Assignment 3b: Design Reflection

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To develop foresight, you need to practice hindsight (McGonigal, n.d.), but hindsight requires humility and honesty. Unfortunately, neither humility nor honesty are universally present across the population. Instead, the Five-Factor model categorizes both as subcomponents of agreeableness, a normally distributed trait (Ashton & Lee, 2005). Working fastidiously on a complex challenge and discovering a productive and presentable solution requires expressions of high trait conscientiousness and low trait agreeableness (Soto & Jackson, 2013). But the process of understanding the needs of stakeholders and the ability to deconstruct prototypes and the thought-process used during ideation (d.School, 2018) instead requires high trait openness and agreeableness. Building a design thinking team that balances trait expression with individual behaviours is a monumental task. However, by endorsing the perspective of numerous stakeholders, designers can better empathize with others (Baker & Moukhliss, 2020), recognize and articulate their own tacit beliefs (Rowland, 1992; Cox & Osguthorpe, 2003), and acknowledge lived experiences influence proposed solutions (Archer, 1965). This paper reflects on the design thinking process used in our earlier partner assignment and invites us to reflect on peer feedback and summarize our reflections as a set of guiding principles. Our design thinking process proposed revisions to the user experience of National Coaching Certification Program (NCCP) cycling coaches and coach developers with an appreciation for the geographic, technological, and cultural challenges Canadian's currently face.

The reflective nature of this assignment helps our cohort fulfill the design thinking testing phase. The collaborative process of prototyping a design solution of mutual interest with our partner and acknowledging feedback from two peer reviewers enacted the principles of action research (Boling, 2010). Due to the lack of resources and time, components of action mapping helped us focus on what we could change in the short run (Moore, 2016). And finally, the process of sharing our solution with others, including our professional colleagues, helped us understand Davis' (1989) Theory of Action,

whereby the perceived ease of use and usefulness of our solutions affect the likelihood of future adoption.

Transitioning this previous work into generalized knowledge and creating guiding design principles allows us to humbly present a more comprehensive design case precedent (Oxman, 1994) and help other instructional designers succeed in similar situations (Argyis et al., 1985). In addition, the peer-review process showed us that when our design challenges and assessments are comprehensive, stakeholders from other sports and jurisdictions often see similar difficulties in their communities, creating an opportunity for collaborative dialogue and communities of practice (Lave & Wenger, 1991). Therefore, we posit to remain focused on what we can change now, build momentum, and get started, but structure things in a way that supports our long-term vision. Therefore, to help us achieve our long-term vision of creating interactive, iterative, and practical training experiences, we propose the following design principles for blended learning updates to the Coach's Association of Canada's (CAC) NCCP coach training program.

Focus on the end-user because when the customer wins, everyone wins. Improving customer service, using detailed and timely surveys, and analyzing student participation and success metrics can help us understand learner and facilitator experiences. Enacting this principle may appear as pre-module quizzes that help learners assess strengths and weaknesses. Universal Design for Learning opportunities may also encourage learners to develop and demonstrate their abilities using preferred modalities (Mayer et al., 2014). Reinforcing the competency-based nature of the NCCP throughout the formative and summative evaluation process may also remind learners of their central position in the process. This design principle complements the Dick & Carey model that focuses on understanding learners and their context. A pre-and post-assessment can help all stakeholders acknowledge if the learner's needs have been met (Heaster-Ekholm, 2020). According to Dousay (2017), the Dick & Carey model is effective in online learning contexts, matching the growing need to shift coach training to eLearning and online

facilitated modalities in the hopes of traversing the logistical and financial complications of Canada's geographically diverse population. However, Nelson and Stolterman (2012) remind us that tools merely complement the design process, not guide it. Therefore, empathetic interviewing must precede the brainstorming phase (Lachheb & Boling, 2018). To support this compassionate process, Blooms' taxonomy of questions can help instructional designers capture comprehensive reflections from a wide range of stakeholders (Crichton & Carter, 2017) and depict a better understanding of the customer's learning experience.

By understanding the needs of stakeholders, we can design solutions for the real world. Neilson's (1994) second design heuristic reminds us to speak the user's language, use familiar concepts, and avoid confusing jargon (Egnal, 2015). Therefore, problem framing and clear communication appear common challenges. Papert & Harel (1991) argued that students could build understanding and knowledge by developing tangible and shareable products, helping students externalize and express their ideas (Crichton & Carter, 2017). In a moment of meta-cognition (Goldman, 2012), this LRNT524 assignment uses Papert & Harel's (1991) constructivist learning exercise to help our cohort explore the complex nature of instructional design through a real-world scenario that is important to each of us. The diverse nature of our cohort's submissions and the energy and attention each student committed to the project despite scheduling challenges associated with the holiday season demonstrated the effectiveness of this design choice by our professors.

Clearly articulate the learning outcomes and coach competencies. For example, Neilson's (1994) eighth usability heuristic suggests that designs should not contain irrelevant information because every extra character competes for attention. Currently, the NCCP's evaluation criteria employ a convoluted 1-2-3 rubric whereby the failing guidelines are listed first, followed by the minimum standards, and finally, the exceeding expectations. Numerous requests have been made to the national council to streamline

the evaluative criteria, as learners and evaluators alike struggle to understand the expectations of the assignments.

Moreover, evaluative criteria must differentiate between minimum required competencies and nice-to-haves. Evaluators empowered with more explicit criteria can better acknowledge how and why coaches meet the minimum standard, building coach confidence more effectively through the evaluation debrief process. Isolating nice-to-haves also invites evaluators to co-create a professional development action plan with a newly certified coach, allowing them to select a topic they wish to develop over the coming season. Papert (1980) reminds designers to ask more of students and give them time to explore their interests. Learning environments with high degrees of autonomy and learner agency can also help students narrate their identity formation and develop a critical awareness of their reflective and coaching practices (Morris, 2018). Therefore, evaluators can use clear minimum standards to build coach confidence and list professional development topics in secondary documents to inspire autonomy and agency.

Clearly illustrating the training and certification pathway also demonstrates care and attention to the needs of the stakeholders. By using a visual and interactive roadmap that articulates the topics, learning outcomes, and connection between formative and summative evaluations, stakeholders can monitor their progress, request timely feedback, and remain focused on their chosen destination (Neilson, 1994).

Use simple language throughout this entire process. When learning environments use consistent standards and definitions, it reduces confusion and helps stakeholders follow conversations (Neilson, 1994). Simple language also illustrates a student and a learning-focused approach, better capturing learner interest (Dolasinski & Reynolds, 2020). Dousay (2017) reminds us to break down complex language and make expert knowledge accessible, avoiding cognitive overload and Dale's (1958) 'Clear Only If Known' (COIK) theory.

Allow students to demonstrate their competencies using flexible submission formats. For example, activating Universal Design for Learning methods (Meyer et al., 2014) encourage students to 'choose their own adventure' and illustrate their abilities using a variety of modalities (video, text, quiz, narration, in-person, letter to self). This method complements learner autonomy and agency promoted by the NCCP's core competencies (valuing, critical thinking, problem-solving, interacting, and leading). Although pedagogical environments can be too flexible, leaving students feeling unsupported and confused (Dron, 2014), an optimal balance encourages students to use and switch freely between as many tools as possible (Lachheb & Boling, 2018).

Delivering content in multi-model and flexible formats also invites stakeholders to use flexible submission formats, heightens comprehension, and promotes new technologies. Although selecting learning technologies is complicated, even Bates' (2005) ACTIONS module for distance education does not ensure success; there is no doubt that technology can help overcome some logistical, financial, and geographical limitations. When learning 'hard' skills, like teaching body position and other fine-motor movements, 5–18-minute microlearning sessions optimally match the processing characteristics of cognitive skills learning (Dolasinski & Reynolds, 2020). For soft skill development, peer-teaching (or teach-back) invites students to mentor one another and maximize social constructivist attributes of the learning environment (Dron, 2014). Introducing iterative changes over time that consolidate group activities and refine open education resources may help policymakers endorse higher home-study participation rates and welcome more Canadians to participate in the program.

Finding a path forward during these culturally and technologically fluid times requires an empathetic approach, innovation, flexibility, and articulate summative evaluation standards. So long as the guiding principles of the CAC's five core competencies and seven coaching outcomes (CAC, 2021) remain paramount, Rapid Prototyping Models can help us try out new iterations and methods (Tripp & Bichelmeyer, 1990). These new solutions do not need to be perfect but reusable and available as soon

as possible (Arshavskiy, 2013). After all, the sports community thrives on challenge, change, and goal-oriented journeys. Building upon the CAC's foundational competencies and the guiding design principles discussed in this paper, perhaps we can transition from goal-oriented to values-based sports experiences. By creating a more ample opportunity for collaboration among all stakeholders, maybe we can better showcase the true power of sport 'as a story to teach our children how to act in the world.'

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