

Grad2Work: Using Design Thinking to Create a Postgraduate Learning Programme in a Contemporary Irish Context

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Abstract

This paper describes the theoretical and processual approaches used to design, develop, and run a pilot online non-formal Design Thinking-based learning programme for long-term unemployed postgraduates in Ireland – Grad2Work. The purpose of the programme was to provide a heterogeneous cohort of participants with skills, methods, and strategies to navigate and successfully overcome challenges associated with re-entering the workforce after an extended period in unemployment. The programme design approach was informed by Social Constructivist learning theory ND Kulcsár et al's Career Decision-Making Framework. A mixed method approach was used to gather quantitative and qualitative data from participants at the conclusion of the programme. Analysis of the data indicated that the pilot programme met its objective of preparing participants to progress their career ambitions. It is concluded that incorporating a Human Centred Design mindset, a robust decision-making framework, and Design Thinking processes provide a systematic approach to course design. Modern digital collaboration platforms adequately support efficacious teaching, learning, and collaboration. Seeking and applying participant insights and feedback into the course enhances opportunities for them to use the knowledge and skills acquired. Providing ongoing support for participants' holistic life balance requirements during programme delivery is important for successful implementation. These conclusions will have applications in Design Thinking for Teaching and Learning, using process frameworks to support return-to-employment strategy formation, and transversal skills development for adult learners.

Key words: non-formal education, lifelong learning, transversal skills, design thinking for teaching and learning, decision making process framework

1. Introduction

The research study describes the processes involved in developing and piloting a non-formal online Design Thinking-based learning programme for long-term unemployed postgraduates in Ireland. Traditionally, informal, and formal learning have

been presented as a dyad [1]. Rogers [2] argues that non-formal learning exists on a more-or-less formal continuum (see Figure 1) between the extremes of fully certified formal education, and informal learning, what Eraut [3] terms 'incidental learning' or "the acquisition of knowledge independently of conscious attempts to learn and the absence of explicit knowledge about what was learned" (Reber, 1993, quoted in Eraut [3]) in terms of structure, location, outcomes, and recognition. For Eraut, learning focuses on activities and outcomes that contribute to significant changes in capability or understanding.

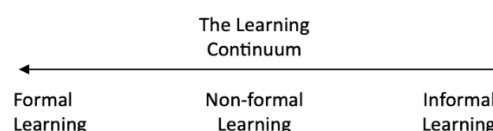


Figure 1. The learning continuum

Non-formal learning then, is planned, structured, and designed to improve skills and competences in a range of domains, but typically does not lead to formalised certification. Significantly, non-formal learning is intentional from the learner's perspective.

Non-formal learning programmes are widely used to build and maintain workforce skills in professional development contexts. However, the process for designing, developing, delivering, and measuring the efficacy of 'born digital' non-formal programmes has received little attention, despite their salience in the COVID-19 and immediate post-pandemic era. This paper describes the process for developing Grad2Work using Design Thinking for Teaching and Learning (DT4TL). Although it may seem of interest to only a small group of specialist educators, it should in fact concern anyone who is involved in course design and delivery for lifelong learners.

2. Context

In Ireland, at any given time more than four thousand people with Irish National Framework for Qualifications (NFQ) Levels 9 (Master's) or Level 10 (Doctoral) degrees are categorised as long-term unemployed, or out of work for 12 months or more.

The Department of Social Protection (DSP), which administers Ireland's social welfare system and oversees the provision of income support and other social services, including a suite of initiatives for individuals in this category to retrain and upskill. Initiatives like JobPath, JobPlus, and the Work Placement Experience Programme (WPEP) for voluntary work experience are designed to enhance the employability of unemployed citizens. However, it is the case that these more general audience programmes do not always align with the specialised return to work needs of the high-skill, high-value people with post-graduate qualifications. The Grad2Work Programme was designed as a pilot initiative to evaluate the feasibility of a bespoke programme to help participants with post-graduate qualifications to re-enter the workforce.

The pilot programme cohort comprised 16 individuals with post-graduate (NFQ Level 9 and 10) qualifications. Living in the north-east region of Ireland, most were made redundant from their previous employment as a result of the COVID-19 pandemic. The remainder left the workforce in the previous three years to take on care responsibilities or other forms of 'invisible labour'. All were on the live register for over 12 months.

The purpose of the initiative was to enable participants to return to the workforce. Its goal was to leverage participants' previously acquired academic and professional skills and competences. The objectives of the programme were: to

- i. enhance participants' marketability and employability potential.
- ii. develop competence in transversal skills.
- iii. advance positive behaviours and attitudes to life-long and life-wide learning.
- iv. increase the likelihood of a successful return to the workforce in a high value role that recognises qualifications, experience, and expertise.

3. Theoretical Framework, Learning Models, Non-Formal Paradigm

Career decision-making is difficult, and outcomes are uncertain. Rather than engaging with the Grad2Work cohort as a homogeneous group with common learning needs, it was more appropriate to consider the participants as a collective of heterogeneous individuals, each differing in motivation, ability, and productivity. In the context of the Grad2Work programme, the complexity of the choices to be made by the cohort about their respective employment ambitions accentuated the need for a theoretically based, systematic approach to course design. Kulcsár et al's framework [4] was selected to inform the curriculum design (see Figure 2). The framework categorises key stages of the career

decision making lifecycle. Kulcsár et al take a process-based approach to articulating how individuals make career decisions, rather than a competencies-based approach (focussing on abilities, aptitudes, and skills) or a values-based approach (emphasising peoples' values, vocational interest and preferences). The framework characterises the steps typically taken to in the career decision making process and sequences them. By understanding the stages and variables in the process, individuals can be prompted to make more informed choices in their employment planning activities. The framework accommodates unpredictability, managing "transitions" (p.4) and other circumstances influencing of career strategy, entry, experience, and exit. The theoretical framework clarified the learning theories, models, and paradigms to be incorporated into the course schema.

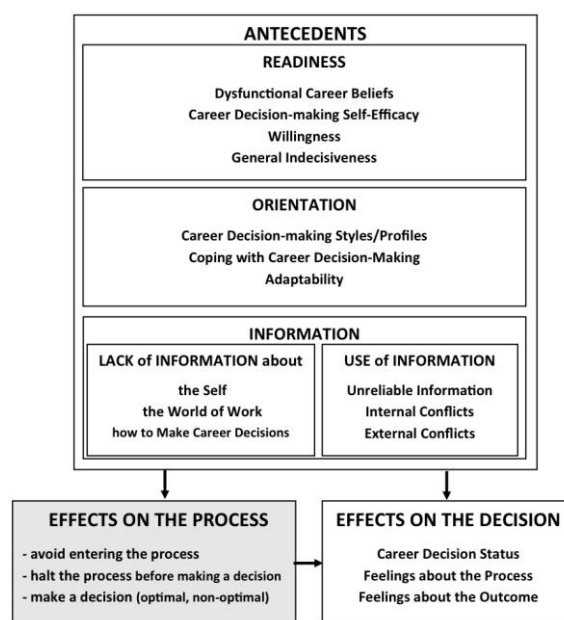


Figure 2. A framework for constructs and assessments of the career decision-making process

By mapping the course design to the relevant stages of the decision-making process, learning interventions focussed on developing transversal skills. Transversal skills are not related to a particular job, task, academic discipline or area of knowledge; they can be used in a wide variety of situations and work settings [5], and can be tailored to participants' specific needs, even in this heterogeneous group setting.

4. Programme Design

Most learning programme designs activities are predicated on the fact that the target audience exhibits a common set of learning needs to be addressed by the education intervention.

In order to address the group’s diverse needs in a holistic and pragmatic manner, a range of Social Constructivist teaching and learning theories, models, and paradigms were referenced or applied in the course design process. These included Kolb’s Four-Stage Experiential Learning Model; Vygotsky’s Zone of Proximal Development; Jonassen’s Cognitive Web; Argyris and Schon’s Single- and Double-Loop Learning; Nonaka and Konno’s Unified Model of Dynamic Knowledge Creation; Wenger’s Components of a Social Theory of Learning Inventory, and Nonaka’s Spiral Evolution of Knowledge Conversion and Self-transcending Process were applied to the course design process.

The Design Thinking for Teaching and Learning (DT4TL) instructional design method was selected to develop the programme. DT4TL is based on the principles of Human Centred Design (HCD). The overarching goal of HCD is to find the right solution for the problem being encountered by people. HCD has five key mindsets: 1) Curiosity invites exploration; 2) Reframing challenges exposes paradigmatic, prescriptive, and causal assumptions and bias; 3) Action-orientation; 4) Exploring possibilities through rapid prototyping and micro-experimentation; 5) Collaboration. Design Thinking is a means to achieving HCD goals using these mindsets. DT4TL synthesises Design Thinking modes, proven Social Constructivist adult learning methods (Kolb, Jonassen, etc.) and aligns them with instructional design best practice to create and deliver learning in an orderly-but-flexible way, at the moment of need for participants.

5. Programme Development

Beginning in October 2021, the Grad2Work programme curriculum development phase took eight weeks to complete. The course materials were developed iteratively, in small ‘chunks’, using the five-stage Empathise-Define-Ideate-Prototype-Test process (see Figure 3).

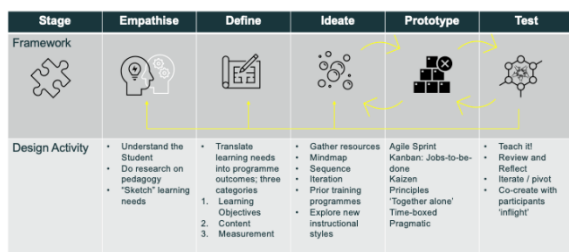


Figure 3. DT4TL 5-stage process uses designed activities to develop relevant course materials

In total, six authors developed content for sixteen 3-hour modules. Over forty associated course artefacts comprising supporting documents, templates, workflows, case studies, reference materials, and further reading were also created, or

sourced, compiled, and integrated into the course portfolio.

The approach enabled the creation of a learning programme that allowed participants to connect their beliefs, their values, their competencies, and their prior learning to the courseware in order to create a unique back-to-work strategic plan. The programme development process will be described in detail in a subsequent paper.

6. Programme Delivery

The programme ran for six weeks from January 29th until mid-March 2022. The learning and skill building components of the course were undertaken in Weeks 1-4 (see Table 1). The final two weeks of the programme were earmarked for experiential practice in a work placement.

During Weeks 1-4, the facilitator, guest contributors, and the pilot participants met online from 10am-1pm each day for four days, a total of 48 contact hours over the duration of the course. The remaining day of each week was designated for personal development work, study, and reflective practise.

The programme used a judicious mix of presentation, workshop, and guest seminars to support the development of employability skills. Four career development related themes were incorporated in the course: 1) Career design skills development; 2) Well-being and resilience; 3) Innovation and entrepreneurship; 4) Creating a digital profile and online presence for recruitment and employment purposes.

Table 1. Grad2Work pilot course timetable

Day	Topic	Presenter	Contact hours
Monday	Introducing Design Thinking for Return to Work	Michael	3
Tuesday	Design Thinking Workshop 1: Empathise	Michael	3
Wednesday	Design Thinking Workshop 2: Define	Michael	3
Thursday	Study Day		
Friday	Wellbeing & Resilience	Annemarie	3
Monday	Postponed - technology issues	Michael	0
Tuesday	Design Thinking Workshop 2: Define	Michael	3
Wednesday	Design Thinking Workshop 2: Define	Michael	3
Thursday	Study Day		
Friday	Wellbeing & Resilience	Annemarie	3
Monday	Postponed - technology issues	Robert	3
Tuesday	Design Thinking Workshop 3: Ideate	Paul & Karen	3
Wednesday	Design Thinking Workshop 3: Ideate	Paul & Karen	3
Thursday	Study Day		
Friday	Wellbeing & Resilience	Annemarie	3
Monday	The role of Chambers of Commerce in new business development	Robert	3
Tuesday	Employability Skills	Edel	3
Wednesday	Design Thinking Workshop 4: Prototype your employment value proposition	Michael	3
Thursday	Study Day		
Friday	Wellbeing & Resilience	Annemarie	3
Monday	Building your online profile using LinkedIn	Michael	3
	Total Contact Hours		48

In accordance with contemporaneous COVID-19 health and safety protocols in place in Ireland, and to mitigate the impact of course participation in circumstances including care responsibilities, as well as mobility considerations, the four-week educational component of the programme was delivered online

using the Microsoft Teams communication platform and the Mural collaboration environment. A private access document repository was established on Google Drive to share recorded videos, presentations, templates, and worked materials. All of the content used over the course of the programme is ‘persistent’. Participants retain access to the Google Drive document repository, and the materials remain available for re-use should they be required.

Fifteen of the sixteen participants in the pilot group successfully completed the course. One participant became ineligible to continue the programme when they gained employment, therefore achieving the programme’s primary objective.

7. Measuring Impact

The efficacy of the pilot programme was evaluated using a mixed methods approach to gather data across three dimensions. The first two data points involved capturing self-assessed quantitative and qualitative data from at the immediate conclusion of the course. Participants were invited to share their views on the course via an online survey tool. Thirteen participants (80 per cent) chose to complete the survey.

A quantitative Kirkpatrick Level 1 questionnaire was used to evaluate participants’ satisfaction with the non-formal learning intervention; a Kirkpatrick Level 3 qualitative data gathering approach was employed to evaluate the extent to which participants practiced the skills acquired during the course in their return-to-work related activities. The Kirkpatrick Level 1 component of the online survey comprised five 5-point Likert-style questions designed to capture participants’ reactions to the education intervention. This level been described as a “measure of (internal) customer satisfaction” (Kirkpatrick and Kirkpatrick, 2006, p.22) [6]. In order to evaluate participants’ self-assessed changes in behaviour as a result of the learning intervention (Kirkpatrick Level 3), they were asked a series of open-ended questions in the survey. Free-text boxes were provided to enable participants to answer with the freedom and space to provide as much or as little information as they preferred.

The third data point was collected six weeks after the programme concluded in May 2022. With all 16 participants’ permission, DSP caseworkers reported on the pilot cohort’s employment status, and any further feedback the participants communicated based upon their lived experience of applying their return-to-work strategy in real-world scenarios. In cases where participants had acquired jobs, their status was registered as ‘Full-time employed’.

Figure 4 shows the participants’ employment status in May 2022. According to the data, eleven participants were in a category of employment; five participants remained unemployed. Two of the five indicated that completing the Grad2Work programme had enabled them to clarify their employment objectives: each one had decided to seek appropriate

further training opportunities to reskill or upskill in relevant disciplines. The remaining three participants

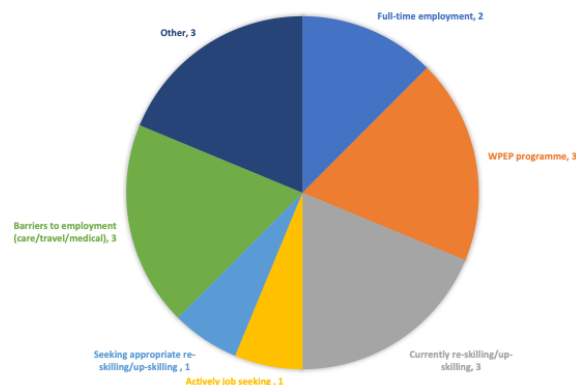


Figure 4. Grad2Work pilot participants' employment status, May 2022 (n=16)

indicated that barriers including travel-related challenges, medical concerns, or care responsibilities mitigated against their capacity to engage in job seeking gain employment in the short to medium term.

8. Discussion

Participants were generally positive in their evaluation of the programme, and its capacity to enhance their employability. Figure 5 illustrates participants’ satisfaction with the programme at its conclusion.

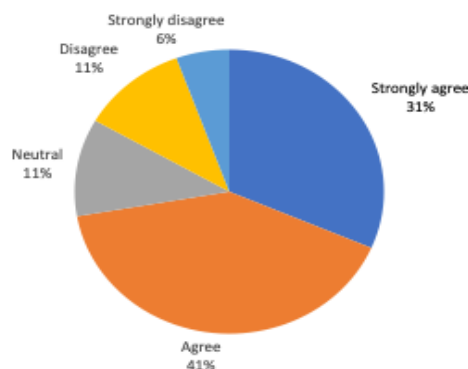


Figure 5 Participants' satisfaction with the Grad2Work programme (n=13)

One commented that they found the course “highly beneficial”. Another participant stated that they were “delighted” to take part in this programme. A third asserted that having the course objectives clearly identified “up front helped [them] to understand the journey [they] are taking” and enabled them to “monitor their progress to the end goal”.

Some found that using the Design Thinking tools a positive experience, with the potential to provide “clarity and direction on how to move forward” in their careers. However, other respondents claimed that it would take more time to use some of the tools.

According to Kirkpatrick and Kirkpatrick, Level 3 measures that learning has taken place "...when one or more of the following occurs: Attitudes are changed. Knowledge is increased. Skill is improved. One or more of these changes must take place if a change in behaviour is to occur."

An important stakeholder objective from this pilot was to study the feasibility of the programme. Running it as a small-cohort, short-term deployment provided an understanding the logics, and dynamics and mechanics of how a large-scale (regional or national) project implementation might operate. A key component of feasibility evaluation was to gather participants' feedback on their lived experience of undertaking the programme. The benefit of this approach is that participants' views on where the course could be improved can be incorporated into future iterations of the course, building congruence between programme intention and outcome.

With regard to the instructional component of the programme, a number of the cohort suggested that Teams-based break-out discussion rooms might be arranged for "personal reflections, sharing and connecting with peers". They felt this would "add hugely for processing emotional, personal and professional learnings and experiences" and may help to build confidence with those who "don't volunteer themselves for sharing / discussions so easily." One participant considered that it would be helpful for course facilitators to know more about each participant's background "provided that was allowed" to ensure topics were relevant to the majority of the learners. In a similar vein, it was proposed that future courses would benefit from greater input from participants' articulating their specific skills needs and wants.

The design rationale for including an opportunity for participants to join an organisation operating in an area related to their preferred industry or market segment was to support skills practice reinforcement in a professional environment, and to introduce the participant to a network of practice that might improve their employment opportunities. However, five participants identified the two-week work placement duration as a weakness of the pilot programme. When operationalising this element of the plan, it emerged that both participants and prospective work placement employers considered that a two-week engagement was insufficient to provide value to either the programme participants or the prospective host organisation.

A consensus emerged that a placement with substantively longer duration (for example 3-6 months) would provide a more beneficial opportunity for participants to engage in a workplace environment, and for host firms to positively engage with the participants. Similarly it was suggested that managing a placement through the standard DSP sponsored Work Placement Experience Programme (WPEP). WPEP is for jobseekers that are currently

getting a qualifying social welfare payment and who have been unemployed for six months or more. The perception was that the scheme is already well understood by DSP caseworkers, service users, and prospective employers. Therefore it would provide less bureaucracy and better value for money for both Grad2Work participants and host companies.

It was noted that travel to or from a work placement might increase financial and travel-time burdens on participants, especially those with care responsibilities. Additionally, two DSP caseworkers reported that COVID-19 mitigation measures caused a number of firms to decline joining the programme because of barriers created by. DSP caseworkers subsequently reported that firms independently made arrangements for Grad2Work participants to join them under the provisions of the WPEP scheme.

9. Conclusion

This paper describes an innovative approach to developing a non-formal digital education programme for long term unemployed graduates in Ireland. Based on the data and the responses from participants and prospective employers, this approach is validated by pilot testing it with a cohort drawn from the target audience. These findings imply that the approach will have applications in future Design Thinking for Teaching and Learning projects, and that there is potential for process frameworks to support return-to-employment strategy formation and transversal skills development for adult learners.

It shows the value of a Design Thinking based approach to continuing professional development for postgraduates. A multidisciplinary approach to developing a programme, which draws on a processual theoretical career and learning theory framework is efficacious in achieving measurable learning outcomes for participants. A conspicuous strength of the approach was the use of online communication, collaboration, and information sharing platforms. This allowed for community of practice formation among participants, and on-going refinement of programme structure, tools, and goals in response to learners' skills development.

A key insight from this non-formal learning intervention was that participants who actively applied their purposefully acquired skills to create a 'back-to-work' plan reported that the course was beneficial to them achieving their goal. Using Vygotsky's scaffolding techniques to support skills' development [7] and creating common purpose by building a community of practice [8] are effective strategies to sustain participant motivation and momentum for successful course delivery and participant benefits' realisation.

For practitioners, design thinking for training and development enables flexibility in learning programme design and delivery, particularly in maintaining alignment between course outcomes and

participants' individual expectations. While still relatively understudied, projects like Grad2Work provide research evidence on how to appropriately adapt learning theories and pedagogies to design and deliver an effective and beneficial course in a sophisticated, multifaceted, situational online learning environment.

10. References

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