UNIVERSITY

Dimensions [6]	UK (QUB) [24]	My (UTM) [25]
Learning environment	Visible support system	Obscure or not easily visible
Reputation	Distinctive positioning, accreditations, and rankings: We are exceptional; A member of the Russell Group of 24 leading UK research-intensive universities, providing world-class education underpinned by world-class research. Top 200 world ranking; Top 20 research intensive in UK; Top 50 pharmacy in UK; Top 20 architecture; Top 10 business and finance; Top 20 engineering 4 consecutive HE awards 2008 to 2011	Generic description and rankings: Innovative, entrepreneurial and global. UTM is a leading innovation-driven entrepreneurial research university in engineering science and technology Top 200 world ranking
Graduate career prospects	Visible support system: a link was listed on the first frame i.e. Student Guidance Centre	Available through search engine, but no link was readily accessible
Destination image	Belfast: Student City	Places of interests nearby
Cultural integration	Embedded in videos and still photos	Embedded in still photos
Virtual tours	Embedded in videos and still photos; No specific virtual tours, yet offer open days; University Map pdf format; you tube	360 still photos and corporate video; Campus Earth Map

Content analysis of the print, audio and visual information suggests that each university presented various types of information at varying degree to communicate its brand online as summarized in Table I.

A. The QUB Websites

As illustrated in Fig. 1, the UK-based university website greeted visitors with a summary of Queen's University Belfast University (QUB). On the website, the QUB highlighted its value proposition through the positioning statement (i.e. "We are exceptional"). The university publicized its reputation through the accreditation received from Russell Group and international and national rankings communicated through its video entitled "Queen's and Belfast" available at the link for "International Students". Its learning environment and graduate career prospects were shared through its "Study at Queen's" link. The learning environment was featured through current students' video testimonials, whilst the graduate prospects were provided through Student Guidance Centre (i.e. http://www.qub.ac.uk/directorates/sgc/) at Careers, Employability and Skills link (i.e. http://www.qub.ac.uk/directorates/sgc/careers/).

Fig. 1 The First Frame of Queen's University Belfast University
(Source: http://www.qub.ac.uk/)

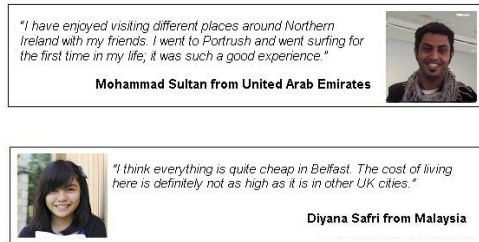Fig. 2 A Photo of International Postgraduate Students
(Source: http://www.qub.ac.uk/home/StudyatQueens/PostgraduateStudents/)

"I have enjoyed visiting different places around Northern Ireland with my friends. I went to Portrush and went surfing for the first time in my life; it was such a good experience."

Mohammad Sultan from United Arab Emirates

"I think everything is quite cheap in Belfast. The cost of living here is definitely not as high as it is in other UK cities."

Diyana Safri from Malaysia

Fig. 3 Published Testimonials of International Students
(Sources:
http://www.qub.ac.uk/home/StudyatQueens/InternationalStudents/BelfastStudentCity/Outofthecity/ and
http://www.qub.ac.uk/home/StudyatQueens/InternationalStudents/BelfastStudentCity/Costofliving/)

The last two dimensions, which are cultural integration and virtual tours, seem to be embedded in the videos and still photos. For example, students and faculties of various ethnic backgrounds and blocks of QUB buildings were featured in most videos and still photos (see Figs. 2 to 3). The website also had a link for undergraduate open days, which was linked to YouTube videos featuring undergraduates and postgraduates talking about their experience at QUB with the centers, classrooms and labs as the backdrops.

B. The UTM Websites

Similar to QUB, the UTM also conveyed its value proposition through three keywords namely, innovative, entrepreneurial and global, and its reputation through being among the top 200 in QS world ranking on its website. The Malaysian-based university link provided visitors with a wide range of information about Universiti Teknologi Malaysia (UTM) as illustrated in Fig. 4, but did not readily share the learning environment at the University and graduate career prospects to visitors. The learning ambience and the career guidance were only available through the search engine or other links. For example, the "About Us" link of UTM (i.e. http://www.utm.my/about/) had additional links such as "Visitor Information" and the "University Performance Indicator" (i.e. the balanced scorecard). The "Visitor Information" link provided numerous videos and photos of the university activities, accommodations and places of interests, whilst the balanced scorecard link summarized the university's annual achievements. The video at the "Visitor Information" led visitors to *UTMotion* (i.e. http://utmotion.utm.my/) through which snapshots of the learning and working environment at the University were shared by the students and the staff. The link also summarized the learning and working environment through its tagline "Inpsiring Creative and Innovative Minds". The tagline also suggests that *UTMotion* represents avenues for graduate career prospects. .Meanwhile, the achievements measured through the balanced scorecard seemed meant to add value to the university's reputation among its multiple stakeholders.

Fig. 4 The First Frame of Universiti Teknologi Malaysia's Website
(Source: http://www.utm.my/)

Fig. 5 Cultural Integration
(Source: http://www.utm.my/prospectus/)

Fig. 6 Virtual Tour
(Source: http://birg1.fbb.utm.my/360/UTM/Home/Main.html)

Two other dimensions, which are cultural integration and virtual tours, seem to be embedded in still photos. Similar to QUB, students and faculties of various ethnic backgrounds and blocks of UTM buildings were featured in still photos (see Figs. 5 and 6). As illustrated in Fig. 5, the link also included print testimonial from current students on learning environment whilst Fig. 6 presents the virtual tour and the visual image of the campus. The virtual tour consisted of 360 degree still photos of various aspects ranging from the administrative buildings to university's events.

Meanwhile, another dimension, which is image destination, was subtly promoted through the Visitor Information link as illustrated in Fig. 7 and the corporate video. The site appears to suggest that UTM offer some balance of preserving natures and developing the local economic activities. The corporate video promoted the university as very dynamic research oriented fraternity through phrases such as steadfast, strong, scholarly, intellectually challenging experience, premier institution of higher learning, loyalty, excellence and inspiring creative and innovative minds.
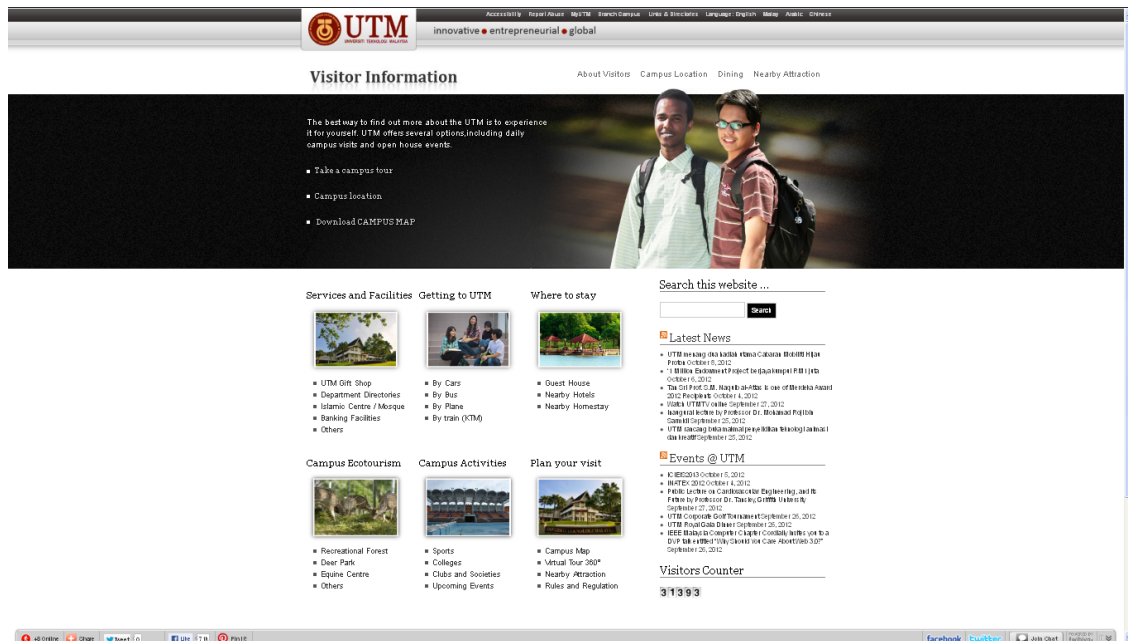

Fig. 7 Image Destination
(Source: http://www.utm.my/visitor/)

IV. CONCLUSION

Comparatively, the websites of both universities reiterate the positioning statements of the universities in the "About Us" link which typically provided historical, administration, and factual information about universities, but highlighted all six dimensions (i.e. the reputation, the learning environment, graduate prospects, image destination, cultural integration and virtual tour) differently. QUB website seems to be more coherent in presenting the university brand compared to UTM website. In other words, the web designer of QUB website appropriately prioritized the simplicity and the negative space, whilst the UTM website needs some refinement to project the positioning statement clearly to visitors. The QUB website also looked polished with its great combination of color scheme, typography, layout, header and negative space, and simple navigation. In short, the QUB website appears to exemplify a university website with great design [see 26], whilst the UTM website definitely need to more solid and well-written [29 and 30].

In general, the findings are consistent with previous claim, that is, some universities have incorporate great website design, but other universities still do not. The results also suggest that some universities have started to use websites as their brand touch points, whilst others have yet to join the league. However, the significance of university websites to influence stakeholders in assessing university brands is yet to be established. Future studies should investigate to what extent university brands projected through websites influence stakeholders' decisions and whether universities websites offer congruent brand experience to their multiple stakeholders. Findings of such studies would help to provide evidence for the importance of having great websites to project the uniqueness of a university to its stakeholders. Specifically, a highly distinctive university brand image, would help potential students to choose the right place to study or potential employers or their agents to source the right candidates to fill job vacancies.

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