

INTERNATIONALIZATION THROUGH WEB BASED LEARNING? AN ASSESSMENT OF THE VIRTUALIZATION OF GERMAN UNIVERSITIES

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Abstract:

The Paper broaches the issue of analyzing a potential relation between the emphasis on virtual web-based processes in an institution of higher education and the paradigm of internationalization. I do so by comparing three German universities, a campus-based university, a mostly paper-based distance-learning university and a fully virtual distance-learning university in terms of their services and procedures. Then I analyze each organizational system's capabilities to fulfill the paradigm of internationalization efficiently according to its four rationales: sociocultural, educational, political and economic. The data for my research was acquired from official documents provided by the universities and additional personal requests via e-mail. My findings are, that the campus-based university has advantages for the sociocultural and political rationales of internationalization due to the emphasis on face-to-face communication and on-campus services, while the virtual university succeeds for the educational and economical rationales of internationalization because of the more wide-spread influence of web services and timeless availability of content. Considering the high costs that the campus-based university's services cause to the university, the thesis that web-based university structures support the paradigm of internationalization more efficiently can be accepted for these two rationales.

Keywords: internationalization, virtualization, rationales.

THE RATIONALES OF INTERNATIONALIZATION AND WEB BASED E-LEARNING

Focusing on education systems beyond national borders while encouraging stronger international ties between institutions of post-secondary education as a mean of knowledge transfer and economic competitiveness has been on most OECD-member's agenda for several years now (Nelson, 2003, p. 3; OECD, 2004, p. 1; Michael, 2005, p. 3; Keeling, 2006, p. 204). De Wit sees four main categories of reasons for this trend: political, socio-cultural, educational and economic rationales (De Wit, 2002, pp. 83–102; Archer, Hutchings & Ross, 2003, p. 120; De Wit, 2008, p. 383). The *political* rationale for internationalization lies in the national interest of invoking international understanding in order to secure international political stability and world peace. The *socio-cultural* motivation refers to the preservation of national culture as well as the advancement of intercultural awareness (Knight, 1999, pp. 17–20). The *educational* rationale supports internationalization due to the interest in international educational quality standards. Internationalization out of *economic* rationale refers to the national interest in being internationally competitive through a well-educated, well-trained workforce that possesses up-to-date knowledge and experiences that are relevant for the challenge of a globally connected, dynamic and demanding market (Knight, 1999, pp. 17–20; Bates, 2005, p. 10; Kritz, 2006, p. 4; Isserstedt & Schnitzer, 2005, p. 1; Enders, 2004, pp. 362–363). Institutions of higher education are assigned to the task of satisfying their governmental, economic and private stakeholders' interests in the pursuit of internationalized education according to these 4 rationales (Knight, 1999, p. 21). Information technology plays an important part in the establishment of this form of cross-border education, for it supports worldwide communication as well as the efficient and mobile handling of knowledge at a low cost (Altbach & Knight, 2007 p. 291; Rosenberg, 2001, pp. 10, 30).

The technological push of digitalized information allowed students of all fields to access, transform and communicate knowledge through the internet and beyond national borders (Bates, 2010, p. 20; Ryan, Scott, Freeman & Patel, 2000, p. 1). "Learning" in the sense of the acquisition of knowledge to increase one's performance underwent a radical change, for the concept of "E-Learning" let students pursue their studies regardless of time or location by accessing learning materials online with less need of additional resources like personnel or space (Rosenberg, 2001, p. 7; Bates, 2005, p. 17). Universities reacted to the change, including increasingly more online elements in their curricula. On an institutional level, the trend of web-based E-Learning led to the establishment of virtual classrooms, virtual departments and even virtual universities as almost fully digitalized institutions of online education (Peters, 2002, p. 132). Due to the mobile access, the capabilities of asynchronous information transfer and the opportunity to create international, intercultural E-Communities (Rosenberg, 2001, pp. 30–31), it is to be assumed, that institutions of higher education which put more emphasis on web-based curricular and administrative structures are also better equipped to fulfill the paradigm of internationalization, thus improving the output of higher education processes with less input of finances and other resources (Rosenberg, 2001, p. 30).

1. COMPARING THREE ORGANIZATIONAL SYSTEMS

In this paper I am giving a review of the current state of the virtualization of higher education institutions, analyzing the specific benefits of each organizational form for the achievement of internationalization. The thesis that is to be investigated is that a Higher Education Institution (HEI) that puts more emphasis on the utilization of web-based learning is more efficient in satisfying the demand for internationalization than an institution with less focus on internet

based processes. Consequently, I am comparing a traditional campus-based university – namely the university of Duisburg-Essen/Germany – with a distance learning focused, mostly paper-based university in form of the Distance Learning University of Hagen/Germany in terms of their organizational suitability to pursue the paradigm of internationalization and satisfy the rationales behind it as described by De Wit. Additionally, both institutions are being compared to a fully virtualized online university, namely the Virtual Global University School of Business Informatics, which is a joint venture between several faculties across central Europe with its physical office located in Frankfurt/Germany. Due to limited space as well as the purely teaching-focused nature of one of the three observed HEIs, I'm concentrating on the field of teaching instead of analyzing the HEIs by their three typical functions (Teaching, Research, Third Mission; see Martin, 2003, p. 18). Wherever a program-specific investigation becomes necessary, I will specifically analyze the program to achieve the degree of Master of Science in Business Informatics, which is a program available at all of the three HEIs.

The studies of Business Informatics on Master-level at the University of Duisburg-Essen (UDE) requires the students to be present at the campus in Essen for about 33 % of the course's workload for most courses (UDE[1], 2010, pp. 9–170) making it the institution with the lowest potential for virtualized long-distance learning in my comparison. Yet, most courses use the Moodle Learning Management System (LMS) to distribute digital course materials and support course-related communication. Administrative functions are available via the university's separated web-portal.

The Distance-Learning University of Hagen (DLU) dispatches all of the learning materials such as scripts and assignments via mail in printed form or for a few courses on a CD-ROM. The "Virtual University Space" lets students subscribe to courses, communicate online and access administrative functions. All students who subscribe to a course are automatically being registered to the course's learning group in the Moodle LMS, underlining the integration of teaching and administration systems (DLU[1], 2010). Only the final written or oral exams at the end of every semester require the students to be on campus or at a location of one of the university's partners, making it an HEI with an increased use for web-based methods in teaching.

The Virtual Global University (VGU) manages all course activities online, including offering videos of lectures, holding examinations, providing textual assignments and other course specific learning materials. A blended learning-mode which requires the students to spend one more semester on campus at the Europa University Viadrina (EUV) in Frankfurt is another available option, but this paper will focus on the fully virtual mode. The only part of the program that cannot be done online is the final exam at the end of the program, which has to be attended at a location decided by the examination board of VGU. Therefore, due to its fully web-based learning as well as administrative structures I consider the VGU as a university with an exemplary amount of virtualization potential. Since the Virtual Global University is not formally acknowledged as a university by the definition of German law, all students of the VGU must enroll at the EUV, which provides the formal framework for the program. Consequently, I will include all the benefits in terms of internationalization programs the EUV can provide, as long as they are available to VGU students inside their regular virtual study environment. This procedure has the added benefit, that I am no longer comparing two institutions of graduate and undergraduate studies to a graduate business school, eliminating service deficits in VGU's administrative department due to lack of size.

2. INDICATORS OF AN INTERNATIONALIZATION STRATEGY

In general, internationalization in higher education is defined through two fields of factors: Academic programs and services on the one hand and organizational factors on the other. Literature provides several collections of indicators for an internationalized HEI (Knight, 1994, pp. 5–6), however, I utilize Dr. Jane Knight’s list of elements of an internationalized HEI since it appears to be the most diversifying.

Picture 1: Summary of Internationalization Elements

Elements of Internationalization

(Knight 1994)

Academic Program and Services

- Student work/study abroad programs
- Curriculum innovation
- International students and scholars
- Faculty/staff exchange and mobility programs
- International development projects
- Joint research initiatives
- International institutional linkages
- Foreign languages
- Area/thematic studies
- Community partnerships
- Intercultural training
- Extracurricular activities and institutional services

Organizational Factors

- Commitment and support of senior administrators and Board of Governors
- Support and involvement of critical mass of faculty staff
- International office or position with experienced personnel
- Adequate funding and support both internally and externally
- Policy to encourage and support local initiatives within a broad institutional policy framework
- Incentives and rewards for students, staff and faculty
- Communication and information exchange mechanisms

Source: Knight, 1994, p. 6.

As not all of these elements are directly related to teaching activities, out of the 12 academic programs and services I have selected 8 which have a direct impact on internationalization in teaching: student work/study abroad programs, curriculum innovation, international students and scholars, faculty/staff exchange and mobility programs, international institutional linkages, foreign languages, area/thematic studies and intercultural training. From the organizational factors I have excluded “support and involvement of critical mass of faculty/staff” since any valid statement on this aspect would require a prolonged survey among faculty members. “Adequate funding and support – internally and externally” are also excluded, since internationalization is a paradigm weaved into other functions of the HEI that any form of funding could hardly be directly linked to. I analyze the HEIs’ structures and programs based on the HEIs’ websites and online systems, since they provide first-hand, up to date information about the state of the HEI’s virtualization. For in-depth information I have contacted the HEIs personally. On the basis of this data I then assess the HEI’s state of internationalization and their potential for it based on Knight’s list of elements of internationalization and compare them to each other.

2.1. Student work/study abroad programs

UDE’s on-campus Academic Foreign Office (AFO) is responsible for supporting students seeking to study or work abroad for a limited time. The students can inform themselves about programs and formalities online, but detailed counseling takes place on-campus. The DLU Hagen’s AFO informs students who seek to study or work abroad about regulations and provides web-links to external agencies for international internships like the German

Academic Exchange Service (DAAD), which is offering a hotline and face-to-face counseling in the DAAD office. DLU and VGU students can continue their studies at their home university while living abroad, but DLU study centers where students have to take exams are being maintained in 5 European countries only. VGU has a subsidiary for international internships called the Valuable International Business Experience (VIBE), which is connected to high-tech companies in India as a global player in the business informatics economy (VIBE 2012). The online matching is fully handled by VIBE's web-portal, strongly supporting the student in the organization of his internship program (VIBE[2], 2012).

The perspective of studying abroad is mostly supported by UDE's Academic Foreign Office with the DLU Hagen offering information and on-/offline counseling for self-organized foreign studies (DLU[2], 2011). Without the support of a physically accessible AFO, DLU and VGU long distance students seeking to study abroad have to depend on online support via asynchronous e-mail communication with AFO representatives and external institutions like the DAAD. However, studying abroad for a semester requires detailed planning from the students and an intense counseling which can easier be provided in face-to-face meetings with experienced AFO representatives rather than online (see Kraus, Stricker & Speyer, 2004, p.78). VIBE's active processing of online applications and digitalized matching streamlines the process for interns, but a stronger horizontal differentiation from only indian companies would require additional work and investment from VIBE's backend office.

2.2. Curriculum Innovation

Through the modular structure of the program, individual courses required for a M.Sc. degree in Business Informatics at all three HEIs can be attended at any other accredited university. Since Knight sees this element from a mostly topic-focused perspective, assumptions about the preference for one of the organizational systems cannot be made (see Knight, 1994, p. 6).

2.3. International Students and Scholars

According to the facts given, 15 % of the University of Duisburg-Essen's student body are of non-German citizenship. Out of these, 24 % are from other European countries, 66 % are from Asian countries, 8 % are from African countries and 2 % are from American and Oceanic countries (H.Kugland, personal communication, January 24, 2012). 9.3 % of the DLU Hagen's students have a foreign citizenship. Out of these, about 90% are from European countries, 5 % are from Asian countries, 3 % are from African countries and 2 % are from American countries (DLU[2] 2012). 67 % of the VGU students have a citizenship other than the german one. Out of these, 39 % are from European countries, 49 % are from Asian countries, 8 % are from African countries and 4 % are from American countries (R.Datsenka, personal communication, January 12, 2012). This comparison is problematic in total numbers of students, because we compare two institutions of undergraduate to postgraduate studies with over 30.000 students each to a graduate school with less than 100 students. Still, the vastly bigger percentage of foreign students for the VGU underlines, that a digitalized online-HEI can recruit an internationally diverse student body more easily.

2.4. Faculty/staff exchange and mobility programs

UDE offers information about forms and procedures for international staff mobility through the Academic Foreign Office. None of the other two inspected HEIs has established a strict program for the exchange of faculty members with other HEIs on an international level.

Exchange programs are mostly handled on department level or through external agencies. Similar to the students' abroad studies (see 3.1.), physical proximity of the AFO, the faculty office and faculty members with the option of face-to-face communication helps with the legal formalities and organization of the exchange. However, since VGU's faculty members are all professors who are under contract at different universities in Germany, Austria and Switzerland, it is questionable whether such a program could legally be organized by VGU.

2.5. International Institutional Linkages

All three HEIs are connected to about 200 other HEIs in 25 European countries through the external ERASMUS program. Student exchange agreements are being upheld on university level by UDE and EUV as well as on faculty level by the DLU. Due to its wide-spread faculty body, VGU's internal structure in itself requires international connections between faculty members, aiding them in establishing contacts to international institutions as well.

2.6. Foreign Language Study

UDE offers optional foreign language courses for students of all fields in on-campus classes using the Moodle LMS for distributing learning materials (UDE[2] 2012) while the DLU lends out CD-ROMs for language courses. VGU students can access language learning materials online through EUV's self-learning center. While the use of web-based learning can successfully be applied in language learning, studies have proven it to be most effective in a supportive role to a tutor-driven, class-based language course (Felix, 2001, p.351). The benefits in cost and mobility make the concept interesting to students with financial disadvantages or those from rural areas where no universities are available to them.

2.7. Area / Theme Studies

Due to the technical-methodical nature of the Business Informatics curriculum, area-specific studies are of low importance for the curriculum and are therefore not focused on in any of the three HEIs. They may however play a minor part in individual assignments on course level, not influencing the preference for or against an organizational form.

2.8. Intercultural Training

As a part of its diversity management concept, UDE tries to sensitize its staff for cultural diversity through training courses. The DLU Hagen is offering on-campus classes for staff. VGU's faculty consists of professors that are employed at several other universities, leaving the task of intercultural sensitizing to these institutions despite the culturally diverse student body (see 3.3.). While both, the UDE's and the DLU's programs are integrated into offline workshops, faculty members could also learn about cultural sensitivity by working on web-based learning programs. There exist several digitalized methods for intercultural training that can adapt to the learner's situation (Landis&Bennett&Bennett, 2004, p. 38). A general preference for face-to-face training or digitalized training cannot be stated at this point.

2.9. Extracurricular activities and institutional services

UDE's and the DLU Hagen's AFOs support international students in terms of the organization and financing of their studies. Furthermore, the UDE's AFO organizes an informal international gathering on campus twice a month. Due to their focus on far-spread

distance learning, neither the DLU Hagen nor the VGU support extracurricular activities of their students. According to Knight, internationalization includes not only common academic activities, but also the forming of a community by the help of non-formal activities and institutions that support them (Knight, 1994, p. 7).

2.10. Commitment and support of Senior Administrators and Board of Governors

The University of Duisburg-Essen has a commission for diversity management, overseeing the activities of intercultural sensitizing. It includes leading staff members of several faculties as well as the prorector of Diversity Management. Preserving the heterogeneity of the student body is one of the university's main guiding principles. The DLU Hagen considers an international orientation to be one of its central goals. However, official statements about support for this goal by the HEI's high ranking staff members have not been made. In his welcome speech on VGU's webpage, the VGU dean proclaims his pride in VGU's worldwide student body, thus giving full top management approval and support for Internationalization. High level management support is one of the most important requirements for internationalization (Rudzki, 1995, p. 437). However, statements of approval do not ensure that actions to implement management decisions have to follow. Due to the strategic long-term perspective of management decisions, identifying clear acts of commitment for internationalization is difficult. Yet, the VGU's flat hierarchy helps the implementation of high level support at the base due to shorter communication channels (Agarwal, 1982, p. 129).

2.11. International office or position with experienced personnel

UDE's AFO has a bureau on campus, supporting international students in their local studies as well as German students on their abroad semesters. It also helps faculty members to establish international contacts for student exchange programs or projects. The DLU Hagen's International Office provides similar services but with less human resources. The VGU's studentship can access the services of the EUV's international office. However, many of the services require a face-to-face meeting with one of the Academic Foreign Office's staff members and are not virtually available to students of VGU or DLU.

2.12. Policy to encourage and support local initiatives within a broad institutional policy framework

Through its diversity management concept the UDE supports international students on and off campus and cooperates with individual social and religious student groups. Due to their distance-learning based institutional concept, the DLU Hagen as well as VGU have no policies for local initiatives to pursue a stronger internationalization in a specific area. The local ties of the distance-learning universities are of lesser importance for local groups due to the HEI's inability to draw talented young academics into the university's periphery that would aid the local economy (Fritsch, Henning, Slavtchev & Steigenberger, 2007, p. 205).

2.13. Incentives and Rewards for students, staff and faculty

Incentives for students and staff/faculty members to participate in activities of internationalization are mostly the value of the additional experience as well as the further qualification for future career options. No organizational form has advantages in this field.

2.14. Communication and Information exchange mechanisms

All three HEIs provide their staff, faculty members and students with an e-mail account to send newsletters or other official and unofficial correspondence from. Yet, informal channels can only be established through interpersonal contact, which is difficult to do when either the students (DLU) or the faculty members and the students (VGU) are not in close proximity to the HEI administration. Informal channels are important for the communication structure and enforcing higher management decisions (see 3.10. and 3.12.) in practice (Frankel, 2008, p. 53).

3. CONCLUSION

Out of the three HEIs discussed in this paper, the University of Duisburg-Essen appears to be the strongest in the pursue of the sociocultural rationale of internationalization as described by De Wit (De Wit, 2008, p. 383; Knight, 1999, pp. 17–20). Its diversity management concept (see 3.8., 3.10. and 3.12.) and the Academic Foreign Office's activities (see 3.1., 3.4. and 3.11.) give UDE advantages in the intercultural and social aspects of internationalization, which can certainly be ascribed to a strong management support (see 3.10.). Without the physical presence of students on campus, informal communication, which is important for executing management decisions (see 3.14.) would require additional organizational efforts, for example by forming extracurricular E-communities (see 3.8.) which especially VGU with its highly diversified student body (see 3.3.) could benefit from. Students need to trust each other to share controversial opinions in particular. Studies proof, that establishing such trust requires at least initial face-to-face contact between the students (Rocco, 1998, p.501). From the viewpoint of the sociocultural rationale, the campus-based HEIs have advantages over virtual HEIs in terms of their internationalization capabilities due to the option of on-campus face-to-face communication. However, according to Knight, the importance of the sociocultural rationale is of decreasing importance for the HEIs' stakeholders (Knight, 1999, p. 20).

As far as the fulfillment of the political rationale goes, it is more than questionable whether a more virtualized formal learning institution can provide the right environment for international understanding since studies proof, that virtual social groups are weaker and lack the cohesiveness that face-to-face relationships could provide (Rocco, 1998, p. 501; Warkentin, Lutfus & Hightower, 1997, pp. 986–987). International on-campus students are more easily exposed to direct relationships and face-to-face communication, allowing them to build enough trust to share their viewpoints with each other freely. Furthermore, campus-based HEIs can arrange informal gatherings between students to increase international understanding further (see 3.9.). They also have closer ties to external local groups (see 3.12.) However, if we consider the educational rationale for internationalization, the VGU's entirely web-based organization and the international availability of their learning content makes them succeed in educating students worldwide as displayed by the wide-spread origin of VGUs students (see 3.3.). The technology-based advantages in cost and mobility make it a reasonable option for long-distance students in particular (see 3.6.). Because of the web-based structures of the curriculum, professors can hold their lectures in video format without being present on campus, allowing universities with a virtual distance learning model to recruit experts from around the globe (see 3.4.) who can provide highest quality education online.

Looking at the economic rationale for internationalization, VGU's strong web-based support for arranging international internships caters to the interests of students as well as companies

through highly integrated digitalized processes (see 3.1.). The economy expects the creation of a knowledgeable workforce. The DLU Hagen and especially VGU have advantages in this field due to their capabilities of delivering full curricula across the world while utilizing efficient processes through tightly connected international administrative and educational systems at low cost. The dominant importance of the economic rationale for internationalization as described by De Wit makes a more virtualized HEIs pursue of internationalization the more satisfying one in the eyes of its stakeholders, leading to the conclusion, that while the campus-based HEIs support the paradigm of internationalization strongly for the political and socio-cultural rationale, the virtual HEIs are stronger in promoting the educational and economic motivations for internationalization, which are considered to be more important and relevant in current times (Knight, 1999, pp. 17, 19). Considering the high costs in personnel and finances of the UDE's diversity programs and Academic Foreign Office (see 3.10. and 3.11.) - services that the DLU Hagen has outsourced (see 3.1) - on the input side, the thesis, that a web-based distance learning organization is more efficient in fulfilling the demands for internationalization of higher education knowledge production seems to be acceptable for the educational and economical rationale.

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