

Creating an International and Multidisciplinary Learning Community in Higher Education

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Abstract

This applied educational research project aimed to establish a multidisciplinary, international learning community in higher education and to bridge the gap between the PXL-Digital and PXL-Business departments of the Belgian PXL University of Applied Sciences and Arts. This was achieved through the introduction of a new course titled Marketing Automation and the organization of two Blended Intensive Programs (BIPs) in collaboration with international partner institutions.

Using a mixed-methods approach, quantitative data were collected via surveys, and qualitative insights were derived from interviews and brainstorming sessions.

The findings indicate that such a learning community is feasible and fosters valuable learning experiences and competence development among students. Despite organizational challenges, the BIPs and the Marketing Automation course were well-received, providing a strong foundation for future program development.

Keywords: *Blended Intensive Programme, Marketing, Applied Informatics, Higher Education, Internationalization*

1. Introduction

Multidisciplinary learning, which integrates diverse perspectives and methodologies such as experiential learning projects, is increasingly recognized for its capacity to foster innovation and creativity in higher education. This approach encourages students to combine analytical and imaginative thinking, leading to enhanced problem-solving skills and the development of novel ideas (Hero & Lindfors, 2019; Joseph-Mathews et al., 2022). Furthermore, international collaboration plays a crucial role in enriching the learning experience by cultivating essential intercultural competence and communication skills. These collaborative environments prepare

students for an increasingly globalized world and enhance their ability to work effectively with individuals from diverse backgrounds (Guillén-Yparrea & Ramírez-Montoya, 2023).

This paper examines the creation and implementation of an international, multidisciplinary learning community at PXL University of Applied Sciences and Arts (PXL), Belgium. The project aimed to integrate the Applied Informatics (PXL-Digital) and Marketing (PXL-Business) programmes, fostering collaboration between these departments within an international educational setting. This initiative corresponds with the Erasmus+ goal of promoting inter-university cooperation in Europe.

The central research question was as follows: *How to establish a multidisciplinary and international learning community in higher education, specifically for universities of applied sciences?* A central aspect of this initiative involved the design and delivery of two key components: (1) the introduction of a multidisciplinary course titled Marketing Automation at PXL and (2) the organization of two Blended Intensive Programs (BIPs) in collaboration with international partner universities of applied sciences from Croatia and Germany.

2. Methodology

2.1. Quantitative Data

Quantitative data were collected via surveys administered through Google Forms. Participants included two groups: the students who participated in one of the two Blended Intensive Programmes (BIPs), which are short intensive programs that combine international student mobility with innovative learning methods, and Belgian students enrolled in the multidisciplinary Marketing Automation course at PXL. The surveys assessed students' experiences regarding multidisciplinary and international collaboration with fellow students.

Blended Intensive Programs (BIPs): Quantitative data regarding the BIPs were collected via mandatory post-program surveys administered to all participating students. Completion of the survey was mandatory for students to receive credit for their participation. From 2022 to 2024, two BIPs were organized, each time for 14 different students from PXL (specifically targeting students from the PXL-Business and the PXL-Digital departments: seven second-year undergraduate marketing students and seven second-year undergraduate applied informatics students). Both BIPs were organized in collaboration with *Technische Hochschule Rosenheim* from Germany and *Zagreb University of Applied Sciences* from Croatia. Another 16 undergraduate business students from these two universities also participated in each BIP, bringing the total number of students to 30 per BIP.

During a one-week on-campus period, students collaborated on the theme of the metaverse. Students were organized into six mixed groups, each comprising five students drawn from the

three participating universities of applied sciences. The students' objective was to present a new business concept to a jury at the end of the week. Additionally, two online sessions were scheduled before the start of each BIP, which all participating students were required to attend. These sessions covered the theoretical aspects of the metaverse subject, allowing students to concentrate fully on the practical components during the physical BIP week. The BIP was held in Rosenheim (Germany) during the academic year 2022-2023 and in Zagreb (Croatia) during the academic year 2023-2024. The online survey was designed and distributed during both BIPs among the international group of participating students. In the end, a total of 60 students completed the questionnaire, which assessed their experiences collaborating with peers from other international universities and different academic backgrounds.

Marketing Automation: In light of the success of the first BIP, the Marketing Automation course was introduced for the first time during the academic year of 2023-2024 at PXL for students of both the PXL-Digital and PXL-Business departments to maintain the multidisciplinary collaboration between these two departments. In multidisciplinary teams, students were assigned the task of designing a strategic marketing campaign for a Belgian retailer. A total of 73 students took this course and were surveyed about what they liked and disliked about this multidisciplinary course.

2.2. Qualitative Data

Regarding the qualitative data, multiple brainstorming sessions were held with representatives from the participating BIP partner universities, again being *Technische Hochschule Rosenheim* from Germany and *Zagreb University of Applied Sciences* from Croatia, on how to successfully create an international and multidisciplinary learning community. These sessions, which took place online and also offline during the BIPs themselves, allowed findings and experiences from each institution to be shared. Reflections were made on how to effectively set up international and multidisciplinary collaborations and projects for students.

Moreover, before the start of the second BIP in the academic year 2023-2024, an information session was held for interested students, organized by the students who participated in the first BIP. This approach helped to identify areas for improvement, aligning the practical knowledge and experiences of the first BIP with the expectations of the students for the second BIP.

In addition to formal interactions, informal conversations were also facilitated and initiated by students who participated in both the first and second BIP. These informal interactions provided more authentic insights, as students were more likely to express their genuine thoughts and experiences. For example, when a BIP was over, the group of PXL students arranged an informal get-together with their fellow Belgian BIP students and participating supervisors to discuss the strengths and weaknesses of the BIP in a more relaxed setting.

Lastly, to map out the differences and similarities between the PXL-Business and PXL-Digital departments in order to establish an international and multidisciplinary learning community, the ECTS sheets of existing courses from both departments were analyzed.

The insights gained from the activities mentioned above will be further reinforced by similar findings cited in academic literature, which are also referenced throughout the results section.

3. Results

This section presents the key findings, beginning with the promotion of multidisciplinary innovation. Subsequently, the development of core competencies is examined. Finally, organizational and evaluation challenges are discussed.

3.1. Promoting Multidisciplinary Innovation

To develop an international learning community, objectives addressing multidisciplinary collaboration are crucial due to the students' varied academic backgrounds.

Based on the two BIPs and scientific literature, cultural and global competencies should be enhanced by ensuring that diverse cultural (academic) perspectives are consistently addressed. For instance, international partners can contribute by sharing unique cultural and academic habits with students from other institutions, fostering a broader understanding of global diversity (Krebs, 2020; Lourenco, 2018).

Moreover, multidisciplinary collaboration must be promoted by encouraging students from different fields to work together on projects, effectively combining their unique perspectives and skills. To support this process, forming multidisciplinary student groups ahead of time was identified as an effective strategy during both BIPs, and in the literature (Ashby & Exter, 2018).

Survey results from the 60 students across both BIPs indicated that collaborating with individuals from different academic and cultural backgrounds was the most rewarding element. This overall positive sentiment was reflected in their strong willingness to endorse the program: when asked, "How likely are you to recommend this experience to a fellow student?" on a 1-to-10 scale (1 = Not at all, 10 = Extremely likely), the mean response was 9.25.

In addition, critical thinking and problem-solving abilities should be strengthened by engaging students in the analysis and resolution of complex issues using knowledge drawn from multiple disciplines. Each discipline should actively contribute to addressing the problem, relying on the specialized expertise of others (Guaman-Quintanilla et al., 2022).

Finally, innovation and creativity should be prioritized by exposing students to a wide range of ideas and methodologies that transcend disciplinary boundaries. For example, the subject of the metaverse was deliberately selected as the central theme for both BIPs to establish a connection

between multiple disciplines, fostering innovative and creative approaches (Lattuca et al., 2017).

3.2. Competency Development

Within the context of a multidisciplinary, international learning community, various competencies can be developed, encompassing both academic skills and essential soft skills which are important in today's global and multidisciplinary labor market. Again, based on the survey administered after both BIPs to participating students, and based on existing scientific literature, international, multidisciplinary collaborations between students ensure that many different competencies can be developed.

International and multidisciplinary collaboration, the central focus of the BIPs, enabled students to enhance their ability to collaborate and communicate effectively with individuals from various disciplines and academic backgrounds (Spelt et al., 2009). Because of this collaboration, their English language skills were also further developed.

Similarly, intercultural competencies were emphasized, fostering the ability to interact respectfully with individuals from diverse cultural contexts (Klak & Martin, 2003; Levine & Garland, 2015). More specifically, this was done by organizing teambuilding activities for students on the first day of each BIP so each student could get to know the academic and cultural differences of his or her peers.

Moreover, creativity and innovation were also encouraged by promoting the generation of original ideas and solutions through the integration of knowledge from multiple disciplines (Hero & Lindfors, 2019). Digital literacy was another important component, with students gaining proficiency in using digital tools and technologies, particularly through the metaverse theme of both BIPs (Gutiérrez-Angel et al., 2022).

Lastly, self-management and personal leadership are strengthened as students enhance their ability to organize themselves, manage time, and work independently since they had to work within small groups. This also required the students to be adaptive and flexible given they only had one week to finish their project.

These competencies are transferable and valuable in almost any professional context. Effectively integrating these competencies increases the value and impact of education on both the personal and professional levels of students, preparing them for their future careers.

On a more local level, the newly introduced Marketing Automation course for Belgian PXL students again proved that multidisciplinary courses can be enriching. Marketing students gained technical insights, while applied informatics students recognized the value of strategic planning for business objectives. Despite the steep learning curve for marketing students due to complex digital tools, the experience highlighted the necessity of aligning strategic decisions

with technical feasibility. The students' feedback also emphasized the importance of cross-disciplinary communication, collaboration in multidisciplinary teams, and understanding shared terminology.

3.3. Organizational Challenges

Brainstorming sessions with the two international partners, coupled with the practical experience of organizing the two BIPs, highlighted several organizational challenges. Coordinating class schedules among not only two PXL departments, but also two other international partner institutions was particularly challenging, as differences in academic structures, procedures, and internal organization needed to be addressed.

When designing multidisciplinary, international educational activities in which students not only have different academic backgrounds, but are possibly also pursuing a different degree (bachelor or master), it is important to choose a subject that all students are equally (un)familiar with. For example, for the BIPs it was deliberately chosen to work on the theme metaverse, since few to no students had any prior experience with this subject.

While organizational challenges related to class schedules were less significant during the online sessions, these sessions proved less effective for fostering team collaboration. This was because personal interactions were limited in an online format. Consequently, the online sessions were primarily used for preliminary activities, allowing for greater flexibility in the use of time and location.

Given that the BIPs mainly consisted of interactive workshops focused on group assignments, five supervisors proved optimal for managing a group of 30 students. This ensured that there was approximately one supervisor per group to guide students in terms of content and address possible issues. Depending on the content (interactive workshops in small groups or lectures for a bigger group of students), the number of supervisors needed may vary. For traditional lectures one lecturer was deemed sufficient, but for small interactive workshops, it is advisable to have one lecturer per group. Other educational institutions that previously organized a BIP generally followed the same distribution between students and lecturers (Gögele and Kletzenbauer, 2023).

An advisory role from the supervisors was sufficient for students to manage their own practical and logistical matters. During the organization of both BIPs, students received advice on how to reach the foreign partner institutions' campuses, including flight and accommodation suggestions, but the students were free to make their own arrangements. No detailed logistical plan was provided, and students were selected partly based on their previous international experiences, allowing for a minimal practical and logistical framework without issues. A WhatsApp group with the supervisors was available for urgent questions, which showed that students mainly helped each other.

Lastly, it should be noted that the students of the host institution should receive extra motivation to participate in optional social activities. These optional social activities often took place on the hosting institution's own campus, making other activities or returning home after the mandatory classes more attractive for the host institution's students. This was experienced during both BIPs. Therefore, it is recommended that the hosting educational institution considers not organizing all activities solely on its own campus.

3.4. Evaluation Challenges

Harmonization of learning objectives and competencies across participating institutions is essential, despite the variations in educational cultures and methodologies. To ensure fair assessment of the students' performance, a common evaluation framework was agreed upon by all three higher education institutions involved in both BIPs. This included decisions regarding grading and resit possibilities. Furthermore, accreditation requirements from all involved countries and educational authorities must be adhered to. This adherence could create more difficulties in creating a common evaluation framework to grade students.

Lastly, it is crucial that educational professionals possess intercultural competence themselves to effectively communicate and collaborate with colleagues and students from diverse backgrounds and other higher education institutions.

4. Conclusion

In response to the central research question of how to establish a multidisciplinary and international learning community within universities of applied sciences, this project demonstrated a successful approach at PXL University of Applied Sciences and Arts. By strategically implementing a cross-disciplinary Marketing Automation course linking its Digital and Business departments, alongside two international Blended Intensive Programs (BIPs) with partner institutions, it was shown that these interventions effectively enhanced both innovation and vital student competencies, such as international collaboration and intercultural communication. However, significant organizational and evaluation challenges, particularly concerning cross-institutional coordination and harmonization, must be carefully managed to ensure success.

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