



## **Cultivating change leaders for a better world: RRU's Learning, Teaching and Research Model (LTRM)**

### **LTRM Working Group**

Brigitte Harris, Jennifer Walinga, Elizabeth Childs, Jacalyn Raby, Geo Takach, Frances Jorgenson, Roberta Mason, Deb Zornes, Charlotte Gorley and Vivian Forssman

**Special contributions:** Geoff Bird, George Veletsianos, matthew Heinz, the Research Advisory Committee, Doug Hamilton, Niels Agger-Gupta, Mary Bernard, Brian Belcher, Leslie King and Robin Cox.

### **Acknowledgement**

Royal Roads University acknowledges that the campus lies on the traditional lands of the Xwsepsum (Esquimalt) and Lkwungen (Songhees) ancestors and families who have lived here for thousands of years, sharing these lands with the neighbouring Scia'new (Beecher Bay) and T'Sou-ke (Sooke) Nations. It is with gratitude that we now learn and work here, where the past, present and future of Indigenous and non-Indigenous students, faculty and staff come together.

## Contents

Executive summary .....	1
1. Purpose and context .....	3
1.1 Purpose of LTRM .....	3
1.2 From LTM to LTRM .....	3
1.3 Theoretical foundations .....	5
Social constructivism .....	5
Social constructionism .....	6
UNESCO’s five pillars and transformation .....	6
Interdisciplinarity and transdisciplinarity .....	7
2. LTRM: Three core categories of attributes .....	10
2.1 ACT .....	10
2.2 A = Applied and Authentic .....	10
Interdisciplinary and transdisciplinary .....	11
Experiential and participatory .....	11
Flexible and individualized .....	11
Outcomes-based .....	12
Openly practiced .....	12
Applied and Authentic in our practice .....	13
2.3 C = Caring and Community-based .....	14
Inclusive and diverse .....	15
Learning community-based .....	15
Supportive .....	15
Team-based .....	16
Co-creative .....	16
Place and virtual space-based .....	16
Caring and Community-based in our practice .....	17
2.4 T = Transformational .....	19
Socially innovative .....	19
Respectful of Indigenous peoples and traditions .....	20
Reflective .....	20

Impactful .....	20
Transformational in our practice .....	21
2.5 LTRM in context .....	22
3. Next steps.....	24
3.1 Continuing conversations .....	24
3.2 Evaluation.....	24
References .....	25
Appendix A: Research approach and methods.....	29
Appendix B: Communications plan.....	34

## Executive summary

This document proposes revisions to the current Learning, Teaching and Research Model (LTM), to become what we now call the Learning, Teaching and Research Model (LTRM) for Royal Roads University. It details what the LTRM Working Group learned when it conducted an action research project. We engaged in an extensive, iterative and inclusive consultation with members of the RRU community about their learning, teaching and research practices, and refined the results into a model comprising key values and attributes and grounded in pedagogical theory. We also identified trends in higher education that support and align with how we work together to create highly effective learning environments at RRU. This LTRM is not a prescriptive document; it does not ask you to abandon practices that you know are engaging and effective. Rather, it invites you to reflect on your practice, and to continue both our collective learning and our conversation on what values and attributes define our work at RRU.

This project arose when the shifting post-secondary education landscape, rapidly changing educational technology and new arrivals to RRU prompted faculty and staff to call for the revision and renewal of the original LTM. Our extensive and multifaceted consultations provided two foundational points to start. First, the new LTRM needs to recognize research explicitly as a core part of our mandate and our work, as well as the essential services provided by RRU staff to support all of our efforts. Second, in identifying RRU's core values, our LTRM must be more capable of being communicated more clearly and succinctly to our diverse stakeholders and audiences. Thus, this LTRM retains essences of the original LTM, while including research and service as primary components, and embodying core values that we perceive are shared at RRU—all in a messaging framework that aims to be simple, cohesive and ultimately, powerful and memorable.

This LTRM can be distilled to three core categories of values, or attributes of practice, that express what RRU faculty, staff, students, alumni, advisory councils and other community members perceive as unique and forward-thinking in our learning, teaching and research, and the diverse and indispensable services that support them: *applied and authentic, caring and community-based, and transformational*. Thus, the LTRM is organized into these three core categories, which together form the acronym, ACT. Each category contains attributes that describe key practices within that category, as shown in Fig. 1 below.

Table 1. RRU's Learning, Teaching and Research Model (LTRM)

<p><b>Applied &amp; Authentic</b></p>	<ul style="list-style-type: none"> <li>• Interdisciplinary and transdisciplinary</li> <li>• Experiential and participatory</li> <li>• Flexible and individualized</li> <li>• Outcomes-based</li> <li>• Openly practiced</li> </ul>
<p><b>Caring &amp; Community-based</b></p>	<ul style="list-style-type: none"> <li>• Inclusive and diverse</li> <li>• Learning community-based</li> <li>• Supportive</li> <li>• Team-based</li> <li>• Co-creative</li> <li>• Place and virtual space-based</li> </ul>
<p><b>Transformational</b></p>	<ul style="list-style-type: none"> <li>• Socially innovative</li> <li>• Respectful of Indigenous peoples and traditions</li> <li>• Impactful</li> <li>• Reflective</li> </ul>

Situated in its wider context, this LTRM expresses *how* we work at RRU and connects to both *what* we learn, teach and research (common threads running through our work, such as leadership, social innovation and sustainability), and most importantly, *why* we work at RRU, to help to create LIFE.CHANGING learning experiences in service of positive social change.

This document contains three parts: Part 1 describes the model's evolution and theoretical foundations, Part 2 sets out the model itself, and Part 3 charts the next steps in its ongoing evolution. Appendix A sets out our research methods.

## 1. Purpose and context

### 1.1 Purpose of LTRM

This Learning Teaching and Research Model (LTRM) document offers practitioners—staff, faculty, students, alumni and others—a report on how the LTRM emerged, what it is, how its categories and attributes are defined, and how these apply to learning, teaching and research at RRU, and the services supporting them. Like RRU's original Learning and Teaching Model (LTM, 2013), the LTRM is “not intended to be a static, rigid, and prescriptive entity” (Hamilton, Grundy, Agger-Gupta, Veletsianos, & Márquez, 2017, p. 19). Rather, the LTRM is meant to inspire ongoing engagement, dialogue, creativity, meaning-making and debate among the wider RRU community about what we do, why we do it, and how it contributes to our unique learning environment, culture and practice. The LTRM invites you to reflect on your practice, and to continue our collective conversation and learning.

This document details what our LTRM Working Group learned through an extensive, iterative and inclusive inquiry process in which we consulted members of the RRU community about their learning, teaching and research practices, and then refined these into a model comprising key values and attributes, and grounded in pedagogical theory. We also identified trends in higher education that support and align with how we work together to create highly effective learning and research environments. This first part sets out the model's evolution and theoretical foundations.

### 1.2 From LTM to LTRM<sup>1</sup>

The LTM/LTRM is RRU's signature pedagogy, which Shulman (2005) defined as the distinctive teaching and learning practices characterizing the education of future practitioners in a given field. In addition to teaching knowledge and skills to future practitioners in distinctive ways, signature pedagogies also foster a particular way of seeing the world, one that includes “professional attitudes, values and dispositions” (p. 55) distinct to the profession. Thus, these pedagogies also have an inherent future orientation, shaping emerging practitioners and, indeed, the future direction of the profession. Although many professions—for example, nursing, architecture and law—have distinct signature pedagogies, RRU's signature pedagogy spans *all* of its professional programs to align with its mission to provide “teaching and research [that] transforms careers and lives by solving problems and creating opportunities in the world” (Royal Roads University, 2017, p. 2).

---

<sup>1</sup> Learning and Teaching Model (LTM) refers to the original LTM (Hamilton, Márquez, & Agger-Gupta, 2013). Through this revision and renewal project, the name of the Learning and Teaching Model (LTM) shifted to the Learning Teaching and Research Model (LTRM).

The original LTM stated that RRU's mandate and past practice had led to a set of lived principles for teaching and learning that were foundational across all programs, and focused on:

... producing citizens of the world who are passionate, determined, and confident lifelong learners, integrated into a broad network of like-minded learners, and who can confidently manage and resolve complex, real-life problems—the kinds of holistic, contextualized, multi-dimensional issues that Ackoff and Greenberg (2008, p. 27) refer to as “messes” because they are seldom simple, non-interactive, and isolated (Hamilton, Márquez, & Agger-Gupta, 2013, p. 1).

The LTM aimed to capture what made teaching and learning distinctive at RRU. It identified eleven elements that were common to RRU's approach to teaching and learning: outcomes-based, technology-enhanced, experiential and authentic, learning community, team-based, integrative, applied, engaged learning, action/applied research, supportive and flexible. These elements presented a description of RRU's then-current educational practices. Identifying, defining and articulating the LTM, and then engaging in multiple RRU community-wide dialogues and workshops, created the context for identifying, building and aligning a unique identity across the institution. The LTM has been used as the basis for strategic and academic planning as well as in faculty, staff and student recruitment, training and development. Most importantly, the LTM provided a platform for important conversations to occur across the university about what learning and teaching means in a RRU context (Doug Hamilton, personal communication, May 9, 2018).

The original intent of the LTM was to foster ongoing and continuous reflection on what it means to learn and teach at RRU. Since the inception of that model, faculty, staff and students have continued to engage in dialogue and meaning-making related to its elements, both informally and formally. Given the shifting post-secondary education landscape, rapidly changing educational technology, and new personnel joining RRU, the time was right to formally re-examine and revise the model as the next step in its continual evolution. This revision project provided the opportunity to continue to evolve a framework for deep dialogue about concepts, practices, values and processes that make RRU unique. This LRTM project undertook an extensive consultation process from December 2016 to August 2017 with the RRU community—staff, faculty, students, alumni and school advisory council members—that harnessed the collective energy, passion and expertise at RRU. (Our research methods are outlined in Appendix A.) This document describes the LTRM, current practice and practice to which RRU aspires.

### 1.3 Theoretical foundations

Our data indicated that most of the original LTM's eleven attributes are still relevant to the RRU community. However, many participants pointed out the need to update, clarify, reorganize and expand the attributes to reflect the current thinking, practices and priorities of the institution, and, more broadly, in higher education. Thus, the LTRM aims to retain the essence of, and build, on the original LTM, and on its theoretical foundations in social constructivist theory and social constructionist theory, and UNESCO's learning pillars (UNESCO, 2010; UNESCO, 2017), as highlighted below.

#### *Social constructivism<sup>2</sup>*

The LTRM is grounded in social constructivist principles. Constructivism was influenced by John Dewey's (1938) theory of experience, which described learning as an individual's active inquiry process in interaction with the world. Part of an "experiential continuum" (p. 33), learning is influenced by what is already known, and what is known influences subsequent learning. Thus, individual learning is built (or scaffolded) on previous knowledge and experiences (Mayes & de Freitas, 2004; Beetham & Sharpe, 2007). Social constructivism adds that an individual's knowledge construction takes place in a social context, which influences the learning process and "socially agreeable interpretations" (Adams, 2006, p. 246).

Shaped by influential theorists (e.g., Piaget, 1971, 1967; Vygotsky, 1986, 1978; Freire, 1970; Bruner, 1961)<sup>3</sup>, constructivist learning theory asserts that "genuine learning occurs when students are actively engaged in the process of discussing ideas, interpreting meaning, and constructing knowledge" (Gordon, 2009). Such social constructivism typically involves seven factors: first, an orientation involving self-responsibility for learning that enables students to actively construct their own understanding of concepts; second, the use of complex, preferably real-world, problems to support a discovery-oriented approach to learning; third, challenging, open-ended activities that encourage experimentation and risk-taking; fourth, collaborative inquiry with peers and faculty members to encourage deeper learning than is possible through individual activities; fifth, shared ownership, understandings and meaning of the learning process; sixth, discussion and reflection that draws on existing concepts, contexts and skills; and finally, timely and effective feedback support improvement in concept and skill development (Mayes & de Freitas, 2004; Beetham & Sharpe, 2007). The role of faculty in this type learning environment goes

---

<sup>2</sup>Our thanks to Niels Agger-Gupta for enriching this section on constructivism and social constructionism.

<sup>3</sup>We acknowledge differences among these theorists and many others. In this paper, we focus on the shared characteristics of constructivism.



beyond content expertise (Gordon, 2009), to also knowing how to guide and coach learners and create engaging learning experiences that promote self-direction and the application of theory to practice. These features are essential elements in the learning environments at RRU.

### *Social constructionism*

While social constructivism suggests that learning occurs as individuals interact with others and the world, social constructionism posits that “we construct multiple and emerging ‘realities’ and selves with others through our dialogue” (Cunliffe 2008, p. 135). Social construction suggests that shared dialogue leads to the creation of new normative understandings of the world among a group, organization or community (e.g., Berger & Luckmann, 1967; Gergen & Thatchenkery, 1996; Gergen & Gergen, 2008). Through patterns of discourse, people form relational bonds with one another; create, transform, and maintain structure; and reinforce or challenge beliefs. The very act of communicating is the process through which we constitute experience. Communication, then, is not just a conduit for transferring information from one person to another; rather, it is the very process by which organizing comes to acquire consensual meaning (Barrett, Thomas, & Hocevar, 1995, p. 353).

This concept of social construction is involved integrally in the creation of a supportive, transformative culture that develops its own language, including humour, icons, images and shared experiences (Berger & Luckmann, 1967; Gergen, 2000). This emerging culture is developed through the learning community (Berger & Luckmann, 1967; Gergen, 2000; Wenger, McDermott, & Snyder, 2002)—student peers, staff and faculty—that supports students throughout their program, achieving shared goals and helping each other to finish the program, and, maintaining these relationships into the broader professional worlds of RRU's alumni.

### *UNESCO's five pillars and transformation*

Like the original LTM, the LTRM remains grounded in UNESCO's five learning pillars:

1. *Learning to know*: The development of functional skills and knowledge, including literacy, numeracy, critical thinking and general knowledge;
2. *Learning to do*: The learning applied and professional skills;
3. *Learning to live together*: The building blocks for social cohesion, i.e., the development of social skills and values, including respect and concern for others, interpersonal communication skills, and appreciation of cultural diversity;

4. *Learning to be*: The learning contributing to mind, body, and spiritual development, including creativity and personal discovery through reading books and the Internet, as well as sports and arts;
5. *Learning to transform oneself and society*: The social construction of new knowledge, skills and values among individuals and groups, equipping them with tools and new awareness for creating positive change in organizations, communities, and societies (UNESCO, 2010; UNESCO, 2017).

Originally conceived as a framework for transformational environmental education, UNESCO's five pillars address the whole-person, multi-dimensional and transdisciplinary learning needed to resolve the urgent, difficult and complex problems confronting people, communities, societies and the world. Learning, according to the UNESCO framework, extends beyond acquiring knowledge and applying skills to working productively and inclusively with others, nurturing and providing individual growth of the whole person, and working for the for the common good. Based on the work of Jacques Delors (1996), the UNESCO model explicitly links personal transformation, social transformation and transdisciplinarity (Delors, 1996; Tawil et al.,2012; Tawil et al., 2013).

#### *Interdisciplinarity and transdisciplinarity*

In the past 20 years, interdisciplinary research—studies involving researchers from multiple academic disciplines—has gone from 'nice to have' to 'need to have.' Today, given the complexity of social, political, environmental, economic and technological challenges facing the world, it is very quickly becoming something no country can do without. (Woolf, 2017)

Woolf goes on to argue that universities must embrace interdisciplinary research that “exposes specialists in one area to other perspectives and ways of thinking, challenging received truths and spurring creativity and innovation.” Since its inception in 1995, RRU has focused on education and research to address real-world issues. This focus “often requires an interdisciplinary and, where appropriate, a transdisciplinary approach” (Mary Bernard, personal communication, August 9, 2018). The LTRM Working Group's consultations showed that faculty members are passionate about both the interdisciplinarity and transdisciplinarity nature of their teaching and research, seeing these as essential characteristics of RRU's learning, teaching and research. While definitions of these terms vary, a recent spontaneous and collegial email exchange on this topic demonstrates both commonalities in how faculty

members define the terms, and that these concepts, particularly transdisciplinarity, are evolving new dimensions as faculty apply them in their teaching and research practices.<sup>4</sup>

The following table contrasts interdisciplinary and transdisciplinary approaches with related terms.

*Table. 2: Disciplinary, multi-disciplinary, interdisciplinary and transdisciplinary approaches<sup>5</sup>*

<b>Term</b>	<b>Definition</b>
<b>Disciplinary</b>	Learning, teaching and research within the theoretical and methodological bounds a single discipline
<b>Multidisciplinary</b>	More than one research project, each done in a disciplinary mode, but aiming to help address a common problem
<b>Interdisciplinary</b>	Combines and integrates theories and methods from more than one discipline
<b>Transdisciplinary</b>	Research that crosses both disciplinary and academic boundaries to incorporate stakeholders in the research process and to foster a more socially robust knowledge

Citing his review of quality in evaluating transdisciplinary research (Belcher, Rasmussen, Kemshaw, & Zornes, 2016), Belcher argues here that most definitions of interdisciplinary learning, teaching and research combine theories and methods from more than one discipline, and that these interact in a novel integration of the components, with a problem-solving focus.

The most common definitions of transdisciplinary learning, teaching and research “focus on a problem-orientation for research and on societal relevance and engagement, transgressing academic boundaries to engage lay actors in the research process” (Brian Belcher, personal communication, August 29, 2018; Belcher, Rasmussen, Kemshaw, & Zornes, 2016). Transdisciplinarity refers to “iteratively crossing back and forth and among and beyond disciplinary and sectoral boundaries to solve the complex, wicked problems of humanity” (McGregor, 2014, p. 161). Applied to research, transdisciplinarity may result in the “construction of unique methodologies tailored to the problem and context” (Wickson, Carew, & Russell, 2006, p. 1050) and involve collaborative knowledge production among researchers and stakeholders to ensure effective problem-solving (Wickson et al., 2006; Carew & Wickson, 2010).

<sup>4</sup>The references to ‘personal communications’ are adapted from this email exchange and used with permission.

<sup>5</sup>Adapted from Brian Belcher, personal communication, August 29, 2018.

Applied to learning, transdisciplinarity “is a way of self-transformation oriented towards knowledge of the self, the unity of knowledge, and the creation of a new art of living in society (Nicolescu, n.d, p. 3). This transformative learning (UNESCO’s Pillar 5) is grounded in and dependent on the capacity to think across disciplines. This expansive, inclusive thinking supports students to tolerate ambiguity, sit with a dilemma, and, in turn, navigate complex challenges by questioning limiting beliefs and assumptions, and embracing different ways of knowing.

As does UNESCO’s framework, transdisciplinarity learning, teaching and research as practiced at RRU “involve different knowledge systems, ways of knowing” (Leslie King, personal communication, August 29, 2018). Because it is oriented to address real-world problems, transdisciplinary approaches also may encompass transgressive methods to address social inequities such as Indigenous, and other creative action- oriented methods; these include inclusion of stakeholders in projects and co-creation of knowledge (Robin Cox, personal communication, August 29, 2018). The conversation continues.

Drawing on the foregoing theoretical frameworks, we now turn to the core of the LTRM as we see it practiced at RRU.

## 2. LTRM: Three core categories of attributes

### 2.1 ACT

The LTRM is organized into three core categories of values or attributes of learning, teaching and research practice (and the indispensable services that support them at RRU), which together form the acronym ACT. Each category summarizes several attributes, as shown below:

Table 3: LTRM

<p><b>Applied &amp; Authentic</b></p>	<ul style="list-style-type: none"> <li>• Interdisciplinary and transdisciplinary</li> <li>• Experiential and participatory</li> <li>• Flexible and individualized</li> <li>• Outcomes-based</li> <li>• Openly practiced</li> </ul>
<p><b>Caring &amp; Community-based</b></p>	<ul style="list-style-type: none"> <li>• Inclusive and diverse</li> <li>• Learning community-based</li> <li>• Supportive</li> <li>• Team-based</li> <li>• Co-creative</li> <li>• Place and virtual space-based</li> </ul>
<p><b>Transformational</b></p>	<ul style="list-style-type: none"> <li>• Socially innovative</li> <li>• Respectful of Indigenous people and traditions</li> <li>• Impactful</li> <li>• Reflective</li> </ul>

The following sections explain the meaning of each of these categories of values or attributes of learning, teaching and research practice, and their supporting services, at RRU. We also indicate how ACT relates to the original LTM.

### 2.2 A = Applied and Authentic

*Applied* refers to RRU's focus on teaching, learning, research and service oriented to making a difference in the real world. It is about creating practical outcomes that make a positive difference in the world vs. knowledge outcomes that are primarily of scholarly interest, but with no direct practical outcomes.

*Authentic* refers to learning experiences that are "designed to connect what students are taught in school to real-world issues, problems and applications" (Pierce, 2016, p. 1). It includes activities that

develop learning that students will use in the real world, as well as experiences that they may have working with messy problems or learning in practice, such as through on-the-job placements. The elements in this category have complementary and overlapping characteristics, but they all promote the applied and authentic nature of our work.

### *Interdisciplinary and transdisciplinary*

As described above, interdisciplinary learning, teaching and research combine theories and methods from more than one discipline. These interact with each other and result in a novel integration of the components, with a problem-solving focus. In contrast, transdisciplinarity refers to “iteratively crossing back and forth and among and beyond disciplinary and sectoral boundaries to solve the complex, wicked problems of humanity” (McGregor, 2014, p. 161).<sup>6</sup>

### *Experiential and participatory*

Creating an experiential learning environment requires RRU educators, staff and students to create authentic teaching and learning environments with space for learners to participate actively in the examination of the complexities of real-world challenges through a research-informed lens. Learning is seen as an active process facilitated by all involved. It is fueled by curiosity, requiring critical reflection and a willingness to experiment, to be challenged and to iterate ideas in the process of constructing knowledge. An experiential and participatory environment helps students to achieve four major objectives in learning: first, to make connections between personal interests and those germane to their field of study; second, to be more motivated to engage and persevere as a result of the increased relevance of the activity; third, to facilitate absorption, retention and transfer of skills and knowledge; and fourth, to provide a sense of enculturation to their profession or discipline (Lombardi, 2007).

### *Flexible and individualized*

We use the term *flexible* in three senses. As an institution, we have long practiced flexible assessment for admission to programs. Flexible assessment identifies qualified learners (who may not have taken traditional educational programs) by evaluating and recognizing demonstrable skills and knowledge that they have gained through life experience, often through their work experience. Flexible assessment creates a pathway for experienced professionals to gain access to programs that allow them to enhance their practice.

---

<sup>6</sup>See pp. 7–9 above for a more detailed discussion of interdisciplinarity and transdisciplinarity.

*Flexible and individualized* recognizes a trend that students increasingly seek opportunities to shape their studies to their needs. We currently do this through course activities and assignments that allow students to work on real-world issues in their lives, in their workplaces or by taking electives. In addition, programs in RRU's College of Interdisciplinary Studies are fully individualized according to the student's interests. However, as we revise programs and create new ones, we recommend that ways to allow students to take course electives in other programs be considered where possible.

*Flexible and individualized* also refers to the flexibility of access to programs depending on the type of program delivery format that suits students' unique learning needs, personal situation and context. Educational offerings are delivered in a variety of settings and modes, ranging from face-to-face, in home communities and on-campus learning, through to programs offered fully online. In this sense of flexible and individualized, "teachers, learners, networks, connections, media, resources [and] tools create a unique entity that has the potential to meet individual learners', educators' and even societal needs" (Gertstein, 2014, p. 92).

#### *Outcomes-based*

RRU has been using an outcomes-based approach since its inception in 1995. All curriculum is developed and delivered using program-wide learning outcomes created in consultation with School Advisory Councils representing various stakeholder groups impacted by the curriculum. An outcomes-based approach facilitates clarity of program focus, can aid in fostering deep learning, and enables explicit connections to be drawn between program learning outcomes, course learning activities and transparent assessment (Drake & Burns, 2004). At RRU, "learning outcomes describe the knowledge and skills that graduates will attain upon completion of their course or program of studies... it is a means of focusing specifically on what students should be learning, not what content should be 'covered'... Learning outcomes can bring transparency, fairness, and flexibility to the process of curriculum design, delivery and assessment" (Hamilton, Márquez, & Agger-Gupta, 2013, p. 19).

#### *Openly practiced*

Ways of working with "open, social and participatory media" have influenced... "the ways in which users interact, communicate and participate with technologies" (Conole, 2013, p. 47), including learning technologies and approaches. The trend towards the use of open educational resources (OER), "free, digital, easily shared learning materials" (DeRosa & Robison, 2017, p. 116) has shifted into a movement of open educational practices and pedagogies, encompassing a variety of practices that can transform

courses “from repositories for content” into “platforms for learning, collaboration, and engagement with the world outside of the classroom” (p. 117).

Open practices share several characteristics (Hegarty, 2015; Conole, 2013) that support social learning. Participatory technologies are used to connect people to share ideas, knowledge and resources through social-networked media. These technologies encourage innovation and creativity through peer interaction. OER, digital technologies and open pedagogical practices promote the production and sharing of learner-generated content and resources. Such practices promote active participation in the learning process. We approach open practices with an ethic of care, which we endeavor to reflect in other practices as well (George Veletsianos, personal communication, 2018)<sup>7</sup>.

Elements of RRU’s LTRM, such as inquiry-based or problem-based learning, dialogic and collaborative learning, constructivism and active engagement (De Freitas & Conole, 2010), as well as reflective practice, experiential learning, collaborative and team learning, align well with open educational practices. All of these elements can serve as a guide as we renew our technologies and instructional approaches.

*Applied and Authentic in our practice*

Table 4: *Applied and Authentic in our practice*

<b>LTRM element (correspondence to original LTM)</b>	<b>Applied to learning</b>	<b>Applied to teaching</b>	<b>Applied to research</b>
<b>Interdisciplinary and transdisciplinary (formerly ‘integrative’)</b>	Interdisciplinary and transdisciplinary perspectives ensure students’ learning is relevant to their workplaces, communities and lives.	Programs are interdisciplinary and transdisciplinary, mirroring real-world, complex and messy contexts.	Researchers use interdisciplinary and transdisciplinary research methodologies and literature.
<b>Experiential and participatory (formerly ‘experiential and</b>	Experiential and participative learning activities promote relevant, active and	Faculty and staff facilitate experiential learning activities that promote the development of higher-order	Participatory methodologies and methods engage organizations and/or community members and

<sup>7</sup>Part of presentation: Childs, E., Axe, J. Webser, K. Dyck, T., Veletsianos, G. (2018). *Building warmth in the cold, dark quiet: the promise and challenge of fostering a pedagogy of care in an online graduate program*. Presentation at the BC Festival of Learning, May 28–29, 2018, Vancouver, BC.



<i>authentic'</i> )	meaningful learning.	thinking skills such as application, analysis and synthesis.	other stakeholders in designing effective and inclusive solutions.
<b>Flexible and individualized</b> <i>(formerly 'flexible'; expanded, aspirational)</i>	Students are able to adapt learning plans and courses of study to fit their needs and objectives.	Programs plan for increased flexibility, creating opportunities for students to individualize programming, e.g., embedded courses, certificates, diploma and full degree programs; options for students to take courses in other programs; courses shared with other schools, etc. Flexible admission allows non-traditional but qualified students to access programs.	Students are supported to develop research plans that fit their needs and objectives.
<b>Outcomes-based</b> <i>(included in LTM)</i>	Rich faculty and peer feedback supports individual student learning. Outcomes-based curricula and assessment empower students to improve their skills and knowledge.	Rich faculty and peer feedback, authentic activities and outcomes-based curricula ensure engaging and well-focused design of learning experiences.	Inquiry skills and knowledge support high quality student, faculty and staff research oriented to making a difference in the real world
<b>Openly practiced</b> <i>(new; aspirational)</i>	Students are empowered to learn with, by and through others in communities and networks supporting dialogical, socially-constructed learning.	Curriculum design includes access to high quality open educational resources, and draws upon open participatory technologies to facilitate collaborative and flexible learning.	Researchers use "participatory technologies and online social networks to share, reflect on, critique, improve, validate and further scholarship" <sup>8</sup>

### 2.3 C = Caring and Community-based

*Caring* refers to RRU's focus on placing the human at the centre and intentionally building relationships based on trust and respect to create a safe community and provide spaces for students to discuss the tensions that they face as they learn, change and grow. It is evidenced by establishing connections with program staff, faculty and student colleagues and beyond, and nurturing these relationships to support the success of all.

---

<sup>8</sup> Veletsianos & Kimmons, 2012.

*Community-based* refers in one sense to the learning communities that support the “conversational, dialogical and, therefore, socially constructed nature of adult learning... they enable students, faculty and others to actively engage with one another and to work collaboratively to address complex issues” (Hamilton, Márquez, & Agger-Gupta, 2013, p. 21). It includes activities that facilitate the creation of supportive relationships, develop trust, and nurture collaboration and contribution. The elements in this category have complementary characteristics and work to create an environment that is supportive, future-oriented and impactful, which is central to our work. In research, it refers to respect for cultural identities and protocols, authentic engagement with communities and participants, and where appropriate, the co-creation of knowledge.

#### *Inclusive and diverse*

Diverse and inclusive experiences enrich the community and the learning of all. “We strive to increase understanding and acceptance of each other, thereby making us more compassionate human beings and strengthening the fabric of our communities” (RRU Diversity Statement, n.d.). Intentionally working to create safe places for sharing experiences and community-building that respect race, gender, sexual orientation, different abilities, etc. is a priority at RRU and a foundation of our focus on cohort-based learning. By drawing on and encouraging the exploration of multiple and diverse perspectives, we are able to provide high-quality learning experiences.

#### *Learning community-based*

Social learning is key to the overall learning, teaching and research experience at RRU. Through on-campus programs, face-to-face residency experiences, RRU's digital learning ecosystem and supporting social-network tools, learners are connected within and beyond their cohorts, communities and networks. The resulting learning community is an act of co-creation among faculty, learners, staff, researchers and members of the wider community. It recognizes at its core the value of relationships and the requirement of reflection, and fosters the inclusion of diverse perspectives. These learning communities encourage and support students, faculty and staff to collaborate and contribute in a meaningful way to the larger networks in their field, and by doing so, extend the scope and impact of their work.

#### *Supportive*

RRU endeavours to adopt a ‘whole-university’ approach to support learning, teaching and research, and the services supporting them. The “caring, service-oriented approach to support students... on-campus

and online” outlined in the original LTM (2013, p. 29) is continually recognized by students, faculty and stakeholders as a hallmark of the RRU experience. The integrated, holistic approach taken by all aspects of the university evidences a common vision and intention to support the human at the centre as best as possible as they do their good work, whether in learning, teaching, research or service. Creating and sustaining a supportive, engaged community is core to the RRU experience, through the vast array of student-support offerings provided through Student Services to online and on-campus students (e.g., Library, TeamsWork, Indigenous Education and Student Services, International Student Services, Accessibility Services, Counseling Services, Health and Wellness offerings), to the course design, delivery and faculty support provided by CTET to associate faculty, faculty and staff, and the extensive support provided by the Office of Research to both students and faculty.

### *Team-based*

In keeping with the LTM (2013), “one of the key educational strategies common to all programs is the emphasis on team-based learning” (p. 24). Team-based approaches in learning, teaching and research facilitate applicable, relevant and authentic experiences. The intentional emphasis on teams supports the inter/transdisciplinarity of the work done at RRU, strengthens and sustains learning communities formed, and extends the individual and collective impact of the learning and knowledge created.

### *Co-creative*

All involved in co-creating the learning experience at RRU include, value and draw on the depth of expertise provided by the RRU learner, learning community, faculty and staff as they deepen their individual and collective knowledge.

### *Place and virtual space-based<sup>9</sup>*

Teaching, learning, research and service are often influenced by the unique ties to the land nurtured by each of us. With a rich natural heritage and a diverse cultural heritage evolving over millennia, the sense of place where RRU resides resonates permanence. The deep emotional quality of this place we acknowledge by recognizing the ancestral lands of the Xwsepsum and Lkwungen peoples. We also learn from the journeys of other families, individuals and groups who came, lived and learned here and whose stories bind this geography to the historical narrative, which is recognized in Hatley Park National Historic Site. We walk, reflect and rejuvenate amidst a distinct mosaic of flora and fauna. Our sweeping

---

<sup>9</sup>Our thanks to Geoff Bird for his contribution to this section.

viewscope of sea and distant mountains testifies to the majesty of this planet and engenders our deep awe and respect as privileged stewards of this special place.

We bring this physical sense of place and its essence into our work in the virtual spaces and places that also constitute the RRU experience. As an early adopter and leader in moving into online teaching and learning, RRU recognized and prioritized the need to create digital learning environments that embodied the sense of place triggered by the physical location of the institution. Through our interactions with, and our engagement in, the various face-to-face and digital learning environments in RRU’s learning ecosystem, we connect to this rich heritage as we continue to examine our role in creating, nurturing and sustaining these interconnected physical and virtual spaces. This sense of place calls to us, it questions, nurtures and inspires us. From this place, we gain and grow our appreciation for our role as a university in this world, and the global responsibility and reach ascribed to our task.

*Caring and Community-based in our practice*

Table 5: Caring and Community-based in our practice

<b>Element</b> <i>(correspondence to original LTM)</i>	<b>Applied to learning</b>	<b>Applied to teaching</b>	<b>Applied to research</b>
<b>Inclusive and diverse</b> <i>(new)</i>	Diverse and inclusive learning environments enrich the learning of all, creating a safe place for sharing experiences and community-building, respectful of race, gender, sexual orientation, different abilities, etc.	Faculty and staff prioritize providing high-quality and respectful educational experiences through engaging and inclusive learning environments that draw on diverse faculty and encourage exploration of multiple perspectives.	Research by RRU faculty, staff and students seeks to engage diverse communities and stakeholders in meaningful dialogue about issues of relevance to them.
<b>Learning community-based</b> <i>(included in LTM)</i>	Students share their expertise and experience so others within their learning communities may benefit, creating a safe place for sharing experiences and community-building, respectful of race, gender, ethnicity, sexual orientation, differing abilities, and the additional categories underpinning individual and	Faculty and staff provide learning activities and the course environment promote the development of mutually supportive learning communities, whether students are in a cohort-based or a fully individualized program.	Researchers consult widely with stakeholders, from the conceptualization of the research topic through to knowledge dissemination, exchange and mobilization.

	community culture. They also develop mutually beneficial relationships and networks that continue after they complete their learning.		
<b>Supportive</b> <i>(included in LTM)</i>	Students offer supportive guidance and appreciative feedback to their peers while also experiencing a broad range of support from classmates, faculty and staff.	Faculty and staff work together to support student access, engagement, and success. They provide a safe and supportive learning environment. Staff throughout the university take an educational approach to helping students gain knowledge and skills that equip them to make change in their own lives and in service of others.	Faculty and students are co-researchers working in the spirit of collegiality and co-creation.
<b>Team-based</b> <i>(included in LTM)</i>	Students gain skills in collaboration, team facilitation and project management, as well as in how to work effectively with people with multiple perspectives, abilities, personalities and cultural backgrounds.	Curricula explicitly support the development of effective face-to-face and virtual team skills, through team-based activities, often supported by team coaches and others.	Faculty, staff and students work in collaborative, interdisciplinary research teams since innovations with complex real-world challenges open up through the application of multiple, simultaneous lenses and perspectives.
<b>Co-creative</b> <i>(new)</i>	Learning is based on experiences, readings and knowledge that students bring to and share with the learning community, and that emerges through dialogue among their cohort and with faculty in innovative and frequently unpredictable ways.	Learning experiences, environments, new knowledge and products, as well as successful learning outcomes, are co-created, developed, implemented and supported through the involvement of many.	Engaged scholarship includes and values the co-creation of knowledge by partners, stakeholders and students.

<p><b>Place and virtual space-based</b> (formerly ‘technology-enhanced’)</p>	<p>The heritage and natural environment of RRU’s campus plays a significant role for students, in addition to being the context for connection-building, reflection, learning and the building of friendships and networks in the diverse communities, virtual spaces and geographic places that also constitute the RRU experience. Students are encouraged to develop an ethic of care and the skills to enact this.</p>	<p>Faculty and staff recognize that both the physical campus and the virtual learning spaces comprise a living learning laboratory, where the learning spaces and experiences they co-create seek to maximize the benefits of the rich cultural and natural setting of RRU’s Victoria campus, the West Shore, and other communities, both virtual and physical.</p>	<p>RRU research takes place in physical locations, and online spaces, and via digital communication, as appropriate to the communities involved. We guard the personal knowledge and identities of others that are shared with us through the research process, and take care in preserving and sharing student and faculty research results.</p>
--	--	---	---

**2.4 T = Transformational**

At the root of any organizational or social change lies individual change (Taylor, 1998). *Transformational* applies to learning, the means for transformation and leadership, the kind of leader that we seek to educate. This category aligns with Pillar 5 of the UNESCO’s educational framework for sustainable development, which concerns “Learning to Transform Oneself and Society” (UNESCO, 2017; UNESCO, 2010). Mezirow (2003) defines transformative learning as:

learning that transforms [a person’s] problematic frames of reference—sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets)—to make them more inclusive, discriminating, open, reflective, and emotionally able to change. (p. 58)

*Socially innovative*

The transformational aspect of the model seeks to develop in students a socially innovative mindset capable of generating systemic, sustainable, creative solutions to social challenges and changes, including challenges related to the environment, education, health, business, etc.

### *Respectful of Indigenous peoples and traditions*<sup>10</sup>

As society learns to integrate and reconcile multiple ways of knowing at RRU, we work intentionally to develop a culturally responsive pedagogy. In collaboration with local and place-based First Nations communities and other Indigenous relations, we co-imagine a curriculum that includes but also learns from Indigenous principles and history, and we offer students opportunities to experience Indigenous ways of knowing and being.

### *Reflective*

Transformational learning requires reflective practice as part of “a dynamic, uniquely individualized process of expanding consciousness whereby individuals become critically aware of old and new self-views and choose to integrate these views into a new self-definition” (Wade, 1998, p. 716). The pattern of transformation described by so many theorists is of a disorienting dilemma; a threatening and challenging opportunity for reflection; a deliberate choice to confront the conflict or dilemma; the questioning of assumptions; the releasing of old ways of knowing; the reception to new ways of viewing the self; the reinterpretation of experiences in a new context; all resulting in a new level of consciousness or insight and followed by feelings of excitement, satisfaction and freedom, as well as sadness associated with loss of the old self, and, finally, an enduring change in attitude and behaviour.

### *Impactful*

Transformative learning is critical to educating transformational leaders who can “[cross] over into a new way of grasping collective action, including their own role in catalyzing sound judgement and harvesting the wisdom of groups” (Briskin, 2012, p. 179). We aim to cultivate leadership and other skills in the interests of making positive social change. Students solve real-life challenges, generate practical solutions, produce accessible research and track the impact of their contributions socially, environmentally, politically and organizationally.

---

<sup>10</sup> The LTRM Working Group has struggled with wording for this element that accurately conveys the richness of meaning we intend. Neither *indigenization* nor *reconciliation* (used in earlier drafts) fully conveyed the process we feel is essential. Nor does *Respectful of Indigenous peoples and traditions* fully convey what we mean; all of these connote that we are doing something for or to Indigenous peoples. Instead, we believe this is a process, not of us and them, but rather of us (Indigenous and settlers) working together in a good way for the good of all.

*Transformational in our practice*

Table 6: Transformational in our practice

<b>Element</b> <i>(correspondence to original LTM)</i>	<b>Applied to learning</b>	<b>Applied to teaching</b>	<b>Applied to research</b>
<b>Socially innovative</b> <i>(new)</i>	Social innovation is embedded in students' learning, as they work on actual challenges in their organizations, communities and lives. Students share knowledge through this work.	Faculty and staff embed an orientation to social innovation and fostering change into curricular and co-curricular activities, such as applied and experiential learning, live cases and community engagement. Faculty and staff strive to meet the needs of students, industry and society by staying informed of local and global shifts and trends.	Faculty and student research drives social innovation committed to sustainability and positive social change. Faculty and student research aims to have a positive impact in organizations, communities, the environment and beyond. Faculty and student research serves the needs of organizations and communities locally and globally.
<b>Respectful of Indigenous peoples and traditions</b> <i>(new)</i>	Indigenous and non-Indigenous students are challenged to become conscious of their role in decolonization and to make contributions to reparation and restitution for the Indigenous peoples of Canada and beyond.	Indigenous epistemologies and pedagogies are reflected in curricula and instruction. Actions relevant to post-secondary education in the Truth and Reconciliation Commission of Canada's Calls to Action <sup>11</sup> are addressed.	Faculty and student research seeks to respect Indigenous protocols and teachings, and conforms to Indigenous research ethics in Canada and beyond.
<b>Reflective</b> <i>(formerly 'engaged learning')</i>	Students become reflective practitioners, with well-developed critical thinking, analysis and decision-making skills.	Curricula promote reflection for ongoing improvement of professional practice and for applying new learning effectively to practice. Rich faculty and peer feedback, authentic activities and outcomes-based curricula ensure the engaging and well-focused design of learning experiences.	Students become reflective researchers, with well-developed skills to design, conduct and iteratively refine their research projects.

---

<sup>11</sup>Truth and Reconciliation Commission of Canada. (2015).



<p><b>Impactful</b> (formerly 'applied' and 'action/applied research')</p>	<p>Students learn to be practitioner-scholars who seek to improve their practices through inquiry and learning.</p>	<p>Faculty members are scholar-practitioners able to support learning that prepares students to tackle real-life, ill-structured and complex issues and problems.</p>	<p>Faculty and student research aims to have a positive impact in organizations, communities and beyond.</p>
--	---	---	--

**2.5 LTRM in context**

The LTRM reflects and is situated within the *how*, *what* and *why* of RRU. The *how* is captured in our acronym of ACT: our learning, teaching and research, and the services supporting them, aim to be applied and authentic, caring and collaborative, and transformational. *What* we teach, how our students learn, and the topics our faculty and students choose to research, reflect our purpose: no matter the subject matter—for example, business, environmental science, educational leadership, peacebuilding, justice, communication, and tourism, to name a few—common threads such as sustainability, social innovation and leadership are woven in throughout. Finally, and most profoundly, our LTRM is grounded in the purpose or *why* of RRU, captured in our tagline: LIFE.CHANGING. As an internationally-designated Ashoka Changemaker (Ashoka, n.d.), RRU aims to help bring about change for a better world; by learning to transform self, we learn to transform others. The relationships among *the how*, *what* and *why* can be illustrated metaphorically as a series of 'ripples of change' as follows:



Fig. 1: The why, what and how of the LTRM

Building leadership capacity is a common theme in our programs since it prepares students to become leaders who can work effectively with others to solve complex, real-world problems (Fullan & Scott, 2009), and foster social innovation, social justice and sustainability. To quote RRU's Strategic Direction document:

No matter the program, no matter the field of research, the common characteristic displayed by our faculty, researchers, students and professional staff is leadership... It is leadership that is deeply invested with values and ethic. It is leadership that is about moving forward and reaching out (Royal Roads University, 2017, p. 9).

Our programs "challenge participants to develop new ways of understanding leadership" (Satterwhite, Miller, & Sheridan, 2015, p. 69) that include inquiry-based decision-making, and inclusive and meaningful dialogue. We believe that to have a positive impact in this context, leaders also need to be effective communicators and researchers, sharing their knowledge and listening deeply and respectfully

in multiple modes. RRU uses innovative, engaging and effective ways to prepare graduates to make a positive difference in an ever-changing, complex world.

### 3. Next steps

#### 3.1 Continuing conversations

This LTRM document reflects our evolving practice at RRU. As our university is a learning organization, we must capture our Learning, Teaching, and Research Model in a living document to give our community a touchstone, compass and reference point. As part of an evolutionary process, we commit to revisiting our model at least every five years to review current educational literature and theory, re-engage with our staff, faculty, students, alumni and other stakeholders to renew our purpose, principles and practices.

Embodied within this process of revising and renewing RRU's LTRM is the concept of continuing conversations. A model is only useful if it is embedded in all we do, referenced continually across the university, and can be used to guide our program development and design, assessment, professional development, accounting, planning, communications, hiring, policy, procedures and partnership development. Effective communication processes and content (see Appendix B) will be essential to ensuring that the model lives and evolves.

#### 3.2 Evaluation

Some ongoing ways to (re)evaluate the currency of our LTRM and how we practice it are:

- Five-year revisit and renewal (working group, research project as with this LTRM)
- Feedback loops in meetings at all levels: program, school, faculty, Academic Leadership Team, Strategic Enrolment Management, Board of Governors
- Campus conversation survey, e.g., where can we be living our model more effectively?
- Question-and-suggestion forum monitored by VP academic, deans, directors, program heads
- Communities-of-practice reports to Academic Leadership Team and academic planning.

## References

- Ackoff, R. & Greenberg, D. (2008). *Turning learning right side up: Putting education back on track*. Upper Saddle River, NJ: Wharton School Publishing.
- Ashoka. (n.d.). About Ashoka. Retrieved from <https://www.ashoka.org/en/about-ashoka>
- Barrett, F. J., Thomas, G. F., & Hocevar, S. P. (1995). The central role of discourse in large-scale change: A social construction perspective. *Journal of Applied Behavioral Science*, 31(3), 352–372.  
<http://doi.org/10.1177/0021886395313007>
- Beetham, H. & Sharpe, R. (2007). *Rethinking pedagogy for a digital Age: Designing and delivering e-learning*. New York: Taylor and Francis.
- Belcher, B, Rasmussen, K., Kemshaw, M. & Zornes, D. (2016). Defining and assessing research quality in a transdisciplinary context. *Research Evaluation*, 25, 1, pp. 1–17,  
<https://doi.org/10.1093/reseval/rvw025>
- Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Anchor Books.
- Bradbury, H., & Reason, P. (2003). Action research: An opportunity for revitalizing research purpose and practices. *Qualitative Social Work*, 2(2), 155–175.
- Briskin, A. (2012). Deep dialogue. In C. Pearson (Ed.), *The transforming leader: New approaches to leadership for the 21<sup>st</sup> century*, pp. 169-180. San Francisco: Barrett-Koehler.
- Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review*, 31(1): 21–32.
- Carew, A. & Wickson, F. (2010). The TD wheel: A heuristic to shape, support and evaluate transdisciplinary research. *World Futures: Journal of New Paradigm Research*, 42, 1146-1155.
- Childs, E., Axe, J. Webser, K. Dyck, T., Veletsianos, G. (2018). *Building warmth in the cold, dark quiet: The promise and challenge of fostering a pedagogy of care in an online graduate program*. Presentation at the BC Festival of Learning, May 28–29, 2018, Vancouver, BC.
- Conole, G. (2013). *Designing for learning in an open world*. Springer: New York.
- Cunliffe, A. L. (2008). Orientations to social constructionism: Relationally responsive social constructionism and its implications for knowledge and learning. *Management Learning*, 39(2), 123-139.
- Delors, J. (1996). *Learning: The treasure within. Report to UNESCO of the International Commission on Education for the Twenty-First Century*. Paris: Unit for Education for the Twenty-First Century, United Nations Educational, Scientific and Cultural Organization (UNESCO). Retrieved from <http://unesdoc.unesco.org/images/0010/001095/109590eo.pdf>.

- De Freitas, S. & Conole, G. (2010). The influence of pervasive and integrative tools on learners' experiences and expectations of study. In R. Sharpe, H. Beetham & S. de Freitas (Eds.). *Rethinking Learning for a Digital Age: How learners Shape Their Own Experiences*. New York: Taylor Francis, pp. 15-30.
- DeRosa R. & Robison S. (2017). From OER to open pedagogy: Harnessing the power of open. In Jhangiani R., & Biswas-Diener R., *Open*. London: Ubiquity Press. DOI: <https://www.ubiquitypress.com/site/chapters/10.5334/bbc.i>
- Dewey, J. (1938). *Experience and education*. New York: Collier.
- Drake, S. M., & Burns, R. C. (2004). *Meeting standards through integrated curriculum*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Eisner, E. (1998). Does experience in the arts boost academic achievement? *Art Education*, 51(1), 7–15.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York, Continuum.
- Fullan, M., & Scott, G. (2006). *Turnaround leadership*. San Francisco, CA: Jossey-Bass.
- Gergen, K. J., & Gergen, M. M. (2008). Chapter 10: Social construction and research as action. In P. Reason & H. Bradbury (Eds.), *The Sage handbook of action research* (pp. 159–171). London: Sage. Retrieved from <http://srmo.sagepub.com/view/the-sage-handbook-of-action-research/d16.xml>
- Gergen, K. J. (2000). Qualitative inquiry: Tensions and transformations. In N. Denzin & Y.S. Lincoln (Eds.), *The handbook of qualitative research*, pp. 1025–1046. Retrieved from <https://works.swarthmore.edu/fac-psychology/558>
- Gergen, K. J., & Thatchenkery, T. J. (1996). Organization science as social construction: Postmodern potentials. *Journal of Applied Behavioral Science*, 32(4), 356–377. Retrieved from <http://doi.org/10.1177/0021886396324002>
- Gerstein, J. (2014). Moving from education 1.0 through education 2.0 towards education 3.0. Retrieved from [http://scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=1104&context=edtech\\_facpubs](http://scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=1104&context=edtech_facpubs)
- Glesne, C. (2011). *Becoming qualitative researchers* (4<sup>th</sup> ed.). Boston, MA: Pearson.
- Gordon, M. (2008). Between constructivism and connectedness. *Journal of Teacher Education*, 59(4): 322–331.
- Grundy, S., Hamilton, D., Márquez, P., Agger-Gupta, N., Veletsianos, G., Forssmann, V., & LeGault, M. (Eds.). (2017). *Engaging students in life-changing learning: The Royal Roads University learning and teaching model In practice* (Revised ed.). Victoria, BC, Canada: Royal Roads University.

Retrieved from <https://learningandteachingmodel.pressbooks.com/> (Note that this can be downloaded from <http://ctet.royalroads.ca/lrm-book>)

Hamilton, D., Márquez, P., & Agger-Gupta, N. (2013). RRU learning and teaching model. Retrieved from <http://media.royalroads.ca/media/marketing/viewbooks/2013/learning-model/?pageNumber=1>

Hamilton, D., Grundy, S., Agger-Gupta, N., Veletsianos, G., & Márquez, P. (2017). Change leadership and the development of institutional educational frameworks. Presented at the Southeast Asia Ministers of Education Organization Conference, Ho Chi Minh City, Vietnam.

Hegarty, B. (2015, July-August). Attributes of open pedagogy: A model for using open educational resources. *Educational Technology*, 3–13.

Mayes, T. & de Freitas, S. (2004). *Review of e-learning theories, frameworks and models*. London: Joint Information Systems Committee. Retrieved from <http://www.jisc.ac.uk/whatwedo/programmes/elearningpedagogy/outcomes.aspx>

McGregor, S. (2014). Introduction to special issue on transdisciplinarity. *World Futures: Journal of new Paradigm Research*, 70:3-4, 161-163.

Mezirow, J. (2003). Transformative learning as discourse. *Journal of Transformative Education*, 1(1), 58–63. DOI: 10.1177/1541344603252172

Nicolescu, B. (n.d.). *The transdisciplinary evolution of learning*. Retrieved from [http://www.learndev.org/dl/nicolescu\\_f.pdf](http://www.learndev.org/dl/nicolescu_f.pdf)

Piaget, J. (1971). *Psychology and epistemology: Towards a theory of knowledge*. New York: Grossman.

Piaget, Jean. (1950). *The psychology of intelligence*. New York: Routledge.

Pierce, S. (2016). Authentic learning: what, why and how? *E-teaching: Management strategies for the classroom*, 10. Retrieved from [http://www.acel.org.au/acel/ACEL\\_docs/Publications/e-Teaching/2016/e-Teaching\\_2016\\_10.pdf](http://www.acel.org.au/acel/ACEL_docs/Publications/e-Teaching/2016/e-Teaching_2016_10.pdf)

Royal Roads University. (2017). Royal Roads University strategic direction. Retrieved from [http://www.royalroads.ca/sites/default/files/17-4174\\_comms\\_2014\\_strategic\\_direction\\_pdf\\_update\\_march2017.pdf](http://www.royalroads.ca/sites/default/files/17-4174_comms_2014_strategic_direction_pdf_update_march2017.pdf)

Satterwhite, R., Miller, W., & Sheridan, K. (2015). Leadership for sustainability and peace: Responding to the wicked challenges of the future. In Sowick, M., Adenoro, C., McNutt, M., & Murphy, S. (Eds.), *Leadership 2050: Critical challenges, key contexts, and emerging trends*, pp. 59–74. International Leadership Association Building Leadership Bridges Series 2017: Emerald.

Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.

- Silverman, H. (2015). Designerly ways for action research. In H. Bradbury (Ed.), *The Sage handbook of action research* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage.
- Stringer, E. T. (2014). *Action research* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.
- Tawil, S., Akkari, A. and Macedo B. (2012). Beyond the conceptual maze: The notion of quality in education, Paris, UNESCO Education Research and Foresight (ERF Occasional Papers, No. 2).
- Tawil, S. & Cougoureaux, M. (2013). Revisiting learning: The treasure within: Assessing the influence of the 1996 Delors Report. *UNESCO Education Research and Foresight, Occasional Papers No. 4, January 2013*. Paris: UNESCO.
- Taylor, K. (1998). Corporate change: If communication isn't working, nothing else will. *Employment Relations Today*, 25(1), 69–78.
- Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to action*. Retrieved from [http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls\\_to\\_Action\\_English2.pdf](http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf)
- UNESCO. (2010). UNESCO education for sustainable development. Module 4: Reorienting education for a sustainable future. Retrieved from [www.unesco.org/education/docs/module\\_4.doc](http://www.unesco.org/education/docs/module_4.doc)
- UNESCO. (2017). The four pillars of learning. Retrieved from <http://www.unesco.org/new/en/education/networks/global-networks/aspnet/about-us/strategy/the-four-pillars-of-learning>
- Veletsianos, G. & Kimmons, R. (2012). Networked participatory scholarship: Emergent techno-cultural pressures toward open and digital scholarship in online networks. *Computers and Education*, 58, 766–774.
- Vygotsky L. S. (1978). *Mind in society*. Cambridge: Harvard University Press.
- Vygotsky L. S. (1986). *Thought and language*. Transl. and ed. A. Kozulin. Cambridge, MA: MIT Press.
- Wade, G.H. (1998). A concept analysis of personal transformation. *Journal of Advanced Nursing*, 2 (4), 713-719.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice*. London: Harvard Business Review Press.
- Wickson, F., Carew, A., & Russell, A. (2006). Transdisciplinary research: characteristics, quandaries and quality. *World Futures: Journal of New Paradigm Research*, 38, 1046-1059.
- Woolf, D. (2017). The future is interdisciplinary. *Universities Canada*. Retrieved September 10, 2018 from: <https://www.univcan.ca/media-room/media-releases/the-future-is-interdisciplinary>

## Appendix A: Research approach and methods

### Research question

This project asked: *How can engaging the RRU community (faculty, staff, students, alumni and others) in dialogue inform the creation of a Learning and Teaching Model 2.0 (which became the Learning, Teaching and Research Model or LTRM) that reflects current best practices as well as desirable directions for the future?*

This project’s purpose, process and outcomes align with features of action research. According to Bradbury and Reason (2003, p. 155), action-research projects:

- address a problem or opportunity of significance to those who are or will be impacted
- are developed in partnership, working with people, since their experiences and knowledge are vital to creating positive outcomes
- promote “new ways of seeing/theorizing the world” and “leave infrastructure in its wake.”

This project was initiated to continue exploration of and dialogue about what learning and teaching mean at RRU, which context began with the original LTM. The resulting project design included several action-research loops (Fig. 7 below), each aimed at providing opportunities to gain diverse perspectives of all members of the RRU community. These loops maximize opportunities for ongoing engagement and feedback from members of the RRU community.

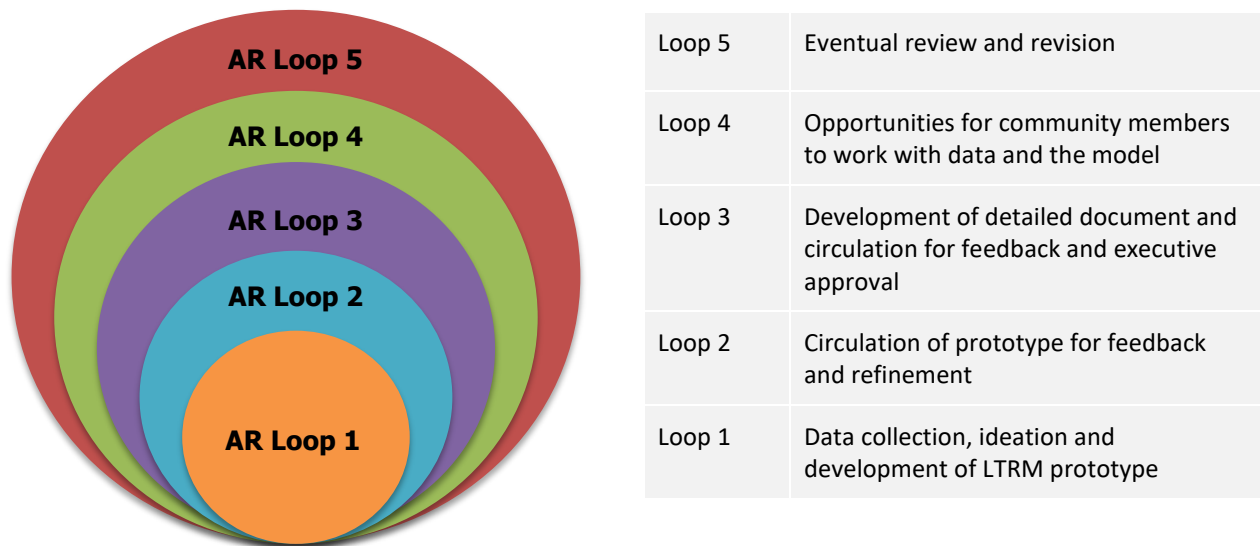


Fig. 2: Action research cycles in the LTRM review and revision



Each loop consisted of the iterative action-research cycles of observation, reflection and action (Stringer, 2014, p. 9). The design of the LTRM was also informed by the design-thinking stages of discovery, ideation and prototyping, followed by iterative cycles of reviewing and refining the prototype (Silverman, 2015, p. 718).

The following table illustrates the alignment of the action-research cycles and the design-thinking stages in the first three loops of the design for this LTRM project:

*Table 7: Stages of the LTRM*

LTRM stage	Action research cycle	Design-thinking stage	LTRM project design
<b>Loop 1</b>	Observation	Discovery or information/data-gathering	Conversations, data-gathering, focus groups
	Reflection	Ideation, generation of ideas or insights from the data/information	Data-analysis meetings
	Action	Creation of prototype	Drafting of LTRM model
<b>Loop 2</b>	Observation Reflection Action	Iterative model-building	Circulation of draft prototype for feedback, identification of changes, revision and refinement
<b>Loop 3</b>	Observation Reflection Action	Iterative model-building	Circulation of draft prototype for feedback, identification of changes, revision and refinement

The LTRM project used an open-data strategy, whereby anonymized data notes and summaries were made accessible to the RRU community. We hoped that this approach would enrich conversations about learning, teaching, research and service, as well as ensuring transparency of and engagement with our consultations and prototyping.

## Loop 1

### *Research methods*

Since the knowledge and experience of members of the RRU community was critical to the successful outcome of this project, extensive consultations with them occurred from 2016–2018.

The first consultation was a 'Maker Day', an immersive, experiential and interactive design-thinking activity, which called on participants to design and build a physical model (or diorama) as a metaphor for

a revised Learning and Teaching Model (LTM). Typically, a metaphor is understood to be a representation of ideas or concepts in a tangible and often creative or imaginative way. Through the creation of metaphors, thinking becomes visible (Eisner, 1998), as well as ways to innovate practices and structures. The design-thinking process used during the Maker Day invited participants to consider what a new LTM at Royal Roads University might look and feel like through the experience of creating and in doing so, cultivating an intentional mindset in themselves as they would in their students.

The Maker Day was followed by focus groups to more deeply understand participants' perspectives of the current LTM and what changes that they felt were needed. Focus groups were conducted with RRU:

- faculty and associate faculty
- faculty who teach international students
- staff
- students
- alumni.

Other sources of data included:

- feedback from school advisory councils
- data from existing student and alumni surveys
- brainstorming and feedback discussions at several campus-wide activities
- interviews with faculty members with specialized knowledge
- meetings with faculty members leading to RRU's application to become an Ashoka Changemaker campus
- feedback from our LTRM webpage.

In addition, two special focus groups with faculty and staff explored how research at the university fit into the LTM. These led to research receiving a more prominent place in the model, and its name change to the Learning, Teaching and Research Model (LTRM). Service was also explicitly recognized as indispensable to this work at RRU.

Focus groups were audio-recorded, and summary notes were made from the recordings. In addition, flipchart notes were made during each session. Notes were taken during interviews and photographs taken of the products of Maker Day.

### *Data analysis*

An initial thematic analysis was conducted using computer-assisted data analysis software (NVivo) to “search for themes and patterns” (Glesne, 2011, p. 187). The comments were coded into categories, which identified key themes. The summary notes and themes (derived from NVivo) were reviewed by the LTRM working group, which worked to create a high-level LTRM prototype. This prototype was then developed into a document for circulation and further feedback (Loop 2).

### **Loops 2 and 3**

#### *Research methods*

Loops 2 and 3 involved circulating the draft prototype for feedback and revising based on that. First, a simple survey was developed to gather feedback on the LTRM prototype from core faculty, associate faculty, staff, student and alumni. The survey asked the following:

1. Please tell us what resonates for you about the draft Learning, Teaching and Research Model.
2. Please tell us what, if anything, does not resonate for you in the draft Learning, Teaching and Research Model.
3. Is there anything that is included that you think should be taken for granted and be eliminated?
4. Is there anything that you think should be augmented that would help to distinguish the Royal Roads University learning, teaching and/or research experience from the standard expected of any university?
5. Is there anything we didn't ask about the draft Learning, Teaching and Research Model that you would like to share?

Invitations to participate were sent to all core faculty, associate faculty, staff, student and alumni with links to the electronic survey and the LTRM prototype. School advisory councils were also invited to provide feedback to the prototype.

The LTRM Working Group anticipates that there will be ongoing conversations and tweaks, depicted in Loop 3 of the design process.

### *Data analysis*

The LTRM Working Group reviewed both the raw survey results and a summary of themes based on the thematic analysis using NVivo data analysis software. The group discussed what resonated, and items

that lacked clarity and needed more explanation. The group used this information to refine, revise and strengthen the LTRM, addressing specific issues identified in the data.

## Appendix B: Communications plan

### Purpose

It will be important to share the LTRM with our various audiences both internally and externally to inform, engage and inspire our community by engaging in and enacting the purpose, principles and practices of RRU.

### Audiences

For internal audiences—faculty, support staff and management leaders—who will use our LTRM as a guide for practice, it will be important to design organizational systems, mechanisms, processes and channels to reflect the purpose and principles of the model.

For external audiences—students and alumni, community members, board members, government officials, media representatives, and industry partners—who will experience the RRU model, it will be important to share the purpose, nature and value of the model to promote their understanding of and engagement with our university.

### Key messages

Some key concepts to address in communicating our LTRM include:

1. Our LTRM is what makes RRU unique.
2. It reflects and represents our practice (our signature pedagogy/andragogy).
3. More broadly, our LTRM also reflects our way of seeing the world.
4. The 'ACT' acronym captures core aspects of RRU's approach to learning, teaching and research.
5. Our LTRM aligns with RRU's values, mission and vision: we live our model and our values.
6. We live our model everyday through learning, teaching, research, community relations, etc.
7. Our LTRM expresses *how* we live *what* values and *why*.
8. RRU's commitment to providing LIFE.CHANGING experiences has earned us a designation as an Ashoka ChangeMaker university.
9. How do each of us enact our LTRM?
10. What further opportunities do we have to enact our LTRM?

### Channels

Some sample activities for further communication and engagement include:

- Inform
  - Publish in hard copy and on website

- Host a campus conversation: slideshow and table-sharing of the LTRM in your unit
- Launch a campaign in *CrossRoads*
- Present to Board of Governors
- Embed in classroom activities, e.g., welcome, assessment
- Feature in dept. and school activities, e.g., retreat, communities of practice, planning
- Use as a live case in MAL, MBA, BCOM, MAPC and BAPC programs
- Launch a media-relations campaign.
- Engage
  - Ask RRU community members where they are in the model (a visual exercise)
  - Use a padlet on the LTRM website to share stories and examples of how we are living our learning, teaching, research and service
  - Host a campus coffee on the LTRM
  - Run a contest for best engagement idea (e.g., ACT buttons, posters, stunts)
  - Include as a standing agenda item in meetings and communities of practice (e.g., directors, program heads, programs, Academic Leadership Team)
  - Institute a research award for students and faculty
  - Host a community ChangeMaker event for Cities of Victoria, Colwood, Langford.
- Inspire
  - Hold regular forums on how we can better live our model
  - Do 'cultural check-ins' on whether we are living our values/model/purpose
  - Embed our LTRM in our work, professional-development and research plans
  - Conduct research focused on LTRM
  - Produce Ashoka Changemaker awards, publications and presentations
  - Conduct research and activities on the scholarship of teaching and learning
  - Hold teaching talks on how we live our model
  - Host LTRM-themed talks for Roads to Research
  - Align CTET offerings in the domain of faculty-development activities (e.g. workshops on assessment practices for team-based learning, learning design) with our LTRM
  - Augment teaching-excellence awards (e.g., Kelly Awards) which recognize individuals and teams for their implementation of LTRM (e.g. problem-based learning)

- Provide funds for teaching innovation (e.g. Teaching with Technology grants) which showcase LTRM signature pedagogies (e.g. unique examples of how learning communities symbolize the care that defines RRU)
- Establish communities of teaching, learning and research practices
- Enhance learning environments with resources and facilities aligned to our LTRM (e.g., library resources and services, computer labs, digital media facilities)
- Provide student services that align with our LTRM (e.g., counselling, career advice, work-integrated learning support, team coaches, community-service programming in support of social innovation)
- Integrate students' evaluations for continuous improvement of signature pedagogies.