Enhancing students' IS offshoring capabilities:

An international blended teaching concept

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ABSTRACT

An appreciation of globalisation issues by information systems (IS) graduates is a growing requirement of organisations with global reach. This paper discusses the planning of a joint course to be delivered online and face to face by two lecturers representing two tertiary institutes in Germany and New Zealand respectively. The IS offshoring content of the course is relatively unique and aspects of globalisation will be demonstrated through the dual country delivery of the course. The two lecturers involved have spent time lecturing and studying in their global partner's country and tertiary institutes and so this joint delivery method is likely to also strengthen cultural ties between the two participating institutions including the students involved. Further research goals and issues are discussed for post-delivery of this dual country blended course. This paper provides a basis for this concept to be evaluated in further research.

Keywords: globalisation, offshoring, joint delivery, blended global course, international students

1. INTRODUCTION

Information systems (IS) offshoring describes the transfer of IS services such as application development and maintenance to service providers residing in countries distant from the client's home country (Strasser & Westner, 2015). Usually companies in highly developed countries engage in IS offshoring with less developed countries to benefit from lower salary levels or to gain access to a greater pool of skilled IS professionals (Dhar & Balakrishnan, 2006; Gonzalez, Gasco, & Llopis, 2010; Westner & Strahringer, 2010).

IS offshoring is not a new trend but has been developing during the last two decades. India was and is still the prime example of a country focusing on delivering IS services to overseas clients with the size of its IS offshoring industry of approximately USD 100 billion. (Kaka, 2009; NASSCOM, 2015)

Primarily Western companies contribute to this growth of the IS offshoring industry. Correspondingly, it becomes more and more likely that employees in IS-related positions in Western countries will be exposed to work environments where IS offshoring is being conducted. This particularly includes IS and Information Technology (IT) graduates.

Studies show that a high percentage of IS offshoring projects are not successful (e.g., St. John, Guynes, & Vedder, 2014; Westner & Strahringer, 2010). Problems arise from the underlying risks in those projects with regard to intercultural issues, communication barriers, temporal distance, geographic distance, or geo-political risks (Gonzalez et al., 2010; Klimpke, Kramer, Betz, & Nordheimer, 2011). The success rate of IS offshoring projects is higher if employees are equipped to deal with those risks (Beimborn & Wolf, 2013; Wende & Philip, 2011).

Tertiary education should therefore try to teach its Computer Science, Software Engineering, or IS students the required tools, methods, and the knowledge about their application, to become better prepared for work environments incorporating IS offshoring. However, corresponding modules are rarely found in IT degree programmes and in research with a few notable exceptions (e.g., Clear, 2011; Daniels, Cajander, Pears, & Clear, 2010; Laxer, Daniels, Cajander, & Wollowski, 2009; McDermott et al., 2012 or - for the field of business - Taras et al., 2013).

This paper attempts to address this deficit. It outlines the structure of a module that is designed to teach students the required competencies to successfully succeed in workplace situations incorporating IS offshoring. The concept involves implementing a joint module at two institutions in two countries, in this case in New Zealand (NZ) and Germany. In this module, teaching will be shared between the NZ and the German lecturers and students are required to form equally mixed NZ-German groups to accomplish group assignments. Theoretical aspects of IS offshoring will be covered in the lecture part of the module, the actual application of the taught content will occur in group assignments where students will experience the challenges and specific issues of accomplishing work in an offshoring context.

The paper is structured as follows: based on a reflection on related works regarding global virtual collaboration in business and in international student projects (section 2), we will describe structure, learning objectives, modes of delivery, involved instructional technology, and the intended schedule of the module (section 3). Section 4 then outlines the research plan that will accompany the module's delivery. A reflective summary concludes the paper.

2. RELATED WORKS

2.1 Best Practices for Collaboration in Globally Dispersed Teams

Research on best practices for collaboration in globally dispersed teams in an IS context primarily addresses the aspect of "How" to conduct IS offshoring projects in an optimal

manner. There has been a significant amount of research in the past addressing the "How" aspect of IS offshoring as literature reviews in the area show (Strasser & Westner, 2015; Wiener, Vogel, & Amberg, 2010).

Problems among individuals in globally dispersed teams mainly arise from geographical, temporal, and socio-cultural distance (e.g., Beverakis, Dick, & Cecez-Kecmanovic, 2009; Gonzalez et al., 2010; Klimpke et al., 2011; Smith & McKeen, 2004). Most research in the IS offshoring context focuses on the firm level, i.e., on the interaction of organisations or larger groups and what makes them successful (Strasser & Westner, 2015). Nevertheless implications can be drawn for team or group level which is of relevance for the setup of this module aiming at improving the collaboration between culturally diverse students forming one group.

Espinosa, Slaughter, Kraut, and Herbsleb (2007) show that shared knowledge within a team helps to overcome distance. Shared knowledge can be achieved by central knowledge repositories, work repositories, and frequent communication. Wende and Philip (2011) also show that communication - in their research setting via use of instant messaging - helps to mitigate cultural differences. Beimborn and Wolf (2013) find further proof for the importance of communication and identify it as a suitable activity to overcome the negative impacts of geographical and temporal distance. Similar to Espinosa et al. (2007), Beimborn and Wolf (2013) also find that a high degree of documentation and knowledge exchange and training supports global collaboration. Documentation and communication should be ideally supported through technology such as portals or online social networks (Mathrani, Parsons, & Mathrani, 2012) and adequate management methods related to change, project, or quality management (Jain, Poston, & Simon, 2011; Mathrani et al., 2012).

Acknowledging the importance of frequent communication and knowledge sharing, other studies find that the organizational roles of a "boundary spanner" (Wang, Chen, Pan, & Wu, 2011) or "bridge system engineer" (Huong, Katsuhiro, & Chi, 2011), i.e., a person acting in an intermediary and facilitating role between members of the globally dispersed team, increases work effectiveness in globally distributed teams.

Several studies emphasize the importance of trust to overcome negative impacts arising from distance (e.g., Deng, Mao, & Wang, 2013; Søderberg, Krishna, & Bjørn, 2013 or Westner & Strahringer, 2010). Communication is an accompanying factor to establish trust (Sudhakar, 2013).

Awareness for each other's culture and intercultural experience is another important success factor for globally distributed teams. Organizations with existing international experience are, for example, more successful when they conduct offshore BPO (Whitaker, Mithas, & Krishnan, 2010). Cultural differences have negative impacts on the effectiveness of knowledge transfer processes (Huong et al., 2011) and on IS offshoring projects as a whole, too (e.g., Beimborn & Wolf, 2013; Stetten, Beimborn, Kuznetsova, & Moos, 2010, Vogt, Beck, & Gregory, 2010). Consequently, activities to bridge or to overcome cultural differences are perceived as good practice when it comes to managing IS offshoring endeavours (e.g., Haried & Ramamurthy, 2010 or Spohrer, Heinzl, & Li, 2011).

2.2 Global Virtual Collaboration as a Teaching Tool

Little research exists on global virtual collaboration as a teaching tool in the context of IS. A number of articles arose from a collaboration project between a Swedish and a United States university that has been going from the mid-2000s (Laxer et al., 2009; Daniels et al., 2010; McDermott et al., 2012). A conference contribution by Clear (2011) has a NZ

focus but has a slightly different scope, i.e., focuses less on international student collaboration but rather on exporting existing modules abroad. Aside from the IS field, the study by Taras et al. (2013) in the business field represents a major contribution to the research of global virtual collaboration in teaching due to its huge longitudinal dataset. The following paragraphs review the previously mentioned research items with regard to their relevance for the paper at hand.

Laxer et al. (2009) describe the evolution of virtual global projects between IT students of two tertiary institutions in the United States and Sweden over four years. The students of both countries conducted a joint project in the healthcare sector examining "the role of technology in patient interaction solutions" (p. 2) but did not include software and/or product development. Based on their experiences from running the module the authors develop guidelines for international student collaborative projects. These guidelines include: (1) building team camaraderie and trust through an early face-to-face meeting by a visit of the US students in Sweden upon the start of the semester, (2) rigorous project management and process, and (3) facilitating frequent communication between team members through different channels.

Daniels et al. (2010) examine the design of the same global virtual module between Swedish and US students as described in the previous paragraph. The authors identify five factors as potential problem causes in the module: (1) students taking different courses, (2) students having different competencies, (3) language and culture differences, (4) implications of inter-cohort communication on trust, values or student attitude, and (5) unequal motivations among students. They perceive only the fifth factor, unequal motivations, as a serious cause of problems and attempt to resolve it through thorough selection of the task for the project. Apart from that, the paper primarily deals with methodological aspects of how to research the module under investigation from an action-research point of view and describes theories and concepts that might be relevant.

McDermott et al. (2012) examine the same Swedish-US collaboration project. They especially focus on the use of collaborative technology, i.e., technology enhancing communication and cooperation over long distances, and how students reflect their own (student) collaboration behaviour using collaborative technology. The authors' original intention in the action research setting was to enhance students' critical thinking capabilities to enable them to reflect upon impacts collaborative activities might have on the joint project. Results show that students can rather quickly understand "possibilities and limitations of each collaborative tool they encountered" [p. 4] but find it hard to infer how the use of the tool might impact the project process.

The previous three studies around the Swedish-US global virtual collaboration projects show that such a module is a positive contribution to teaching in tertiary education and they outline specific challenges and good practices to consider when designing such a module.

Clear (2011) report their experiences on "exporting" a degree course from NZ to Vietnam, i.e., replicating the course structure from the NZ institution in Vietnam with Vietnamese students. Global virtual collaboration between NZ and Viet-namese students was not part of the issue under investigation. Therefore, their findings refer to the nature of the global virtual supervision of Vietnamese students in Vietnam by NZ super-visors residing primarily in NZ. In their study, the authors mention the importance of liaison between NZ and Vietnamese co-teachers, the positive impact of knowledge sharing, the beneficial role of regular face-to-face events and activities in

Vietnam as well as the importance of a robust underlying learning management system.

Finally, Taras et al. (2013) evaluate the effectiveness of global virtual student projects in management education (~ 6,000 participating students, almost 80 universities in 43 countries) working for two months together. Although their study does not give specific advice on module design, findings show that students primarily perceived issues around intra-team coordination as being most challenging when they worked together. Differences regarding culture, language, and time-zones proved to be less of a challenge during actual project work. Overall, the study's main finding is that positive learning effects can be observed at all levels in comparison to control groups not taking part in global virtual projects. Especially students' cultural intelligence improved as well as their under-standing for the special nature of global virtual collaboration. The authors thus find empirical evidence that global virtual student projects are a highly effective teaching tool and recommend incorporating it into curriculums for the benefit of students and instructors.

2.3 Module Implications

The findings from related works as described in the previous subsections have implications on the design of the joint module. The module's structure is intended to encourage students to communicate open and frequently in formal and informal manner. Corresponding jointly used technology should facilitate these communication activities.

With regard to the boundary spanning role of a bridge system engineer, lecturers will act accordingly when necessary, i.e., in cases of unresolvable conflicts along cultural lines.

Trust building will be achieved through communication on the one hand but is planned to be also supported, for example, by trust-building group activities. Personal onsite face-to-face meetings would contribute to increased levels of trust but will not be possible due to the distance between the NZ and the German institutions making travel time-consuming and costly.

Change, project, and quality management methods will be introduced and explained to students. To increase students' cultural awareness, fundamental principles of intercultural management will be introduced as well as underlying concepts explaining cultural differences.

Finally, the topic of the project work should be chosen to be interesting and feasible for the students.

3. MODULE CONCEPT

3.1 Overview

The module's concept is structured along three main ideas: (1) from a content-perspective students are required to learn tools and methods for effective collaboration in an offshoring context, (2) students are required to experience the specific issues and challenges of IS offshoring work themselves through re-enacting a work environment where offshoring takes place, (3) the module itself is being set up in an international (offshore-similar) environment by joint teaching and supervision activities through use of digital technology. The pilot run of the proposed module will focus on a mixed business-IS topic and not on a software engineering topic to reduce cognitive load and complexity for students.

The module assumes the scenario of a multinational company (MNC) that is interested in how IT and the trend towards digitization might affect its respective industry in the medium to long-term. Such an MNC could be a bank, an insurance company, a hospital organisation, a retailer, or a car manufacturer. Exemplary topics that might be of interest for the imaginary MCN could be "Impact of IT on the Global

{Banking | Insurance | Healthcare | Retail | Automotive} Sector" with the brackets indicating alternative topics. In the assumed scenario, the MNC hires a management consultancy with expertise in the IT industry to analyse potential medium to long-term implications on its industry. Student groups take the role of the management consultancy, while the lecturer(s) take on the role of the MNC's executive manager(s).

3.2 Structure

The module will be structured in two parts, (1) input lectures and (2) group work.

In the first part ("input lectures"), students will receive lectures to prepare them (a) for working in cross-cultural and globally dispersed teams, (b) for analysing markets from a strategic per-spective, and (c) for structuring their communication and end products in a professional manner. Content for (a) will stem from the area of International and Intercultural Management, for (b) from Strategic Management and Strategic Marketing, and for (c) from Business Consulting, Business Communication, Business Problem Solving, and Project Management. Those lectures will be jointly delivered by the NZ and German lecturer as video-lectures with corresponding online quizzes for student self-assessment. Students are required to watch those video lectures in a self-paced and self-directed manner during an initial self-study period. The time allocated to this part is five weeks.

Upon completion of the video lecture series, the second part of the module ("group work") starts with lecturers forming groups of four or six students. Groups will be of even size and consist of 50% students from the NZ institution and of 50% students from the German institution. Each group represents one imaginary "management consultancy" and is assigned one MNC client project. The client projects, i.e., the clients' industries, will be different for each group (c.f. section 3.1). The group work part will incorporate four elements of assess-ment, i.e., deliverables for each student group: (1) project proposal, (2) first steering committee presentation, (3) second steering committee presentation, and (4) weekly delivery of status reports and group meeting minutes.

(1) Project proposal: Students will firstly need to pitch for the project in a presumably competitive manner, i.e., they have to "win" the project from the MNC. To "win" the project, students need to produce and deliver a project proposal presentation that clearly convinces the client why they should hire the consultancy. Input lectures from part one will provide the necessary guidance to students. Students are required to incorporate in their project proposal aspects such as preliminary results presentation, commercial terms, perceived viability of the suggested project approach, and the consultancy's and consultants' level of expertise. So the project proposal fulfils two objectives: it is, firstly, a team building exercise and it prepares, second, for later project management. Team building is supported because students are required to be creative in a "fun" manner, e.g., by inventing a company logo, client references, and the company history. They also get to know each other because they have to incorporate their shortened CVs and areas of expertise in the proposal presentation. Project management is supported because students need to identify the major work packages and activities for the assignments ahead and present it to the customer using milestone plans and GANTT charts. The project proposals' presentations will take place in video conferences with both the German and the NZ lecturer as well as all student team members being present. Due to the time differences this will happen either early morning or early evening local time.

(2) + (3) Steering committee presentations: Having "won" the proposal, student groups, i.e. the "consultancies", would now

start to conduct their projects, i.e., they analyse the impact IT might have on the given industry segment of the imaginary client MNC. To succeed, student groups first have to understand the respective industry. This might, for example, necessitate that they carry out analyses regarding value chains, market maturity, or competitive market structure. Subsequently, they will identify emerging IT trends and relate those to their respective MNC client's industry. Based on creativity or scenario methods they then derive potential implications of IT trends for this industry. Students are required to deliver their results in the course of two steering committees as a presentation to the lecturer(s) acting in the roles of client executive managers. Presentations will again take place in video conferences with both the German and the NZ lecturer as well as all student group members attending.

(4) Status reports: During the course of the module, students are required to demonstrate that they are attempting to work effectively in a globally-distributed work environment. They are required to synchronously interact (e.g., via video conference or chat) once a week for at least 60 minutes to reflect the past work results and plan the future work progress. They are required to create meaningful minutes of those interactions which they submit to their lecturers. By Friday each week they are required to submit a meaningful project status report to their lecturers, i.e., "clients", illustrating, assessing, and interpreting the project's progress so far as well as showing the immediate next steps. Students are furthermore required to use one joint infrastructure for collaboration, i.e., one communication tool (for example, Adobe Connect) and one file repository (for example, Microsoft SharePoint).

3.3 Learning Objectives

The module's learning objectives fall into three categories: (1) collaboration in globally-dispersed and culturally heterogeneous teams, (2) production of high quality project results as it would be expected in a professional services company, (3) assessing the disruptive impacts of digital technology.

Regarding learning objective category (1) students will learn how to effectively collaborate across temporal, geographical, and cultural distance. Their learning will be supported by their use of appropriate software tools and collaboration methods to support them in bridging the distance between NZ and Germany from a cultural as well as a location perspective. As a result, students will be prepared to manage and conduct project-based work in globally dispersed teams.

Regarding learning objective category (2) students are required to learn how business is being conducted in the professional services industry such as management/IT consulting. They will experience first-hand the professional services value chain from project initiation (proposal), over project execution (status reports, minutes) to project finalization (steering committees). They will learn how to produce a group work result that adheres to high quality standards regarding formal appearance and content.

Regarding learning objective category (3) students can analyse and reflect the potentially disruptive impact IT might have in the mid to long term on selected industries such as energy, financial services, healthcare, mobility, and manufacturing industries or retailing. They learn to apply existing concepts of Strategic Management to different industries through the lens of the potential IT impact. This enables students to further develop their market research and data gathering skills. Finally, they need to judge the relevance of the information they found for the respective industries which helps them to enhance their analytical and critical thinking skills.

3.4 Modes of Delivery

In part one of the module, the mode of delivery will primarily be video recorded lectures which are complemented by online quizzes for student self-assessment and grading purposes. These lectures will illustrate: selected concepts of Strategic Management for the purpose of market and business analysis (Cadle et al., 2014), value chain and specifics of the consulting industry (Biggs, 2010; Wickham & Wilcock, 2016), fundamentals of business communication (Zelazny, 2007), key elements of project management (Kerzner, 2013) and selected aspects of intercultural differences with respect to NZ and Germany based on Hofestede's concept of cultural differences (Hofstede, 1980; Hofstede, 2011)

The module's second part will consist of student-led group work on the project using collaboration technology such as Adobe Connect and Microsoft SharePoint (c.f. Section 3.5). In this part student groups can contact their lecturers for instructional guidance in addition to the formal proposal and steering committee presentations. To avoid any disintegration of the groups along cultural borders, instructional guidance or consultations will only happen on a group level. Otherwise there would be a threat that within one group NZ students only approach their NZ lecturer and German students only approach their German lecturer thereby avoiding the collaboration and cultural alignment challenge. To prevent this, there will be defined time slots for personal group consultations with lecturers through chats or video conferences and a standing online forum for asynchronous communication.

3.5 Instructional Technology

Research shows that a common joint work infrastructure that facilitates communication has a positive influence on IS offshoring project success (c.f. section 2). Consequently, a corresponding infrastructure will be provided to students and it will be mandatory for them to use it. The technical infrastructure will be of one of the involved institutions, most likely the German institution. For this purpose, all participating students and lecturers will receive user accounts for the German institution's IT network.

Part one of the module ("input lectures") will be hosted on a Moodle-based Learning Management System (LMS). Instructional videos of three to seven minutes length will be produced by the NZ and the German lecturer in H.264 encoded MP4 files before the module starts. Those videos will be uploaded to the Moodle platform where students can watch them self-paced. Using the Moodle feature "Test", the lecturers will generate a series of self-assessment quizzes to complement the videos. Videos will be produced using the software "Camtasia" and will be primarily screencasts, i.e., videos showing slides with voice recording.

Part two of the module ("group work") requires the students to work together over a period of several weeks. For inter- and intra-group communication and collaboration, the German institution will provide an Adobe Connect video conferencing service. Adobe Connect "meeting rooms" will be permanently available for all student groups to work and communicate together. Additionally, Adobe Connect will be used for giving the required presentations as graded deliverables. For intra-group collaboration in terms of document creation and storage (presentations, status reports, meeting minutes, and researched resources), students are required to use the German institution's Microsoft SharePoint infrastructure. SharePoint provides a central document repository and allows simultaneous editing of one document by many authors.

Student consultation during part one and part two will be carried out face-to-face in the respective country, by e-mail, or - to treat all participating students the same - on the Moodle-

based LMS through forums, chats, or Adobe Connect-based virtual lectures.

The previously described services do not require specialist hardware or software equipment but are accessible from a broad range of devices from a traditional Windows-based notebook over Apple to Android or iOS-based devices. Adobe, for example, offers apps for mobile devices to connect to the Adobe Connect infrastructure. All other services mentioned above only require a modern web browser.

3.6 Assessment

10% of grade points will stem from part one of the module, 90% of grade points from part two. This reflects the higher workload and cognitive load of the second part of the assessment.

In part one, the 10% grade points will be awarded upon the correct completion of the self-assessment quizzes complementing the lecture videos.

Part two contains more differentiated assessment forms. 30% (cumulative 40%) of grades will be awarded to the project proposal and its presentation. 25% of grades will be each awarded to the presentation created for steering committees one and two (cumulative 90%). Over the course of part two groups will have to submit four weekly status reports and meeting minutes accounting for the remaining 10% of grades (cumulative 100%), i.e., each week of status report and minutes will earn 2.5% grade points.

The two lecturers will evaluate the deliverables jointly and agree qualitatively how they perceive the groups' results. They will then convert their joint assessment into the respective country-specific grading scheme and system to comply with local assessment and examination regulation (c.f. Section 3.8).

3.7 Module Schedule

The module's course outline and schedule needs to take the differing academic calendars in NZ and Germany into account: NZ institutions operate from mid-February to end of June and mid-July to end of November. German institutions have a mid-March to end of July term and an October to mid-February term. Since the course involves group work and synchronous interaction, a significant amount of semester overlap is required. This overlap is greatest for the terms in the first half of the year, i.e., mid-February to June (NZ) and mid-March to July (Germany).

To make as much time available for joint student group work, the input lecture part will be more condensed for the German students, leaving them one week (week 5) for the self-directed study period in comparison to five weeks (weeks 1 to 5) for the NZ students. To offset any potential negative implications, the German lecturer will make the video-recorded input lectures already available to German students in their semester break and will tell them that – if they want to prepare – they can already do so before semester start.

In week 6 and 7 groups will be formed and students are supposed to generate their project proposals (first deliverable). They will present their project proposals in week 8. Week 9 and 10 is dedicated to group work until week 11 in which the first steering committee presentation (second deliverable) will take place. After that week 12 and 13 are again dedicated to group work with the second and final steering committee (third deliverable) in week 14. At the end of weeks 9 to 13 students are supposed to create and send weekly status reports and minutes of their team meetings to their lecturers.

Figure 1 illustrates the previously described schedule.

Part	Week	NZ students	German students	Deliverables	Grade weight
1	1	Self-directed study	Semester break	Successful completion of self-assessment quizzes	10.0%
	2				
	3				
	4				
	5		Self-directed study		
2	6	Group formation, proposal generation		Project proposal	30.0%
	7				
	8	Proposal presentation			
	9	Group project work		Status report & minutes	2.5%
	10			Status report & minutes	2.5%
	11	First steering committee		Steering committee presentation	25.0%
	12	Group project work		Status report & minutes	2.5%
	13			Status report & minutes	2.5%
	14	Second steering committee		Steering committee presentation	25.0%

Figure 1: Illustration of module schedule illustrating course work, deliverables, and grade weights

3.8 Viability

The success of such a joint teaching project as this depends very much on the ability and experience of the lecturers involved. In this proposed case, the NZ lecturer has taught a degree block course in the German university environment and so would be well prepared for some cultural differences in students' attitudes and learning styles. Also, the German lecturer has had experience in the NZ environment, having studied for a Master's degree in NZ, and has visited a wide number of NZ and other international universities. Some experimentation has already taken place by the lecturers with Adobe Connect-based virtual lectures between two institutes.

NZ students probably appear to have a more casual style in their learning approach, as well as a more informal relationship with their teachers. The German learning environment is typically more formal, with students and academic staff addressing each other by surname and keeping more professional distance. However, German students are more likely to have had recent industry experience with internships undertaken midway through their degree and, in the NZ authors experience in teaching German students, are often more motivated to achieve excellence in their academic assessment. Hofstede (2011) has outlined a cultural dimensions model with six categories which can be useful to compare people, and work through ways of working with mutual respect and shared goals with people from different countries and cultures. The categories in Hofstede's model of Collectivism versus Individualism, the Indulgence versus Restraint, and the Power Distance are arguably reasonably similar for both German students and NZ students. Both countries have a similar history of western democratic principles, and even shared linguistic roots. However, in the categories of Masculinity versus Femininity, Long Term versus Short Term Orientation, and Indulgence versus Restraint, there appear to be some differences between Germany and NZ. German society still indicates more traditional family roles for women, although historically the Eastern German experience differed with women entering the workforce early in equal numbers to men (Dahlerup & Leyenaar, 2013). Also Long Term versus Short Term, and Indulgence versus Restraint, would both place NZ students in the spectrum tending towards shorter term thinking and towards indulgence as a more dominant tendency (Hofstede, 2016). Although both countries are experiencing decline in religious affiliation, 52% of New Zealanders identify with the Christian religion compared to

60% of the German society thus reflecting cultural similarity in this area.

Classes of students from the German institution are more likely to be more homogenous in nature with a small number of international students from other European countries, while the NZ class would typically consist of approximately 30% Maori students, thus reflecting the strong influence of indigenous people (Maori) and Polynesian culture in the NZ cultural environment, as well as a number of international students from Asia.

The unique global delivery of this proposed course, with two lecturers in separate countries, teaching two cohorts of students in different countries, using a blend of face-to-face and online teaching methods, is also modelling to the students in a real-world case some of the very concepts within the actual course. How the lecturers communicate requirements, how the mixed student groups communicate and negotiate, will all reinforce many of the learning outcomes of the IS offshoring course. Students will remain fully enrolled in their respective institutes, within a course within their own degree, while one partner institute will provide LMS "enrolment" for all students as part of the agreement.

Another aspect of viability is that the mutual delivery of the course by representatives of two tertiary institutes is likely to further cement the growing relationship between the two institutes. Already a number of computing degree students from both institutes are studying on exchange at the partner institute. This is likely to increase as students build trust as they become familiar with academic staff at the partner site.

One limitation with the joint delivery is the matching of the learning outcomes and the course definition in each institution as the students may not be enrolling in courses with exactly the same name or a perfectly identical prescription. The NZ tertiary environment is more prescriptive in requiring specific learning outcomes and requiring more formal detailed approval of new courses with a relatively lengthy approval process. The German university allows more academic freedom and allows flexibility through Special Topic or Lecturer-defined courses with a shorter development/approval time. This limitation will be managed through the use of Special Topic courses and, where necessary, some flexibility around assessment overlapping both courses in both institutions.

Further teaching visitations, block courses and sabbaticals by staff at both institutes, and student exchanges are more likely to be arranged and progress forward as the shared global course facilitates sharing of tasks and increased communication amongst the student body and teaching staff in both institutes.

4. RESEARCH OPPORTUNITIES

4.1 Research Topics

Research areas which are likely to be explored during and after delivery of this course would include the investigation of the efficacy of student group work in such a unique environment. There are a number of challenges and good practices from a student's perspective for conducting group-based project work with geographically and culturally distributed undergraduate student teams. Group work is often fraught with difficulties even in normal circumstances when local students work together in teams (De-Dreu & Weingart, 2003). With the proposed course involving two students from each country working in a team of four, this is likely to provide additional special complexities and challenges. Shared collaborative software tools such as Microsoft SharePoint will provide common working data platforms and tools. Asynchronous communication by e-mail and forums on the LMS is likely to be augmented by regular Adobe Connect meetings with careful planning around time differences.

Another area of further research investigation would be to identify and describe challenges and good practices from a lecturer's perspective for running group-based project work with geographically and culturally distributed undergraduate student teams. For example, Google My Maps was used by the NZ lecturer teaching a block course in Germany in 2015 to combine locations and video clips from students in both countries and both institutes. It was useful for all students and the lecturer to see transparently an overview of all participating students and their work in progress and outputs.

A further area of investigation surrounding this global course, using action research, would be to assess the students' perception of their increased readiness for the graduate transition from a global perspective as a result of studying this course. The group work with partnered international students, the dual lecturer delivery including an international lecturer, the use of online digital technology mirroring contemporary corporate usage, and the internationally focussed course content is likely to prepare participating students for internationally-based internships, job opportunities overseas, international business positions, and for greater cultural sensitivity and flexibility within local country graduate job situations.

Research will also take place to assess the impact that intercultural awareness trainings and methods have on student group success. Embedded within the assessment will be some reflection on the group's self-awareness especially in regard to the cultural differences within the group. Using the Cultural Dimension Model it will be possible to survey the students on their perception of their own cultural measurement and their group partners self-evaluation and measurement (Hofstede, 2011).

4.2 Research Approach

Previous research investigating this area of geographically extended classes, with a mixture of video conferencing, online communication tools, LMS, and separated face to face classes has provided an outline of research methodology in this area. When surveying students in this type of course it is useful to separate technological issues from pedagogical issues, however these issues can be intertwined in the viewpoint of the students involved. Quantitative student surveys, lecturer qualitative feedback, and industry evaluations can be combined with an action research approach to evaluate and reach findings for geographically extended and globalised courses (Verhaart & Hagen-Hall, 2012).

However, the research investigating the topics in 4.1 will also aim to apply a methodology consisting of five steps following the research approach of Taras, Caprar et al. (2013). The five steps are: (1) Assessment of Reactions, (2) Assessment of Learning, (3) Changes in Attitudes and Perceptions, (4) Changes in Behaviour, and (5) Assessment of Performance. This approach is likely to be successful due to the high similarities of the overall intentions as well as the positive results the authors have achieved using their methodology. Furthermore, the data gathering includes student and lecturer surveys (mainly after the assessments), evaluations, team report quality assessments by instructors and by students from other teams, plagiarism statistics provided by Turnitin, student course evaluations, and project records on meeting individual and team deadlines.

(1) In consideration of measuring the effectiveness of the module several tests will be performed. Firstly, the students will be asked to provide open-ended comments on their experience with the module. The data will be independently elaborated by a number of the researchers to evaluate the results. Secondly, to ascertain the students' satisfaction with the

course overall, control versus treatment group comparison will be conducted to evaluate possible limitations of the module. Step two will be also applied to the lecturer to measure overall satisfaction and limitations.

(2) To analyse the participants knowledge acquisition, in relation to the learning objectives, three types of learning will be assessed: (a) students' cultural intelligence will get evaluated before and after their participation of the module, (b) a before-and-after comparison of expected versus observed challenges of global virtual collaboration will be conducted to see whether the students' perceptions and understandings had changed over the course of the project, and (c) using a control versus treatment group comparison, to compare students that have attended to the module in comparison to those who have not, to examine performance of the deliverables.

(3) To identify changes in the attitudes and perceptions all participating students will be asked to report their perceived ease of difficulty of working with the students from the other country. This can be evaluated by observing a reduction in the perceived differences and perceived difficulty before and after the joint course.

(4) To measure changes in behaviour all participating students will be asked whether they would do anything different to achieve better results if they had access to an alternative joint course. The results of this section can be used to identify different approaches, such as increasing communication skills, proactive in terms of decision making, or checking the progress of their team members, that were trained or adopted during the participation of the course.

(5) The assessment of the performance can be measured, in the first run, by evaluating and putting the students in contrast with other students using a control versus treatment group comparison. By comparing completed assessments, of attending students and comparative course students, a qualitative analysis could identify potentially higher quality outputs analysed by the lecturer and additional resources.

4.3 Research Issues

The research approach discussed in this paper faces some limitations and issues which will inform the future research goals and conclusions arising from this course delivery and prospective recommendations for other educators seeking advice for the delivery of similar courses.

Firstly, the evaluation of the effectiveness of group work will be attempting to cover the normal aspects and challenges of student group work while also attempting to evaluate the challenges of geographical and cultural extension. A planned self-assessment by students, and a planned evaluation of the final grades will assist the research, however a wider case study approach may also be considered.

Secondly, the investigation into best practices and recommendations for lecturers managing this type of internationally based course will need to take into account the rapid changes in technologies and applications that would assist combining classes across countries.

Research issues and limitations may also affect the planned evaluation of the graduate readiness profile. In order to conclude that students completing this international course will be more likely to be successful in their graduate transition in particular in their globally oriented graduate transition then some comparison may need to be undertaken to a control group or graduates emerging from a programme without such an internationally focussed course.

The outcome from the assessment product - the large presentation and report - should preferably be of some potential commercial value to a real-world company. This raises the issue of commercial evaluation of a consultancy output compared to an academic assessment of an IT or Business output (Skelton, 2006). This issue of the tension between academic assessment and industry evaluation will be carefully balanced in the assessment of this course and in the ensuing research investigation. Principles from the Work Integrated Learning (WIL) field will be useful to explore the synergies and differences between academic assessment of student output and industry focussed evaluation (Coll & Zegwaard, 2011). Students' progress will also reflect the mix of knowledge application of course content, satisfactory navigation of the global course systems, and the industry output value.

5. OUTLOOK

With growing internationalisation together with the phenomenon of tertiary institutes looking for meaningful relationships with offshore partners to build understanding, improve course content in a rapidly changing job market, and prepare their students for an internationalised work environment, this type of blended global course is likely to fulfil these requirements. The content of this global IS course is also highly relevant to both information technology and business students for its value in graduate preparation for a global employment market.

A blended global course, as discussed in this paper, provides a concrete set of shared goals for both lecturers and students, and is likely to lead to further interest by participating students in pursuing further international exposure through overseas exchanges, internships and the international job market. Further research examining attitudes, future plans, and the outlook of participating students is planned for the future as well after the course has been completed.

A good working relationship between participating academic staff from partner institutes is crucial for the success of this type of course and delivery. Some administrative details and trust between institutes will also need to be planned, particularly with the enrolment status of students, and the likely need for students to be "enrolled" in the partners LMS and other learning systems. The motive for ongoing courses of this nature is also useful to explore as there is not necessarily an immediate financial benefit or increased enrolment outcome from the delivery. However, it is likely that demand will become strong from students looking for a broader experience, and a greater preparation for the graduate transition. Universities and tertiary institutes who can offer internationally oriented courses in both content and delivery are likely to benefit from greater engagement from current students, and higher interest from potential students.

6. REFERENCES

Beimborn, D., & Wolf, M. (2013). Challenges in offshore outsourcing relationship management: A Peruvian perspective. In Proceedings of the 19th Americas Conference on Information Systems (AMCIS). Chicago, Illinois.

Beverakis, G., Dick, G. N., & Cecez-Kecmanovic, D. (2009). Taking information systems business process outsourcing offshore: The conflict of competition and risk. Journal of Global Information Management, 17(1), 32–48.

Biggs, D. (2010). Management consulting: A guide for students. Andover: Cengage Learning.

Cadle, J., Eva, M., Hindle, K., Paul, D., Rollason, C., Turner, P., & Yeates, D. (Eds.). (2014). Business analysis (3rd ed.). Swindon: BCS Learning & Development.

Clear, T. (2011). Replicating an 'onshore' capstone computing project in a 'farshore' setting: An experience report. In 6th

IEEE International Conference on Global Software Engineering ICGSE (pp. 161–165).

Coll, R.K., & Zegwaard, K.E. (Eds.). (2011c). International handbook for cooperative and work-integrated education: International perspectives of theory, research and practice. Lowell, MA: World Association for Cooperative Education

Dahlerup, D., & Leijenaar, M. (2013). (Eds.). Breaking male dominance in old democracies. Oxford: Oxford University Press.

Daniels, M., Cajander, A., Pears, A., & Clear, T. (2010). Engineering education research in practice: Evolving use of open ended group projects as a pedagogical strategy for developing skills in global collaboration. International Journal of Engineering Education, 26(4), 1–12.

De-Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. Journal of Applied Psychology, 88(4), 741–749. doi:10.1037/0021-9010.88.4.741

Deng, C.-P., Mao, J.-Y., & Wang, G.-S. (2013). An empirical study on the source of vendors' relational performance in offshore information systems outsourcing. International Journal of Information Management, 33(1), 10–19. doi:10.1016/j.ijinfomgt.2012.04.004

Dhar, S., & Balakrishnan, B. (2006). Risks, benefits, and challenges in global IT outsourcing: Perspectives and practices. Journal of Global Information Management, 14(3), 39–69.

Espinosa, J., Slaughter, S., Kraut, R., & Herbsleb, J. (2007). Team knowledge and coordination in geographically distributed software development. Journal of Management Information Systems, 24(1), 135–169. doi:10.2753/MIS0742-1222240104

Gonzalez, R., Gasco, J., & Llopis, J. (2010). Information systems offshore outsourcing: An exploratory study of motivations and risks in large Spanish firms. Information Systems Management, 27(4), 340–355.

Haried, P., & Ramamurthy, K. (2010). Lessons learned from offshore IT outsourcing: A client and vendor perspective. Journal of Information Technology Case and Application Research, 12(1), 12–38. doi:10.1080/15228053.2010.10856175

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Beverly Hills, CA: Sage.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. Online Readings in Psychology and Culture, 2(1). doi:10.9707/2307-0919.1014

Hofstede, G. (2016). What about New Zealand? Retrieved from https://geert-hofstede.com/new-zealand.html

Huong, N. T., Katsuhiro, U., & Chi, D. H. (2011). Knowledge transfer in offshore outsourcing: A case study of Japanese and Vietnamese software companies. Journal of Global Information Management, 19(2). doi:10.4018/jgim.2011040102

Jain, R. P., Poston, R. S., & Simon, J. C. (2011). An empirical investigation of client managers' responsibilities in managing offshore outsourcing of software-testing projects. IEEE Transactions on Engineering Management, 58(4), 743–757. doi:10.1109/TEM.2010.2090730

Kaka, N. (2009). Strengthening India's offshoring industry. McKinsey Quarterly. (4), 14–15.

Kerzner, H. (2013). Project management: A systems approach to planning, scheduling, and controlling (11th ed.). Hoboken, NJ: Wiley.

Klimpke, L., Kramer, T., Betz, S., & Nordheimer, K. (2011). Globally distributed software development in small and medium-sized enterprises in Germany: Reasons, locations, and obstacles. In Proceedings of the 19th European Conference on Information Systems (ECIS). Helsinki, Finland.

Laxer, C., Daniels, M., Cajander, A., & Wollowski, M. (2009). Evolution of an international collaborative student project. In Proceedings of the 11th Australasian Computing Education Conference.

Mathrani, A., Parsons, D., & Mathrani, S. (2012). Knowledge management initiatives in offshore software development: Vendors' perspectives. Journal of Universal Computer Science, 18(19), 2706–2730.

McDermott, R., Daniels, M., Cajander, A., Cullhed, M., Clear, T., & Laxer, C. (2012). Student reflections on collaborative technology in a globally distributed student project. In Frontiers in Education Conference (FIE).

NASSCOM. (2015). India IT-BPM exports. Retrieved from http://www.nasscom.in/india-itbpm-exports

Skelton, D. (2006). The tension between academic marking and practical evaluation: A review of current practice. In R. K. Coll (Ed.): Conference proceedings: Using cooperative education and work-integrated learning to develop lifelong learning skills. Queenstown, 27-28 April, 54–58. Retrieved from https://nzace.files.wordpress.com/2014/07/2006-queenstown.pdf

Smith, H. A., & McKeen, J. D. (2004). Developments in practice XIV: IT sourcing - how far can you go? Communications of AIS, 31(13), 508–520.

Søderberg, A.-M., Krishna, S., & Bjørn, P. (2013). Global software development: Commitment, trust and cultural sensitivity in strategic partnerships. Journal of International Management, 19(4), 347–361. doi:10.1016/j.intman.2013.04.004

Spohrer, K., Heinzl, A., & Li, Y. (2011). Antecedents of ISD offshoring outcomes: Exploring differences between India and China. In Proceedings of the 44th Hawaii International Conference on System Sciences (HICSS). Hawaii.

St. John, J., Guynes, C. S., & Vedder, R. (2014). The client–vendor offshore relationship: Success factors. Information Systems Management, 31(2), 120–125.

Stetten, A. von, Beimborn, D., Kuznetsova, E., & Moos, B. (2010). The impact of cultural differences on IT nearshoring risks from a German perspective. In Proceedings of the 43rd Hawaii International Conference on System Sciences (HICSS).

Strasser, A., & Westner, M. (2015). Information systems offshoring: Results of a systematic literature review. Journal of Information Technology Management, 26(2), 70–142.

Sudhakar, G. P. (2013). A review of critical success factors for offshore software development projects. Organizacija, 46(6). doi:10.2478/orga-2013-0026

Taras, V., Caprar, D. V., Rottig, D., Sarala, R. M., Zakaria, N., Zhao, F.,. . . Huang, V. Z. (2013). A global classroom?: Evaluating the effectiveness of global virtual collaboration as a teaching tool in management education. Academy of Management Learning & Education, 12(3), 414–435. doi:10.5465/amle.2012.0195

Verhaart, M., & Hagen-Hall, K. (2012). gxLearning, teaching to geographically extended classes. In M. Lopez & M. Verhaart (Eds.): CITRENZ 2012: Proceedings of the 3rd Annual Conference of Computing and Information Technology Research and Education New Zealand, incorporating the 25th Annual Conference of the National Advisory Committee on Computing Qualifications. Christchurch, 8th-10th October, 111–118. Retrieved from http://www.citrenz.ac.nz/conferences/2012/pdf/2012CITR ENZ_Verhaart27-GxLearning.pdf

Vogt, K., Beck, R., & Gregory, R. (2010). Conflict as manifestation of culture in global IS outsourcing relationships. In Proceedings of the 18th European Conference on Information Systems. Pretoria.

Wang, Z., Chen, E. J., Pan, S.-L., & Wu, Y. (2011). Bridging boundaries in offshore outsourcing organizations: A case study of promoting KM system initiatives in Wipro Technologies. In Proceedings of the 44th Hawaii International Conference on System Sciences (HICSS). Hawaii.

Wende, E., & Philip, T. (2011). Instant messenger in offshore outsourced software development projects: Experiences from a case study. In Proceedings of the 44th Hawaii International Conference on System Sciences (HICSS). Hawaii.

Westner, M., & Strahringer, S. (2010). Determinants of success in IS offshoring projects: Results from an empirical study of German companies. Information & Management, 47(5/6), 291–299.

Whitaker, J., Mithas, S., & Krishnan, M. S. (2010). Organizational learning and capabilities for onshore and offshore business process outsourcing. Journal of Management Information Systems, 27(3), 11–42. doi:10.2753/MIS0742-1222270302

Wickham, L., & Wilcock, J. (2016). Management consulting: Delivering an effective project (5th ed.). New York: Pearson.

Wiener, M., Vogel, B., & Amberg, M. (2010). Information systems offshoring: A literature review and analysis. Communications of the AIS, 27(1), 455–492.

Zelazny, G. (2007). The say it with charts complete toolkit. New York: McGraw-Hill.