

Does Internationalization Have Its Own Face in Each Country? Measuring the Internationalization of Web Presence on Higher Education Admission Web Pages between USA and Taiwan

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Abstract. Developing sophisticated networks and facilitating its widespread use by the academic community is a powerful strategy to achieve the internationalization of higher education. But the content, structure, and responsive design of collegiate websites can perform the most probabilities of Information and Communication Technology for communication and transaction still unexplored. We review the growing discussions on the internationalization of higher education and the website quality evaluate criteria to construct a measure template to help us analysis the web presence of higher education. This study measures top ranking of worldwide institutions with USA and Taiwan collegiate admissions web pages, to compare the differences and similarities on admission web pages presence. Fifteen top USA universities which intersected between three Worldwide Rankings and 15 top universities which got Top R & D grant from the Ministry of Education in Taiwan were selected. Content analysis method employed to measure the presence of internationalization on admissions web pages. Results present all the top universities of USA and Taiwan mention internationalization in their mission statements, and have appropriate organizational structures in their institutions. And there are differences as it implements practically on web presence between 2 groups.

Keywords: Internationalization, Higher Education, Admission Web Pages.

1 Introduction

Internationalization of higher education has been a trend in quite many developing countries. Lo(2009) argues that this trend together with a few other phenomena, such as increasing international competition, pursuing higher ranking in global university league tables, and the quest for creating world-class universities, has generated significant impacts on the higher education systems in Asia.

Academic and professional requirements for graduates increasingly reflect the demands of the globalization of societies, economy and labor markets and thus higher education must provide an adequate preparation for that.

Owing to the above phenomenon, school performance, and student achievement become important indices of parents and students choosing their future school.

In global educational marketing, Qiang (2003) pointed out the recruitment of foreign students has become a significant factor for institutional income and of national economic interest.

The use of new information and communication technologies in the delivery of education and the involvement of private actors in this mean that national borders and the role of national governments in education become blurred.

University must identify what is important to students, inform students that they intend to deliver, what is important to them, and deliver what they promise.

Thune & Welle-Strand (2005) assumed that information and communication technologies (ICTs) are pivotal for globalization of higher education and in internationalization processes. Moreover, it is claimed that globalization and new technologies have opened up a global market for education, in which new providers of higher education operate, and that this competition poses significant threats to traditional campus-based universities and colleges.

But the literature on technology and internationalization is fragmented and chiefly occupied with conceptual issues. Empirical research studies on the use of information technology for and in international activities are rare [Mason 1998, Thune & Welle-Strand 2005].

2 Literature Review

2.1 Higher Education and Globalization

In the last two decades, the international dimension has become one of the key paradigms in higher education development worldwide [Lanzendorf & Teichler, 2003, p.220]. The same period is also characterized by a rapid growth of the global market for higher education, which, in turn, puts strong pressure on universities to implement similar internationalization strategies.

Based on Qiang (2003) review of the literature, a number of elements have been identified which play an important role in the internationalization process [Harari, 1989; Audas, 1991; Aigner et al, 1992; Norfleet & Wilcox, 1992; Scott, 1992; Francis, 1993; Knight, 1994].

Qiang concludes the elements for internationalization in different cases. In most cases, the elements are different types of academic activities, e.g. student/faculty exchanges, curriculum, recruiting/hosting international students. In other cases, organizational factors such as policy statements, annual planning and review systems are identified as the elements.

Knight (1999) proposed two generic types of strategies, program strategies and organizational strategies, both are needed to internationalize an education institution. While they are very different in orientation they need to complement and reinforce each other. [11]

Program strategies refer to those initiatives which are academic in nature or are related to the teaching, learning, training, research, advising or supporting activities of the institution both at home and abroad. And it can be divided into four major

categories: academic programs; research and scholarly activities; extracurricular activities; external relations and services.

Organizational strategies include those initiatives which help to ensure that the international dimension is institutionalized through appropriate human resources, policies and administrative systems. By stressing the importance of integrating the international dimension into the institution's mission statement, planning and review systems, policies and procedures, hiring and promotion systems one is working toward ensuring that the international dimension is institutionalized.

2.2 The Applying Tasks and Web Interaction

The choice of which university to attend has been characterized as a highly complex decision that is subject to multiple influences [Briggs and Wilson 2007]. Eduventures Inc. surveyed in 2007, most students surveyed (84 percent) said they used colleges' web sites most heavily in their research, followed by personal recommendations (75 percent), campus visits (64 percent), and college viewbooks (64 percent). Most students (71 percent) said a campus visit was their most trusted source of information, followed by college Web sites and personal recommendations.

In general, the higher the involvement with the purchase, the higher is the product's perceived risk [Dowling 1986; Dowling and Staelin 1994; Mitchell 1999]. Risk in the buying decision is related to the notion that consumers make decisions under a certain degree of uncertainty regarding a specific product or service; thus, risk refers to the chance of negative outcomes and the possibility of loss [Taylor 1974; Murray 1991; Conchar et al. 2004]. To reduce risk perceptions, consumers employ strategies such as searching for information [Cox 1967; Urbany, Dickinson, and Wilkie 1989], the higher the degree of perceived risk, the greater is the tendency to search for information [Murray 1991; Choi and Lee 2003].

Developing sophisticated networks and facilitating its widespread use by the academic community is a powerful strategy to achieve the internationalization of higher education. But the content, structure, and responsive designate of collegiate websites can perform the most probabilities of information technology for communication and transaction still unexplored.

Many believe that when it comes to marketing, the Internet is the "great equalizer," permitting service-based organizations, no matter how successful or well known, the ability to promote their products and services in a more-or-less equal manner. [9]

Since web-based marketing is relatively inexpensive and widely available, all organizations enjoy similar abilities to use the Internet to their marketing advantage. In reality, however, interactive technology has transit into web 2.0, when it comes to the marketing of Academic institutions. In this study, we understand how top-ranked schools provide an "interactive edge" when it comes to promoting their services to students.

2.3 The World Ranking Matters of U.S. and Taiwan

Unlike for-profit businesses, universities and colleges are judged by students and others on the merit of their academic services. The major sources of the fund of

higher education come from the government and the students' tuition. By reducing government funds gradually, the government urges universities and colleges to work hard to increase economic benefits. Whereas the internationalization of U.S. universities is driven by the market without doubt, the better the university is, the more tuition it will charge.

Over the past 10 years, Taiwan's higher education has expanded impressively with the increase in the number of institutions as well as that in the number of students. The quantitative increases shows that Taiwan's higher education has transformed from elite type into universal education, and the system is moving towards openness and autonomy, too.

In Taiwan, the national policies push universities to catch up with regard to internationalization, universities and colleges spare no efforts to improve their quality of education and highlight its unique features. In this way, they attract both domestic and international students.

And in response to the quest for world-class status across the globe, the Ministry of Education (MOE) of the Taiwan government has made a series of attempts to pursue quality excellence in higher education since the late 1990s. In 1998, for example, the MOE launched a 5 year program for Promoting Academic Excellence of Universities, aiming primarily to enhance research capacity of Taiwan's universities. (Chen and Lo 2007).

But, as Lo (2007) portrays that most today's world-class universities are in the major English-speaking countries, the impression of internationalization of higher education is to transplant the Anglo-American standards and practices in Asia. With the tendency, researchers are curious about, whether or not the institutions are moving from a monolithic model to take account of pluralistic needs?

3 This Experimental Study

The purpose of this article is to realize the current situation of the web presence on university web-pages for students recruiting between USA and Taiwan.

Therefore, we propose the following hypothesis: The USA top-ranked universities have higher interaction presence of internationalization strategies on admission web pages than Taiwan tops.

3.1 Instrument

Base on literature reviewed, the internationalization strategies items employed from Knight(1999) and constructed by 4 dimensions includes in 2 Strategies, each dimension has its own items. And then, the interactive types of ICTs measured by five scales (see Table 1) constructed.

A quantitative and qualitative content analysis was employed examining university homepages with the menu of admission or prospective student pages at the first, and reviewing from the pages for international students or English version secondly. After series of intensive sessions, two coders were trained to code the websites under the checklist. If the measured item cannot be found on the pages, then we archive it from website map or search engine.

Table 1. The scale of measurement

Items	None	Static Document Link	Text-Graphic Highlight	Portal site	Web 2.0
Score	0	1	2	3	4

McMillan (2000) emphasizes the importance of building on prior research when performing web-based content analysis, adding that it builds rigor into variations on traditional methods.

Content analysis method is originally developed for static, printed texts such as newspapers, where text is arranged in a more sequential and contained manner. To overcome the more dynamic nature of websites, the HTML of each organization homepage was downloaded from November 11 to 26, 2010 and the time frame of analysis was between January 26-February 13, 2011, which permitted the authors to correct coding issues and check the reliability of the collected data against the results of other studies as the analysis progressed.

3.2 Sample Profiles

To study and compare the level of internationalization web presence between USA and Taiwan, 15 university websites were selected from each country.

By intersecting three world ranking lists - the Webometrics Ranking of World Universities 2009 (WR), the Academic Ranking of World Universities 2009 (ARWU), and the Times Higher Education-QS World University Ranking 2009 (THES) - a sample of fifteen USA universities assessed in top forty were thus obtained as the US group of top universities (Group A).

As for Taiwan universities, all the 15 universities which have ever been granted into the 5-year Program for Developing First-class University and Top Research Centers, launched in 2006 by the Ministry of Education (MOE) in Taiwan are selected as Group B.

4 Results

Table 2 and 3 shows the program and organizational strategies of internationalization web presence means and group means of admission web sites that were judged to be in each category. T-statistics were calculated to identify significant differences in the internationalization of each component at the interaction level.

After reviewing the Sig. (1 tailed < 0.05), parts of components shows there are significant differences and parts are no between two groups.

Both two groups, have not neglected any of the internationalization components. But researcher finds out some components present on the additional linked web pages, not direct present on admission pages, especially by Taiwan groups. The components present on the project of grant audit website.

Table 2. The outcome of program strategies measurement

Program strategies	Groups Mean		Mean	t	Sig. (1-tailed)	< α
	U.S.	Taiwan				
Academic Program category components						
International students	3.07	3.13	3.10	0.81	0.21	
Student exchange programs	3.13	3.00	3.07	3.25	0.00	*
Area of thematic studies	3.07	2.87	2.97	0.75	0.23	
Internationalized curricula	2.67	2.47	2.57	1.34	0.10	
Work/study abroad	3.00	2.00	2.50	2.42	0.01	*
Foreign language study	2.93	1.93	2.43	(0.45)	0.33	
Visiting lecturers and scholars	2.73	2.13	2.43	3.26	0.00	*
Link between academic programs and research, training and development assistance	2.80	1.73	2.27	0.16	0.44	
Faculty/staff mobility programs	2.33	2.00	2.17	3.93	0.00	*
Joint and double degree programs	2.07	2.00	2.03	0.79	0.22	
Teaching/learning process	2.20	1.07	1.63	2.01	0.03	*
Cross-cultural training	2.20	0.87	1.53	2.85	0.00	*
Research_and_scholarly_collaboration_category items						
– Area and theme centers	3.00	2.87	2.93	1.47	0.08	
– International research partners in academic and other sectors	2.93	2.67	2.80	1.02	0.16	
– Researcher and graduate student exchange programs	3.00	2.53	2.77	1.61	0.06	
– International conferences and seminars	2.73	1.73	2.23	3.25	0.00	*
– Joint research projects	2.67	1.67	2.17	2.54	0.01	*
– Link between research, curriculum and teaching	2.87	1.47	2.17	4.02	0.00	*
– International research agreements	2.67	1.20	1.93	4.36	0.00	*
– Published articles and papers	2.47	1.27	1.87	2.95	0.00	*
External_relations_and_services_domestic_and_abroad_category items						
– Community-based partnerships and projects with non-government groups or private sector companies	2.80	2.27	2.53	1.60	0.06	

Table 2. (continued)

– International development assistance projects	2.80	1.80	2.30	2.80	0.00	*
– Customized/contract training programs off-shore	2.47	1.67	2.07	1.90	0.03	*
– Link between development projects and training activities with teaching and research	2.67	1.60	2.13	2.78	0.00	*
– Community service and intercultural project work	2.67	1.67	2.17	2.46	0.01	*
– Off-shore teaching sites and distance education	2.73	2.33	2.53	1.18	0.12	
– Participation in international networks	2.87	1.73	2.30	3.07	0.00	*
– Alumni development programs abroad	3.13	2.33	2.73	2.32	0.01	*
Extracurricular activities						
– Student clubs and associations	3.20	2.73	2.97	1.25	0.11	
– International and intercultural campus events	3.13	2.27	2.70	1.92	0.03	*
– Social, cultural and academic support systems	2.67	2.47	2.57	0.52	0.30	
– Peer groups and programs	2.53	2.00	2.27	0.90	0.19	
– Liaison with community based cultural groups	2.27	1.33	1.80	1.74	0.05	*
N	15	15				P=0.05

Table 3. The outcome of organizational strategies measurement

Organizational strategies	Groups mean		Mean	t	Sig. (1-tailed)	< α
	U.S.	Taiwan				
Governance category items						
– Expressed commitment by senior leaders	2.73	2.73	2.73	0.00	0.50	
– Active involvement of faculty and staff	2.73	2.13	2.43	1.57	0.06	
– Articulated rationale and goals for internationalization	2.67	2.53	2.60	0.42	0.34	
– Recognition of an international dimension in mission statement and other policy documents	2.67	2.00	2.33	1.73	0.05	*

Table 3. (continued)

Operations category items					
– Integrated into institution-wide and department planning, budgeting and quality review systems	2.80	2.87	2.83	(0.34)	0.37
– Appropriate organizational structures	3.07	3.00	3.03	0.27	0.40
– Communication systems (formal and informal) for liaison and co-ordinator	2.93	2.20	2.57	2.42	0.01 *
– Balance between centralized and decentralized promotion and management of internationalization	2.80	2.53	2.67	0.91	0.19
– Adequate financial support and resource allocation systems	2.87	1.73	2.30	3.31	0.00 *
Support_services category items					
– Support from institution-wide service units, i.e. student housing, registrariat, counselling, fund-raising, etc.	3.00	2.73	2.87	1.17	0.13
– Involvement of academic support units i.e. language training, curriculum development, library	2.87	2.47	2.67	1.20	0.12
– Student support services for international students studying on campus and domestic students going abroad, i.e. orientation programs, counselling, cross-cultural training, student advisors, etc.	3.00	2.60	2.80	1.57	0.06
Human_resource_development category items					
– Recruitment and selection procedures which reorganize international and intercultural expertise	2.93	2.00	2.47	2.61	0.01 *
– Reward and promotion policies to reinforce faculty and staff contribution to internationalization	3.00	3.00	3.00	0.00	0.50
– Faculty and staff professional development activities	3.07	3.00	3.03	0.56	0.29
– Support for international assignments and sabbaticals	-	-	-	-	-
N	15	15			P=0.05

5 Discussion

Today's America still enjoys the most advanced science and technology and highly developed economy because of its emphasis on education, especially higher education. In Taiwan, the national policies push universities to catch up with regard to internationalization. For much of the twentieth century Taiwan universities were striving to "catch up" with what were perceived as advanced standards elsewhere. Now finally in the early 21st century they are reaching a position of strength, where they may come to be seen as equal partners with universities in other parts of the world.

We can see Taiwan universities present their internationalization well performs on the project of grant audit website. But if academic institutions like to recruit student from web distribution, the best way is let them present on the easy find place for prospect international students.

Any organization can create web site, but not all are committed to making it an essential and effective tool for marketing. Future research could use questionnaires sent to university and college "Web Masters" to understand the level of commitment their schools have to using the web sites as marketing tool, or high school students to assess their satisfaction from admission web services.

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