3 The multi-disciplinary approach to an interdisciplinary virtual exchange

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Abstract

New communication technologies are changing the way we work and communicate with people around the world. Given this reality, students in Higher Education (HE) worldwide need to develop knowledge in their area of study as well as attitudes and values that will enable them to be responsible and ethical global citizens in the workforce they will soon enter, regardless of the degree. Different institutional and country-specific requirements are important factors when developing an international Virtual Exchange (VE) program. Digital learning environments such as ProGlobe – Promoting the Global Exchange of Ideas on Sustainable Goals, Practices, and Cultural Diversity – offer a platform for collaborating with diverse students around the world to share and reflect on ideas on sustainable practices. Students work together virtually on a joint interdisciplinary project that aims to create knowledge and foster cultural diversity. This project was successfully integrated into each country's course syllabus through a common global theme; sustainability. The focus of this paper is to present multi-disciplinary perspectives on the opportunities and challenges in implementing a VE project in HE.

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Furthermore, it will present the challenges that country coordinators dealt with when planning and implementing their project. Given the disparity found in each course syllabus, project coordinators uniquely handled the project goal, approach, and assessment for their specific course and program. Not only did the students and faculty gain valuable insight into different aspects of collaboration when working in interdisciplinary HE projects, they also reflected on their own impact on the environment and learned to listen to how people in different countries deal with environmental issues. This approach provided students with meaningful intercultural experiences that helped them link ideas and concepts about a global issue through the lens of their own discipline as well as other disciplines worldwide.

Keywords: multi-disciplinary approach, interdisciplinary virtual exchange, higher education, sustainability, cultural diversity.

1. Introduction

ProGlobe is a VE project that promotes the global exchange of ideas on sustainable goals, practices, and cultural diversity[6]. It offers a platform for collaborating with diverse students around the world to share and reflect on a global issue. Students from three different disciplines (interior design, tourism, and business) and from four different countries (Canada, Germany, Portugal, and United States) work together virtually on a joint interdisciplinary project that aims to create knowledge and foster cultural diversity. Students in general need to be ready to interact with others in various disciplines. Students in HE worldwide need to develop knowledge in their area of study as well as attitudes and values that will enable them to be responsible and ethical global citizens in the workforce they will soon enter, regardless of the degree (Davies et al., 2018; Denson & Bowman, 2013).

6. www.cove.education/proglobe

2. Common link: sustainability

Environmental and economic issues are intrinsically linked. Oftentimes economies are based largely on natural resources, which are not limitless on our planet. In order to maintain these resources, and therefore our economy as well, we must emphasize sustainability. *Our Common Future* (WCED, 1987) was a document put together by the world's leading scientists, research institutions, and government officials whose goal was to politically bring to light environmental issues. It also recognized the interconnectedness of many of the world's concerns and the need for everyone to work together to solve these issues. Based on the premise of providing for 'our common future', the ProGlobe project coordinators determined that focusing the project on a global issue such as sustainability, would ensure easy integration into curriculum for all project partners, and later adaptation for future project partners. Understanding of sustainability requires knowledge of business practices as well as economics. Sustainability provides the bridge and a common thread that could thoughtfully and intentionally be woven into and throughout a variety of curriculum and projects. Knowledge of sustainable products and processes also requires knowledge of the interactions among people and cultures, which was one of the project goals. The scaffolding project provides a platform for students to reflect on resource consumption and sustainability on a global level. The project involves interdisciplinary student teams from across the globe charged with solving a contemporary real-world design problem, which is developed through real-world interviews and presented at a virtual conference each year[7]. Within the context of collaboration, students learn both leadership and teamwork strategies.

3. Project set-up: internationalization and curriculum integration

Once the common link is identified, many factors that vary from country to country are addressed in order to set-up the VE project, such as institutional

7. cf. https://www.youtube.com/watch?v=fPl_lPYz93M and https://youtu.be/SxHAnE2az4I

and country requirements, technology, and scheduling. In the ProGlobe project, strict adherence to policies for data protection and research ethics are followed early in the set-up of the project as part of the institutional and country requirements. For example, in North America, required compliance with the Research Ethics Board mandates that students provide signed informed consent once they are apprised of the research objective to protect all participants, and the dissemination requirements of the research results to eliminate identifiable information (Conestoga, 2011).

Another critical component in setting up a VE project is technology, as appropriate equipment and training for both faculty and students must be acquired prior to the start of the project, and access to technology varies from country to country. In addition, ongoing maintenance of the project materials, submissions, and digital platform must be scheduled from the beginning of the project, through to the end. To address the technological and scheduling challenges, coordinators as well as their students use synchronous collaborative tools (Zoom and/or Skype) as well as asynchronous tools, such as emails, Google Docs, and Google Spreadsheets. Coordinators also share information on Slack, an online messaging platform.

Which course will the VE be integrated into? The program or course selection depends, not only on the course topic, but on the program outcomes and course outcomes. The VE project should enrich the learning experience toward the intended student outcomes in the course (Rutherford, 2014).

How will the VE be integrated into the program or course? The level of integration of the VE into the program or course must be determined by assessing whether the VE will be an entire course, a project over several weeks, or a one-time experiential task that will ensure the most effective alignment with the program and course outcomes.

What credit will be awarded for the VE? What will the grade weight be for the VE toward the final course grade? The length and complexity of the VE will affect this determination, as will the effectiveness of the VE to meet the program and course outcomes.

4. ProGlobe: a multi-disciplinary approach

However, a new level of complexity is introduced into this consideration of curriculum integration when the VE project includes multiple disciplines, beyond the complexity of multiple institutions in multiple countries. In the ProGlobe VE project, we address this by introducing the unique integration of the VE into each course, program, and/or institution; a *multi-disciplinary approach*. It is determined that flexibility must be provided to each country coordinator (faculty) in order to most effectively align the project with each of the varied discipline foci separately. ProGlobe is a six-week project that is integrated into an existing course, which accommodates this flexibility. To maintain the quality, consistency, and relevance of the ProGlobe project, a balance of fixed versus flexible project components is established. The flexible components include:

- unique alignment of the VE project and goals with the course at each institution;
- unique assignment of the grade weight for the VE project within the total course grade at each institution; and
- unique integration of the course-specific discipline as a focus for the final student presentations at each institution.

The flexibility of these components simplifies the integration of the VE project in order to promote this mode of global and culturally diverse experience for students. The fixed components of the ProGlobe project are contained within a shared student guidelines document to ensure consistency in project instruction, tasks, and student submissions throughout the program by all faculty and all students in all countries. The student guidelines document provides a project plan and schedule (see Table 1), itemized task instruction, and supporting resources and templates for all required student submissions. While the project sequence, instruction, and tasks are consistent, the tasks are broadly focused, which allows students from multiple disciplines to easily adjust their focus for their final submission more specifically to their own discipline.

Table 1. ProGlobe 2019 project management plan: the stages and tasks

Phases	Dates	Task overview	
I	September 30 – October 06	Orientation	Welcome Message and Project Orientation from Coordinators in Canada, Germany, Portugal, and the USA
	October 07 – October 13	Task A: Footprint Analysis	Information on Sustainable Footprints, join one of the five research teams and get acquainted with the field of research
	October 14 – October 20	Task B: Personal Log	Collect personal data about your footprint behavior
	October 21 – October 27	Task C: Cultural Interviews	Conduct an informal interview about a cultural topic
	October 28 – November 03	Task D: Research Interviews	Conduct and record a research interview as well as be interviewed by another student from abroad
II	November 4 – November 10	Task E: Presentation	Prepare a presentation on research topic and cultural interviews, demonstrating learning outcomes
III	November 12	Task F: Virtual Conference	Organize, conduct, and attend a virtual conference
IV	November 18 – November 22	Task G: Documentation and Project Evaluation	Reflect on the research assignments, compile all documents from your country, and complete the online evaluation of the project

This table exemplifies a project management plan that was put into practice in the 2019 ProGlobe project. It shows an overview of the different phases, tasks, and deadlines in this specific project. Please note that some phases run parallel. Each phase has a particular deadline when the task is to be completed and uploaded on the project wiki.

5. Implementation of multi-disciplinary approach into ProGlobe

The implementation of *the multi-disciplinary approach* into the ProGlobe project begins with the review of each program and course for opportunities

of curriculum integration. A review of the program/degree outcomes, course outcomes, and accreditation outcomes in all four institutions of the ProGlobe project reveal common outcome foci in various areas, specifically in cultural diversity and sustainability. For example, for Portugal, the tourism program strives to connect innovation and evolution of tourism with other sectors within a sustainable network. Their course outcomes revolve around social, cultural, and linguistic awareness in sustainable tourism practices. For the United States and Canada, the accreditation requirements are the same and focus on cultural diversity within a global, societal, economic, and environmental context as well as sustainable design, cultural sensitivity, and multicultural influences. For Germany and the business program, the goal is to introduce students to concepts of sustainable business practices. As a result of this review, the ProGlobe project is integrated into the course from each institution where these outcomes best align with the goals of the project.

Given the specificities of each course, each country coordinator decides how they will embed the project into their course syllabus and who will participate. In Canada and the US, the ProGlobe project is introduced mid-semester as a component of a larger design project within the discipline and, therefore, all the students (20) participate. The same holds true for Germany, where all the students (20) also participate. The ProGlobe project for this specific country is the initial project of a larger English communications project. The tourism degree in Portugal; however, implements the project differently from the other three partner countries. The ProGlobe project is a voluntary-based standalone project that students can choose to do for course credit instead of another tourism related project. In 2019, despite the high enrollment rate of that academic year (+/- 40 students), only 30% agreed to take part due to many different factors. Personal motivation was the main factor. Those who chose the ProGlobe project in 2019 as their semester project, did so because sustainability was a topic that highly interested them, while others were more motivated toward other topics.

To ensure and maintain project motivation and commitment throughout the project, it is fundamental that each country coordinator decides the grade weight

of the VE project within the final course grade. This decision is closely related to whether the project is considered a standalone project or a component of a larger project during the semester. It is not surprising that Portugal attributes the highest percentage rate (60%) of its total course assessment to the project given that ProGlobe is a standalone project within the course. The other three countries weighted the project with similar percentages (USA: 25%; Canada: 20%, and Germany: 20%) within their final course assessment given that the VE project is a component of a larger project.

6. Project results and conclusion

To conclude, students in HE need to develop global competencies such as cross-cultural collaborations, and learn how to work on multi-disciplinary teams to build on 21st century skills in order to be competent professionals when they enter the workforce. Multi-disciplinary VE projects like ProGlobe encourage these students to do just that. This VE allows students to learn aspects of teamwork, teambuilding, and project management within an international scope. The nature of the structure and scaffolding in the project aids in project tasks and is clearly seen in student learning outcomes.

This project also provides students with an environmental and social global awareness at a personal level by allowing students to evaluate and reflect on their own sustainable practices as well as at a global level by interviewing students from other disciplines and countries to share and discuss these reflections and understand the issues from different cultural perspectives.

Finally, students gain the ability to link ideas and concepts through the lens of different disciplines through an intercultural experience, which is witnessed in the virtual conference at the end of the project. It is in this conference that students from all countries are able to present common sustainable topics with a focus on their own discipline, while also gaining a multi-discipline perspective by listening to other students from other countries presenting their discipline-focused findings.

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