Project Based Learning in Communication Design

Creating value for learners and communities

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ABSTRACT: *This paper presents a developing framework aimed to further enhance the delivery of Project Based Learning (PBL) in Communication Design at the School of Design, Otago Polytechnic. Our programme employs PBL methodologies extensively in the second half of the degree. We find that this is a great way to engage learners with live projects, improving both their design skills and techniques and their social skills. The benefits to community groups are wide-ranging, and they come to better understand their own needs, as well as how to work with a designer. This highlights the United Nations's Sustainable Development Goals 4 (SDGs 4) of an exclusive and equitable quality education for our students that targets sustainable development through global citizenship. However, there is a lack of coherent resources and consistency of delivery in these courses. An explorative study was conducted, including a literature review and a range of stakeholders' interviews investigating needs and opportunities of the PBL model. An observation and analysis of existing models and practices were conducted that led to a proposed systematization of best practices in delivering PBL in the classroom. The paper also outlines the various improvements and recommendations that will provide a sustainable, ethical and high value chain that will benefit the communities and stakeholders. These findings were analyzed and informed the proposed initial framework that will be piloted in course teaching for 2021.*

KEYWORDS: *Project-based Learning, Communication Design, Frameworks for Project-based Learning, Education for Sustainable Development*

In Communication Design at Otago Polytechnic, we employ Project Based Learning (PBL) methodologies extensively in the second half of our degree. We find that this is a great way to engage learners with live projects, as well as help learners to see a place for themselves in the world as designers. Our mostly young learners need to work with others – outside of their peer group – and develop professional capabilities during the course of their study. The benefits to the community groups are wide-ranging, and working with students provides them with a better understanding of their own needs, as well as how to work with designers.

This is a case study enquiry that reflects the UNESCO's Sustainability Goal Development 4 (SDGs 4) that ensures inclusive and equitable quality education. As this practice has grown

quickly, I found a lack of coherent resources and consistency in delivery of Project Based learning in the Communication Design degree. The research project was guided by the following questions:

1. What existing project-based learning practices and opportunities in Communication design can we use and improve?
2. What does a successful project-based learning environment in Communication Design look like and how can we assess this?
3. What do we consider as a high-quality project and what are the criteria?
4. What tools and frameworks can we provide lecturers and students to aid in the planning, implementation and delivery of project-based learning in our courses?

The scope of this project only includes the development and implementation of project-based learning in the Communication Design degree programme. This implies that it only includes frameworks, methods and tools applicable to a design degree. Further study may be done to improve the framework that may be applied to other disciplines of design (e.g. Product Design, Fashion Design and Food Design).

Methodology

This project aims to develop a systematic approach to conducting project-based learning in Communication Design. Ethics approval for this project by the Otago Polytechnic Ethics Committee was received on 19th May 2020. Similarly, the research project received approval after consultation with the Kaitohutohu Office on 21st May 2020.

To generate the data in this study, initial observation and analysis of existing frameworks were made. This was a starting point for understanding the context of what, when and how they are being used. Additionally, being a lecturer myself in these courses, I've observed and trialed some of these frameworks and also added some new ones as applicable.

A literature review was conducted to identify possible directions for analyzing data and to give context to what an applicable framework might look like. Some aspects of the research will reference other literature, while other aspects will be based on theory to make sense of the data.

I began by interviewing 3 lecturing staff teaching in project-based learning courses to discover insights, experiences, and approaches to teaching. Additionally, a recent postgraduate student was interviewed to get a student's account of studying in a project-based environment. These multiple perspectives are expected to contextualize the current situation of the project-based learning approach and will provide a rich transcript that will help enhance the framework for future use.

Literature Review

Project-based learning (PBL) has long been used as a progressive and comprehensive instructional approach for learning. More and more educators around the globe believe that engaging students in complex, 'real world' projects enable them to learn academic-focused skills and knowledge while building personal agency to tackle challenges that affect the world around them. Projects focus on the creation of a product or performance, and generally

require learners to navigate their learning by allowing them to organize their activities, conduct research and synthesize their findings.

According to current research, projects are complex tasks, based on a challenging question, that serve to organize and drive activities towards a meaningful project (Thomas, Mergendoller, & Michaelson, 1999; Brown & Campione, 1994). Projects give learners autonomy to solving problems over an extended amount of time, and culminate in realistic products, presentations, and outcomes that address the driving question.

Project-based learning is a form of experiential learning. In this model, the learning task involves the following:

> a time-bound activity which is directed by the project participants or team, who determine the course of the project and the final output in response to a brief of some description. The brief should ideally relate to a concrete or real-world issue which the project participants are required to address. During the course of the project, participants might draw on widely differing disciplines and subject methods to achieve their goals. Student activity revolves around a complex series of interactions between team members over time and draws on a range of key transferable skills such as communication, planning and team working. (Hanney & Savin-Baden 2013, p 8).

This highlights the important characteristics of task specification, time constraints and people or teams, as key factors to identifying a project for learning. These characteristics of learning projects are confirmed in other research literature (e.g. Bell 2010; Graham & Crawley, 2010; Helle Tynala, & Olkinuora, 2006).

Fridrich (2006) suggests that the word 'project' is to be considered a learning task if:

> 1) the process and the results of a project cannot be exactly predicted by the teacher;
> 2) a project is what the project group does, which means the project cannot be repeated and is completely unique;
> 3) and that the project-based learning is not just a different teaching method; it is autonomous, self-responsible problem solving.

However, research conducted by the Buck Institute of Education challenges these considerations and they facilitated the development of a High-Quality Project Based Learning (HQPBL) criteria (Figure 1). This list was a result of a rigorous account and research of hundreds of educators and outlines the factors that equate to a "high quality" project.

The six criteria are: 1) Intellectual Challenge and Accomplishment 2) Authenticity 3) Public Product 4) Collaboration 5) Project Management 6) Reflection. These criteria should at least be minimally present in projects for it to be considered memorable, impactful and meaningful for the learner's learning and development.

In the context of PBL in Communication Design, all projects include these criteria in some varying level. Our project design process includes developing an idea, research and analysis, working with others, evaluation and reflection. Projects are mostly driven by a brief and are time-bound. They follow an exploratory yet open-ended process, and result in a tangible but somewhat unpredictable outcome. Our students are encouraged to try new things, take calculated risks, think out-of-the-box, and be experimental while keeping mindful of the brief. We provide methods, tools and background knowledge and information to help the students navigate their design journey on their own. This is considered 'learning by doing'.

INTELLECTUAL CHALLENGE AND ACCOMPLISHMENT

Students learn deeply, think critically, and strive for excellence

PUBLIC PRODUCT

Student' work is publicly displayed, discussed and critiqued

COLLABORATION

Students collaborate with other students in person or online and / or receive guidance from mentors and experts

AUTHENTICITY

Students work on projects that are meaningful and relevant to their culture, their lives and their future

REFLECTION

Students reflect on their work and their learning throughout the project

PROJECT MANAGEMENT

Students use a project management process that enables them to proceed effectively from project initiation to completion

Figure 1 - High Quality Project-Based Learning criterion, Buck Insitiute of Education, 2018

Purposeful Education

Employing PBL in design education clearly reflects Biesta's (2009) three purposes of education – "*qualification*", "*socialization*," and "*subjectification*" (p.33) and provides multidimensionality of education purpose, thus adding high value to all stakeholders. The projects we do intersect Biesta's (2009) three education functions. *Qualificatio*n requires the individual to "do things", develop skills, knowledge and dispositions; *socialisation* allows the individual entry into existing social orders; while *subjectification* involves the individual developing a sense of self-identity, allowing her to "come into presence." (Carter, 2019).

Through these projects, students participate in learning about people, place and history. It gives them the opportunity to acquire, share and apply their knowledge into a design outcome, which, in turn empowers them and strengthens their understanding of self and purpose while situating them within their society and community.

Research Data

After interviews several themes emerged:

Recognised Benefits

Both lecturers and students agree that there are many benefits to doing project-based learning in design. For one, it enables students to learn techniques and skills that would not be possible or may be hard to replicate in a 'traditional' classroom model. Skills like

communication, working in teams, project management, collaboration and innovation (Musa, Mufti, Latiff & Amin, 2012).

Another identified benefit from this model is that it also recognizes the Māori concept of *ako* meaning both to teach and to learn.

> *Ako* is a reciprocal learning relationship – teachers are not expected to know everything. In particular, ako suggests that each member of the classroom or learning setting brings knowledge with them from which all are able to learn (Keown, Parker, and Tiakiwai, 2005, p.12).

It acknowledges that everyone has *mana* to share – student or staff alike and the project is a *mana-enhancing* experience that everyone learns from. *Mana* at a basic level can be translated as "authority, control, influence, prestige, power, psychic force, effectual, binding, authoritative . . . and take effect" (Hemara, 2000, p. 68). It also has a deeper meaning of 'spiritual power and authority' (Love, 2004). *Mana* is a crucial aspect of Māori perceptions of the world and of the self, with almost all activities linked to upholding and enhancing mana.

Embracing the principles of *ako* and *mana* enable teachers to build caring and inclusive learning communities where each person feels that their contribution is valued and that they can participate to their full potential. In this learning environment and shared experience, everyone is empowered to learn and to grow, to make mistakes and to try again. Teaching staff also benefit from these collaborations and use these learning and teaching experiences as milestones for potential research outputs as well as a way to give back to society (Elmes & Loiacono, 2009) and to the project-based learning pedagogy.

Another advantage of doing project-based learning is its ability to get a higher level of engagement from students. Real projects provide a learning experience that enhance their creativity, drive and curiosity. When students find meaning and purpose to what they are working on, the most likely they persist and succeed.

Inconsistencies in delivery and expectations

Through the interviews, inconsistencies and differences in the delivery of teaching of project-based learning in the studio courses became evident. For example, there were lecturers that knew about the Polytechnic's Code of Professional Practice while others didn't.

It was identified that a systematic approach to project-based learning in the classroom needed to be established. This could be done through a careful curation and development of tools, methods, techniques, and procedures for designing. These frameworks not only aid the teaching staff to deliver a coherent approach to projects but it also provides students a step-by-step guide to help frame their learning goals. This practical, repeatable approach should instigate inquiry, learning and creativity, and not hinder it.

Project Scoping

Another aspect that was identified in interviews is how projects are received, scoped and filtered to be included in the final studio project listing. In Communication Design, we are approached by many different local community groups, business owners, and Polytechnic colleagues with design projects. And these project inquiries come to us from different channels at different times of the year– emails to different staff members, inquiry from website and casual conversations with staff. With a centralized system, project inquiries may be responded to in a timely way. But oftentimes, these projects enquiries remain unanswered unless timely. In this instance, clients or contacts may have moved on with the projects or will not respond when contacted again. The lack of a centralized system proves laborious for both parties (staff and clients). When no one is overseeing the project organization and communication, it can cause frustration.

To solve this complexity, two things are suggested:

1. Develop a more robust framework that summarizes how project-based learning is planned, implemented and delivered in the course. This framework also provides methods and tools for staff and students working in this learning environments.

2. Assign a staff member to collect, curate and assign projects from other staff, with a ce-bntralised system. This singular contact person will receive project inquiries and establish timely expectations; keeping track of these projects in a shareable list for all staff to read and follow. This role could be transferrable once the system has been put in place.

In Communication Design, we've employed the Double Diamond as a method for our design process. This was developed by the British Design Council that suggests four phases in the design process: *Discover, Define, Develop* and *Deliver*. Another model integrated in this new framework is the High-Quality Project Based Learning (HQPBL) criteria developed by the Buck Institute of Education which outlines the factors that equate to a high-quality project.

The new framework (Figure 2) was designed to integrate the abovementioned frameworks and intertwines both course and project expectations. HQPBL is used to initate project scoping. With the numerous project we get every year, we are now able to qualify and filter projects that meet the criteria. The Double Diamond is at the heart and centre of this new framework. This guides our design process and project outcomes. This is supported by a set of Design Toolkit and Methods that aid learners and teachers throughout the project. Evaluation and Handover was added at the end to wrap up the process. We want to be able to reflect on the project with our stakeholders and have a proper turnover of outcomes to clients so they can further review and use them.

This framework is in its initial stages. It is being trialed and tested in the design courses for 2021. We have adapted some of the methods and toolkits in the on-going courses and will continue to refine them as we go. With this new framework, we aim to provide our stakeholders with the best possible experience in working with our students and staff in a PBL environment. After the pilot run, we'll evaluate the model and iterate for future use.
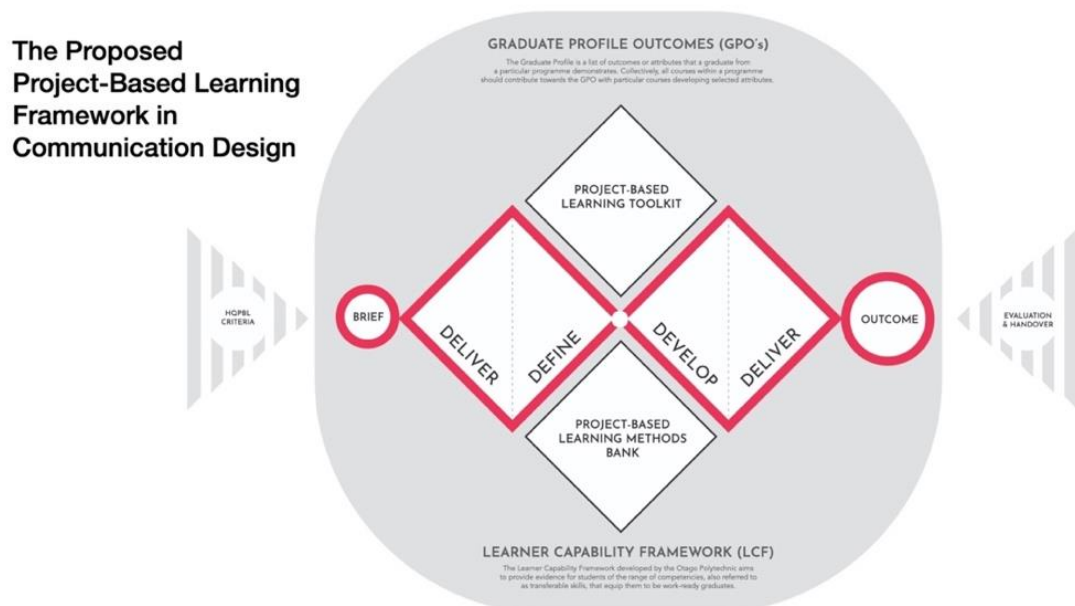

Figure 2 - Proposed PBL framework in Communication Design

Project Based Learning in Communication Design
Futures of Education, Culture & Nature – Learning to Become

Futures of PBL Education

As the future of education is at a crossroad, educators, like us, need to prepare, transform and reorient our practices to help learners develop knowledge, skills, values and behaviours needed for sustainable development which have previously perhaps not been considered in the domain of tertiary education. With UNESCO's Sustainability Goal Development 4 (SDGs 4) which highlights the importance of education, most specifically its target to promote education for sustainable lifestyles and global citizenship, I believe Project-Based Learning in Communication Design offers strategies that support this goal.

As discussed in this paper, the benefits of PBL to all stakeholders are wide-ranging. But first and most importantly, it involves students as active members of the community. By immersing them in live projects, they participate in these learning conversations that address issues that affect their lives and their futures – issues of a social, political or environmental nature. These skills enable learner to participate in a changing and developing world, thus, preparing them to be lifelong learners that serve the community that they are building and are a part of.

By improving the ways in which we conduct PBL in our degree, we create a value chain of sustainable, and ethical ways of collaborating with our community. The PBL pedagogy model can only be successful when we improve our project selections, stakeholders' engagement, project management and learning methods. Although this model is in its initial stages, it is a response to improving education of design for a more sustainable, inclusive future. It is the intention that through this new framework, we set a high standard of collaboration that will secure long-term value and solutions when working with and for communities.

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