

## **A Culturally Responsive Self-Regulated Learning Framework**

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### **Abstract**

Self-regulated learning (SRL) research is placing increasing emphasis on the way in which individuals exercise agency within sociocultural contexts, for example, by examining social forms of regulation. But further attention is still needed on how SRL frameworks can support educators in meeting the needs of culturally diverse learners in today's classrooms. To take up that challenge, we conducted a theoretical analysis to juxtapose a situated model of SRL and cultural responsive teaching (CRT) principles. We considered the interconnections and divergences between SRL and CRT theories, principles and practices to advance understanding about the potential benefits of an integrated culturally responsive (CR)-SRL pedagogy. We conclude that a culturally responsive SRL framework can help teachers in meeting the needs of culturally diverse learners by offering relevant pedagogical practices that take into consideration the interaction between the sociocultural context of learning and what the learner brings to it. Implications for theory, research and practice are considered.

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## **A Culturally Responsive Self-Regulated Learning Framework**

North America's 21<sup>st</sup> century classrooms including in both Canada and the United States (US) are increasingly diverse; that is, they include learners from different cultural backgrounds and with different learning experiences and academic needs. For example, Canada has witnessed a great demographic shift through immigration. The 2011 National Household Survey (NHS) indicated that over 20% of Canada's total population is made up of immigrants with over 200 ethnic origins, defined as an individual's ancestral heritage and language. Of this number, 17.5% reported speaking at least two different home languages (Statistics Canada, 2013). This cultural diversity is manifested in the multicultural nature of today's classrooms.

The presence of culturally diverse learners (that is, all learners in a multicultural classroom) creates opportunities and challenges for both students and teachers (Fine & Handelsman, 2010; Omeri, Malcolm, Ahern, & Wellington, 2003). Culturally diverse learners bring enriching histories including values, experiences, knowledge, ideas and skills to classrooms that can expand learning opportunities for all students. Teachers can build on students' cultural diversity as resource for teaching and learning by creating opportunities for inter-cultural communication, peer interaction, and sharing of ideas (Gay, 2013). For example, a teacher can draw on ideas of a student with experiences of immigration processes as a resource for teaching a social studies topic on immigration. Nevertheless, tapping into the enriching opportunities in multicultural classrooms in support of all students' positive learning experiences can be challenging for both teachers and students.

Multicultural classrooms pose challenges to teachers especially because teacher preparatory programs do not seem to provide teachers with the necessary knowledge (e.g., about cultural diversity or the impact of cultural bias on teaching and student expectations) and skills

(e.g., in designing culturally responsive activities) for teaching and supporting culturally diverse learners (Gay & Howard, 2000; Gay, 2013; Gist, 2014). Consequently, teachers may not be aware of the opportunities for building on what learners are bringing to multicultural classrooms, and may instead create pedagogies that are disconnected from many students' backgrounds and experiences. Without effective forms of support, classroom contexts (e.g., including pedagogical practices and other learners) can be challenging for diverse students who are negotiating and navigating new learning structures and expectations (Butler, Schnellert, & Perry, 2017). Further, discontinuities between diverse learners' prior knowledge and classroom learning experiences can constrain their learning engagement, participation and success (Gay, 2002, 2010, 2013; Hockings, Cooke, Yamashita, McGinty, & Bowl, 2008). Meeting the needs of all learners in today's multicultural classrooms requires the enactment of culturally relevant pedagogical practices.

Research findings are converging to uncover promising approaches to culturally responsive teaching (CRT); but, there is less attention to empowering learners in taking up the opportunities created by CRT practices. At the same time, a large body of research identifies pedagogical practices that empower learners to navigate learning environments successfully, from a self-regulated learning (SRL) lens; but, research on SRL is just beginning to apply a cultural lens to inform understanding about pedagogical practices inclusive of all learners. Thus, if we are to fully meet the needs of culturally diverse students in classrooms, an important opportunity exists to investigate potential theoretical synergies and convergences between the CRT and SRL literatures.

## Objective

Self-regulated learning (SRL) encompasses individual and social forms of learning involving students' transformation of their thoughts, feelings, and actions to achieve personal goals within particular contexts (Zimmerman, 2008). SRL research has identified a variety of practices associated with individuals' success in life and learning in schools (Butler & Schnellert, 2015; Perry, 2004; 2013; Zimmerman & Schunk, 2001). Research on SRL has from the outset identified the importance of social contexts on learning (see Zimmerman, 1989); with much attention currently being invested in studying how individuals' agency unfolds in relation to sociocultural processes (Butler & Cartier, in press; Cartier & Butler, 2016; Hadwin, Järvelä, & Miller, in press; Martin & McLellan, 2008). To complement this growing focus in the SRL literature, in this theoretical analysis, we investigated whether principles and practices from CRT might help in extending understanding about sociocultural dimensions of SRL for culturally diverse learners.

Culturally responsive teaching (CRT) similar to culturally relevant pedagogy (Ladson-Billings, 1995; 2001), is a pedagogical practice developed to address the challenges of students from diverse cultural and linguistic backgrounds (Gay, 2000, 2010; Villegas & Lucas, 2002). CRT describes a form of teaching that effectively utilizes ethnically diverse students' cultural frames of reference including their background, language, beliefs, values and prior experiences as the channel of teaching. It explicitly considers the impact of sociocultural contexts on individual learning based on the understanding that students' engagement is elicited and sustained by connecting classroom practices with students' prior knowledge and lived experiences (Gay, 2000, 2010, 2013). In the US, CRT research including African American, Latino American and Native American students has advanced understanding about how to build a culturally caring learning community and design culturally relevant curricula (Gay, 2013). But

more attention is needed on how to support students' deliberate engagement with these culturally relevant practices. Thus, in this theoretical analysis, we investigated whether principles and practices derived from the SRL literature might help in extending understanding about how to build culturally diverse students' capacities to take ownership over their learning process.

In sum, to help teachers in successfully addressing the needs of culturally diverse learners in regular classrooms, we undertook a theoretical analysis designed to identify interconnections and divergences across the SRL and CRT literatures. The analysis was undertaken to answer the question: Would it be theoretically coherent and beneficial to create an integrated culturally responsive self-regulated learning pedagogy?

## **Theoretical Lenses**

### **Sociocultural and Situated Perspectives**

Our theoretical analysis of potential synergies and disconnects between SRL and CRT was sensitized by sociocultural and situated perspectives of learning. From a sociocultural perspective, learning is a social and cultural process that involves an individual's participation in community-based activities (Rogoff, 2003) where the learner is guided by more knowledgeable others (Wertsch, 2008; Vygotsky, 1978, 1987). Through this process, the learner is provided with the skills and knowledge required to successfully navigate the new learning environment. As learning is constructed through social interaction (Järvelä & Järvenoja, 2011) and is situated in social and cultural environments (Bang, 2015), regulation of learning also is influenced by these contexts (Järvenoja, Järvelä, & Malmberg, 2015). Thus, SRL researchers (e.g., Hadwin & Järvelä, 2011; Hadwin & Oshige, 2011; Hadwin, Järvelä, & Miller, in press; Järvenoja, Järvelä, & Malmberg, 2015; Jarvela, Volet, & Jarvenoja, 2010; Nolen, Horn, & Ward, 2015) are expanding inquiry to the social aspect of regulation to advance our understanding about learning

as situated in contexts. Similarly, a situated perspective on learning is being applied to understand individuals' learning behaviours and beliefs as emerging from their participation in social and cultural contexts including communities, schools, classrooms (Nolen et al., 2015; Turner and Nolen, 2015).

### A Situated Model of SRL

Given the vast amount of literature on SRL that is available, we chose to base our theoretical analysis on a situated model of SRL as developed by Butler and Cartier (Cartier & Butler, 2016; Butler & Cartier, in press). We made this choice because Butler and Cartier have been building this model to more carefully represent theory and research that captures the interplay between individual agency and sociocultural processes in learners' engagement and development of self-regulating approaches to learning. We built from this model to inform our description of empirical findings related to SRL-promoting practices that empower learners to effectively navigate the kinds of socioculturally anchored environments in which culturally diverse learners are living and learning.

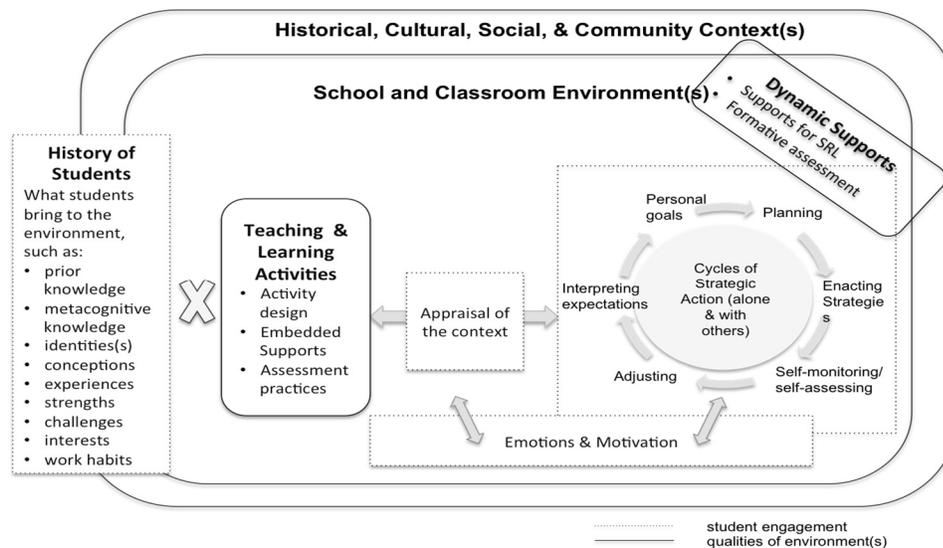


Figure 1. A Model of SRL as Situated in Context (Butler & Cartier, in press; Cartier & Butler, 2016).

As depicted in Figure 1, the Butler and Cartier model foregrounds the role of individual-context interactions in shaping students' learning engagement (Butler & Cartier, in press; Cartier & Butler, 2016). On one hand, by paying attention to the interplay between the learning context and the histories the learners are bringing to it, this model identifies the impact of sociocultural backgrounds on students' learning engagement. On the other hand, this model of SRL stresses the influence of learning environments such as the broader historical, sociocultural context, as well as school and classroom environments (e.g., activities and tasks, resources and supports, assessment and feedback) in shaping students' engagement; and, how all these processes interact with emotion and motivation during learning.

### **Research on Self-Regulated Learning**

We also built from considerable research that has shown how supporting SRL development is very important to students' motivation, problem-solving success, and academic achievement (Anyichie & Butler, 2015; Broadbent & Poon, 2015; Dent & Koenka, 2016; Perry & VandeKamp, 2000; Schunk & Zimmerman, 2007; Zimmerman, 1990; Zumbrunn, Tadlock, & Roberts, 2011). Recent summaries of this literature suggest that SRL-promoting practices (see Table 1) include creating a safe and supportive learning environment, designing complex meaningful tasks, providing opportunities for choice and control over challenge, fostering self-evaluation, offering teacher support, and providing opportunities for peer-to-peer support. These kinds of practices have been shown to empower students' ownership of their learning (Butler, Schnellert, & Perry, 2017; Perry, 2013). In the sections to follow, we briefly outline key practices, from an SRL perspective, that we considered in relation to the CRT literature to identify potential synergies and divergences.

Table 1. SRL-Promoting Practices

Pedagogical practices	Guidelines for implementation	Expected benefits
<b>Creating a safe and supportive learning environment</b>	Teacher: <ul style="list-style-type: none"> <li>- establishing participation structures,</li> <li>- creating and fostering a community of learners, and</li> <li>- creating a non-threatening class environment.</li> </ul>	Students': <ul style="list-style-type: none"> <li>- shared understanding of classroom routines and variation of participation structures,</li> <li>- sense of community,</li> <li>- accommodation of individual differences,</li> <li>- being valued and comfortable in taking learning risks,</li> <li>- experience of positive emotions,</li> <li>- engagement in rich forms of learning and SRL, and</li> <li>- achievement.</li> </ul>
<b>Designing complex meaningful tasks</b>	Teacher designing tasks that: <ul style="list-style-type: none"> <li>- have multiple instructional goals,</li> <li>- focus on large chunks of meaning about the learning content,</li> <li>- integrate across subject areas,</li> <li>- extend over time,</li> <li>- involve students in making meaningful choices,</li> <li>- engage students in diverse cognitive and metacognitive processes,</li> <li>- include individual and social forms of learning, and</li> <li>- allow multiple ways of demonstrating learning and knowledge.</li> </ul>	Students': <ul style="list-style-type: none"> <li>- development of adaptive expertise in their use of skills,</li> <li>- ownership of their learning,</li> <li>- development of strategic learning and metacognitive knowledge,</li> <li>- development of thinking and metacognitive processes,</li> <li>- engagement, and</li> <li>- success.</li> </ul>
<b>Providing opportunities for choice and control over challenge</b>	Teacher: <ul style="list-style-type: none"> <li>- designing complex tasks with opportunities for choice and decision-making,</li> <li>- scaffolding students' meaningful choices, and</li> <li>- control over learning.</li> </ul>	Students': <ul style="list-style-type: none"> <li>- autonomy and independent learning,</li> <li>- sustained interest,</li> <li>- motivation,</li> <li>- control and ownership of learning,</li> <li>- engagement,</li> <li>- adaptive expertise, and</li> <li>- academic achievement.</li> </ul>
<b>Fostering self-evaluation</b>	Teacher creating opportunities for students': <ul style="list-style-type: none"> <li>- self-reflection,</li> <li>- self-monitoring, and</li> <li>- adjustment of learning.</li> </ul>	Students': <ul style="list-style-type: none"> <li>- critical thinking,</li> <li>- learning engagement, and</li> <li>- achievement.</li> </ul>

<b>Offering teacher support</b>	Teacher offering: - resources and instrumental supports, and - co-regulatory opportunities between the teacher and student(s).	Students': - autonomy, - learning transfer, - enhancement of SRL skills strategies, - engagement, and - achievement.
<b>Providing opportunities for peer support</b>	Teacher offering opportunities for peer-to-peer: - instrumental supports, - group activities, - co-regulation of learning, and - assessment.	Peer seeing others as: - learning resources, and - co-learners.  Peer engagement, and achievement.

### **Creating a Safe and Supportive Learning Environment**

Safe and supportive environments are those learning contexts where all learners are comfortable and ready to take learning risks. Educators provide a supportive environment for students' SRL by: (a) *establishing participation structures* (e.g., having clear expectations and instructions about engagement in activities and how students will interact with others; asking questions during class; co-constructing routines) that help students in navigating unfamiliar classroom environment (Butler et al., 2017); (b) *creating and fostering a community of learners* (e.g., through community building activities including playing together, sharing students' histories and celebrating their strengths and experiences) in ways that build student collaborative, cognitive and metacognitive skills (Brown & Campione, 1996); and (c) *creating a non-threatening class environment* (e.g., by emphasizing growth and mistakes as opportunities for learning). These practices serve as foundation for successful implementation of other SRL practices.

### **Designing Complex Meaningful Tasks**

According to Perry (2013), complex tasks are activities that: (a) integrate across subject areas (e.g., including hand drawings in geometry assignments); (b) focus on large chunks of

meaning about the learning content (e.g., giving students an inquiry project that asks them to describe an animal, its habitat and important facts); (c) have multiple instructional goals (e.g., mastering speaking, reading and writing strategies); (d) engage students in diverse cognitive (e.g., attention, thinking) and metacognitive (e.g., engagement in the cycles of strategic action) processes; (e) involve students in making meaningful choices (e.g., about a topic to research or who to work with in collaborative activities); (f) include individual and social forms of learning (e.g., working in groups and alone); (g) extend over time (e.g., in weeks and months); and (h) allow multiple ways of demonstrating learning and knowledge (e.g., in writing, a hand or computer drawing, oral presentations) (Butler et al., 2017). Complex activities offer students opportunities to develop their adaptive expertise (i.e., students' ability to apply knowledge flexibly to a new task), metacognitive knowledge and processes, learning engagement and success.

### **Providing Opportunities for Choice and Control over Challenge**

Complex tasks are ideally designed with opportunities for teachers to support students in making meaningful choices and taking control over learning (e.g., by making choices about what to learn, where and who to work with, materials to use or how to demonstrate knowledge). Opportunities for choices foster students' autonomy (Bozack, Vega, McCaslin, & Good, 2008) by allowing them to take control over what to learn, where and how to work, and learning engagement (McCann & Turner, 2004; Perry, 2013).

### **Fostering Self-evaluation**

Self-evaluation is the process of assessing one's learning based on defined goals and performance expectations. Teachers foster students' self-evaluation by creating opportunities for them to judge their current learning performance against criteria with a view to future

improvement (Schunk, 1998). Successful self-evaluation helps students to identify what they accomplished and what they still need to work on (McMillian, 2009). Also, self-evaluation empowers students' critical thinking, evaluation, monitoring and adjustment of learning resulting in improvement in their SRL engagement and achievement (Perry, 1998; Perry, Hutchinson, & Thauberger, 2008; Perry, Thauberger, & Hutchinson, 2010; Schunk & Zimmerman, 2008).

### **Offering Teacher Support**

Teacher support involves provision of resources and instrumental supports (e.g., modeling and scaffolding students' strategies including transfer of learning across contexts) as well as opportunities for co-regulation between the teacher and student(s). Teacher support increases students' control of metacognitive processes and autonomy (Bozack, Vega, McCaslin, & Good, 2008; Mccaslin & Burross, 2011); and fosters students' development of effective forms of SRL and academic achievement (Anyichie & Butler, 2015; Anyichie & Onyedike, 2012; Perry, Phillips, & Hutchinson, 2006).

### **Providing Opportunities for Peer Support**

Peer support describes students' assistance to each other both as individuals and as a group. Teachers create opportunities for peer-to-peer instrumental support by designing learning activities that engage students in sharing experiences and knowledge while serving as learning resources to each other. Peer support fosters peer interaction and sustains high-level engagement in collaborative learning (Volet, Vauras, & Salonen, 2009).

### **Summary**

To ground our theoretical analysis, we built on situated and sociocultural perspectives. In particular, we drew on the Butler and Cartier (in press; Cartier & Butler, 2016) model of SRL because of its attention to the interplay between individual and social processes in students'

engagement in learning. We also built on a large body of literature on SRL to identify key kinds of SRL-promoting practices with promise to empower diverse learners in successfully navigating the socially- and culturally-embedded contexts in which they are living and working.

We also were aware of research suggesting the benefits of these same kinds of regulatory constructs and practices in different cultures (McClelland & Wanless, 2012). However, our background analysis of SRL literature also identified cross-cultural research showing evidence of differences in students' goals and patterns of SRL actions and engagement processes (King & McInerney, 2016; McInerney, 2008; Purdie & Hattie, 1996; Shi, Frederiksen, & Muis, 2013). Thus, we recognized the need to further consider the potential of SRL-promoting practices in supporting culturally diverse learners (Anyichie, Yee, Perry, & Hutchinson, 2016).

### **Research on Culturally Responsive Teaching**

To inform our analysis, we also built on descriptions of CRT by key researchers in that field (Gay, 2000, 2010; Ladson-Billings, 2001; Villegas & Lucas, 2002; Wlodkowski & Ginsberg, 1995). These scholars have developed frameworks for describing pedagogical practices that support culturally diverse learners. For example, Gay (2010) identified key CRT principles and practices as: (1) creating culturally responsive and caring learning communities; (2) establishing cross-cultural communication; (3) including ethnic and cultural diversity in curriculum content; and (4) establishing cultural congruity in classroom teaching and learning. In the sections that follow, we briefly describe each of these in turn.

Table 2. CRT Pedagogical Practices (following Gay, 2010)

Principles and practices of CRT	Guidelines for teacher implementation	Expected benefits
<b>Creating a culturally responsive and caring environment</b>	Teachers should: <ul style="list-style-type: none"> <li>- acquire a knowledge base about cultural diversity,</li> <li>- self-assess their cultural beliefs and assumptions,</li> <li>- develop high expectations of all students,</li> <li>- create awareness and respect for cultural diversity,</li> <li>- encourage students to care and support one another,</li> <li>- dialogue with students about cultural diversity, and</li> <li>- honour students' diversity as assets (e.g., having students share their histories including cultural backgrounds, strengths and interests).</li> </ul>	<b>Increase in teachers' and students':</b> <ul style="list-style-type: none"> <li>- multicultural awareness and intercultural competence,</li> <li>- appreciation and accommodation of cultural diversity,</li> <li>- navigation of cross-cultural diversity,</li> <li>- interpersonal relationships (e.g., peer-peer, &amp; peer-teacher relationships),</li> <li>- cooperation and collaboration among students,</li> <li>- students' learning engagement, and</li> <li>- achievement.</li> </ul>
<b>Establishing cross-cultural communication</b>	Teachers' understanding and acknowledgement of diverse communication styles including: <ul style="list-style-type: none"> <li>- discourse participation structures (e.g., active-participatory and passive-receptive patterns),</li> <li>- organization of ideas (e.g., topic-centered and topic-chaining techniques), and</li> <li>- creating opportunities for social interaction.</li> </ul>	<b>Increase in students':</b> <ul style="list-style-type: none"> <li>- development of cross-cultural competence,</li> <li>- deeper thinking and learning,</li> <li>- navigation of multiple layers of cultural contexts,</li> <li>- engagement, and</li> <li>- achievement.</li> </ul>
<b>Designing cultural diversity in curriculum content</b> (i.e. design stage)	Teachers adjusting and situating curriculum content to connect with students' prior knowledge and lived experiences by: <ul style="list-style-type: none"> <li>- involving students and parents in selecting, designing and analyzing reading material and curriculum content, and</li> <li>- using multicultural textbooks.</li> </ul>	<b>Increase in teachers':</b> <ul style="list-style-type: none"> <li>- preparedness to engage all learners,</li> <li>- development of high expectations for all learners,</li> <li>- design of student-centered lesson plans,</li> <li>- creation of equal opportunities for students' positive learning outcomes, and</li> <li>- use of culturally relevant materials.</li> </ul> <b>Increase in students':</b> <ul style="list-style-type: none"> <li>- knowledge about cultural diversity,</li> <li>- ownership over their learning,</li> <li>- participatory engagement with subject matter,</li> </ul>

		<ul style="list-style-type: none"> <li>- capacity for active knowledge construction, and</li> <li>- achievement.</li> </ul>
<b>Establishing cultural congruity in classroom teaching and learning</b> (i.e. implementation stage)	Teachers use of diversity as a resource for teaching and learning by: <ul style="list-style-type: none"> <li>- matching class instruction with students' prior experiences,</li> <li>- designing meaningful and culturally relevant activities,</li> <li>- encouraging students' activation of prior experiences,</li> <li>- creating opportunities for class discussions, and practice of culturally relevant skills,</li> <li>- scaffolding and modelling students' learning.</li> </ul>	<b>Increase in students':</b> <ul style="list-style-type: none"> <li>- development of problem solving skills,</li> <li>- interest, motivation and task engagement,</li> <li>- self-evaluation and critical thinking,</li> <li>- activation of prior experiences,</li> <li>- deeper understanding of learning content, and</li> <li>- achievement.</li> </ul>

**Creating a Culturally Responsive and Caring Environment**

Culturally responsive and caring environments are those environments that promote caring interpersonal relationships and high expectations of culturally diverse students (Gay, 2010; Villegas & Lucas, 2002). Educators can create an environment that cares for and responds to students' cultural diversity by: (a) developing their and students' cultural competencies and cross-cultural consciousness through conversations about cultural diversity; (b) assessing their cultural beliefs and assumptions to identify biases; (c) having high expectations of all students; (d) honouring students' diversity as assets (e.g., having students share their histories including cultural backgrounds, strengths and interests); and (e) encouraging students to respect, care for and support one another. Creating a culturally responsive and caring environment increases teachers' and students' multicultural awareness, interpersonal relationships, collaboration, accommodation and navigation of cultural diversity.

**Establishing Cross-cultural Communication**

Cross-cultural communication describes ideal inter-cultural communications in culturally diverse classrooms where students participate in and respect others' communication styles and

discourse patterns. Teachers can address the challenges of cross-cultural communication by creating opportunities for understanding diverse communication styles including discourse participation structures (e.g., active-participatory and passive-receptive patterns) and organization of ideas (e.g., topic-centered techniques that focus on one idea at time, and topic-chaining techniques where a lot of time is spent on describing the context of the main idea). Enabling cross-cultural communication helps students in developing cross-cultural competence, negotiating diverse communication styles, navigating multicultural contexts and enhancing learning engagement.

### **Designing Cultural Diversity in Curriculum Content**

Culturally responsive curriculum content describes the adjustments of curriculum resources (e.g., textbooks) and content (e.g., lesson plans) to consider students' prior knowledge and lived experiences including their interests, needs and aspirations. Culturally responsive teachers can design cultural diversity into curriculum content by: (a) using textbooks with multicultural perspectives that allows students to learn about cultural diversity; (b) involving parents and students in selection of relevant class reading materials to increase students' ownership of their learning; and (c) including discussions on issues about racism. Culturally relevant curriculum helps teachers to design culturally responsive student-centered lessons with equal opportunities to address all learners' needs; and, increases students' interpersonal relationships and learning participation.

### **Establishing Cultural Congruity in Classroom Teaching and Learning**

Cultural congruity in classrooms involves the use of diverse resources and practices in contextualizing instruction for culturally diverse learners. Cultural congruity can be established in classrooms by: (a) designing culturally responsive teaching practices and techniques that are

connected to learners' cultural backgrounds, histories, values, and interests; and (b) creating opportunities for class discussions. Establishing cultural congruity in teaching and learning is beneficial for activating students' prior knowledge, developing critical thinking skills and engagement.

## **Summary**

To ground our theoretical analysis, we built on descriptions of CRT provided by leading researchers in the field. Many scholars, (e.g., Gay, 2010; Villegas & Lucas, 2002), have identified practices they suggest should support culturally diverse learners to feel and be more included in today's multicultural classrooms. However, more information is needed on how students within those classrooms can be supported to take up opportunities successfully to support effective forms of engagement and achievement.

### **Divergences and Convergences between SRL and CRT Frameworks**

As we described above, our objective in this paper is to examine whether it would be theoretically coherent and beneficial to create an integrated culturally responsive self-regulated learning pedagogy. To this point, we have outlined what the SRL and CRT literatures suggest, from their different perspectives, about how to better support diverse learners. In this section, we turn our attention to identifying divergences and convergences between the two perspectives. We considered whether and how a combined pedagogical framework might advance understanding about how to empower culturally diverse learners in today's multicultural classrooms.

### **Divergences Between the SRL and CRT Literatures**

Building on our overarching summaries, as presented above, we were able to identify important divergences between the SRL and CRT literatures. Theoretically speaking, the two perspectives were developed to achieve different purposes, and so foreground different issues.

For example, the CRT framework emerged because of researchers' effort to bridge the discontinuities between ethnically diverse learners' backgrounds and classroom instruction (Brown, 2007). In contrast, SRL researchers have been concerned with understanding and explaining the processes involved in individuals' learning engagement and knowledge construction while working on their own and/or with others and as situated in context (Wolters, 2010). Note here that, to date, SRL research has paid less attention to students' cultural backgrounds in relation to the sociocultural contexts in which they are learning. Calls for research are emerging on how an SRL framework could be applied to meet the needs of culturally and linguistically diverse learners (e.g., Anyichie et al., 2016; Perry et al., 2015).

Empirically speaking, CRT and SRL pedagogical practices emphasize different aspects of teaching and learning processes. The literature on CRT pays more attention to situating instruction within students' cultural contexts than to students' learning processes within those contexts. Consequently, the CRT literature tends to emphasize the role of the teacher, rather than the role of the students, in the learning processes. In contrast, the literature on SRL tends to emphasize learning processes as situated in context, in relation to what learners are bringing to contexts (e.g., motivational beliefs; learning history). Thus, in addition to considering the role of the teacher in supporting students' learning, SRL frameworks focus centrally on how to empower students to own and drive their learning.

### **Convergences Between the SRL and CRT Literatures**

Our theoretical comparison of the SRL and CRT literatures also suggested many theoretical and empirical convergences. Theoretically, the sociocultural and situated perspectives of SRL align well with CRT in how they deliberately highlight the dynamic interaction between individuals and learning contexts. Both CRT and these perspectives on SRL suggest that learning

is inherently a dynamic social process that is situated in context (Butler and Cartier, in press; Cartier & Butler, 2016; Gay, 2010; Järvenoja, Järvelä, & Malmberg, 2015; Nolen et al., 2015; Turner & Nolen, 2015).

Empirically speaking, SRL research conducted from many theoretical perspectives (e.g., social cognitive, sociocultural, socio-constructivist, situated) has identified pedagogical practices that link closely with recommendations from the CRT literature. For example, Butler and Cartier's (in press; Cartier & Butler, 2016) situated model and Gay's (2010) CRT pedagogical practices both recommend attending to the quality of learning environments, recognizing and building from what learners are bringing to contexts, and utilizing multiple student-centred pedagogical practices. These shared practices might well combine to achieve goals for SRL and CRT for culturally diverse learners.

More specifically, our analysis suggested that pedagogical approaches of SRL and CRT, while not necessarily the same, might be very complementary. Indeed, our analysis of synergies between SRL and CRT principles and practices suggested that an integrated culturally responsive (CR)- self regulated learning (SRL) framework could be constructed around three interdependent themes that include: (1) classroom foundational practices; (2) culturally responsive SRL practices; and (3) dynamic supportive practices (see Table 3).

Table 3. A Culturally Responsive Self-Regulated Learning Framework

Emerging themes for a CR-SRL framework	Guidelines for teacher's implementation	Expected benefits
<p><b>Classroom foundational practices</b></p>	<p>Developing knowledge about:</p> <ul style="list-style-type: none"> <li>- cultural diversity (e.g., by reading and sharing ideas with others, and assessing their cultural beliefs),</li> <li>- teachers' own history, and</li> <li>- students' histories (e.g., by asking students to share their cultural background, heritage, and previous learning experiences in the class).</li> </ul> <p>Establishing safe, caring and supportive learning environments by:</p> <ul style="list-style-type: none"> <li>- building a community of learners;</li> <li>- creating positive, non-threatening spaces for learning; and</li> <li>- establishing clear classroom participation structures.</li> </ul>	<p><b>Increase in teachers' and students':</b></p> <ul style="list-style-type: none"> <li>- multicultural awareness and intercultural competence,</li> <li>- appreciation and accommodation of cultural diversity,</li> <li>- navigation of cross-cultural diversity,</li> <li>- interpersonal relationships (e.g., peer-peer, &amp; peer-teacher relationships), and</li> <li>- cooperation and collaboration among students.</li> </ul>
<p><b>Culturally responsive SRL practices</b></p>	<p>Designing culturally responsive classroom practices</p> <p>Designing culturally responsive complex tasks (e.g., inquiry) that have:</p> <ul style="list-style-type: none"> <li>- multiple instructional goals;</li> <li>- focus on large chunks of meaning;</li> <li>- integrate across subject areas;</li> <li>- extend over time;</li> <li>- involve students in making choices; -</li> <li>- engage students in diverse cognitive and metacognitive processes;</li> <li>- include individual and social forms of learning;</li> <li>- allow multiple ways of demonstrating learning and knowledge; and,</li> <li>- connect with learners':               <ul style="list-style-type: none"> <li>- cultural background,</li> <li>- lived experiences,</li> <li>- prior knowledge, and</li> <li>- interests.</li> </ul> </li> </ul> <p>Collaboration with a specialist, students and parents in:</p> <ul style="list-style-type: none"> <li>- selecting reading materials (e.g., multicultural textbooks),</li> </ul>	<p><b>Increase in students':</b></p> <ul style="list-style-type: none"> <li>- knowledge about cultural diversity,</li> <li>- ownership over their learning,</li> <li>- capacity for active knowledge construction,</li> <li>- self-evaluation and critical thinking,</li> <li>- development of problem solving skills,</li> <li>- activation of prior experiences,</li> <li>- deeper understanding of learning content,</li> <li>- participatory engagement with subject matter,</li> <li>- interest, motivation and task engagement, and</li> <li>- achievement.</li> </ul>

	<ul style="list-style-type: none"> <li>- adjusting curriculum, and</li> <li>- activity design (e.g., homework, class activities).</li> </ul>	
<b>Dynamic supportive practices</b>	<p>Dynamic Support</p> <ul style="list-style-type: none"> <li>- support for SRL, and</li> <li>- formative assessment.</li> </ul> <p>Multidimensional feedback from:</p> <ul style="list-style-type: none"> <li>- peer,</li> <li>- parents, and</li> <li>- teacher.</li> </ul>	<p><b>Increase in students’:</b></p> <ul style="list-style-type: none"> <li>- self reflection,</li> <li>- SRL,</li> <li>- motivation, and</li> <li>- engagement.</li> </ul> <p><b>Increase in teachers’:</b></p> <ul style="list-style-type: none"> <li>- CRT and SRL practices.</li> </ul>

**Classroom foundational practices.** Foundational practices describe those classroom practices that are required for setting up safe, caring, supportive, and culturally responsive learning environments. Attention to the learning context is based on the understanding that students’ learning is shaped by the quality of their environments including home, community, school and classroom (Butler and Cartier, in press; Hannah, 2013). To build supportive, culturally responsive classroom environments, the CRT literature cautions that educators should begin by developing and expanding their own knowledge base about cultural diversity (e.g., by reading, or by sharing ideas with students and other educators) and more importantly self-assessing their own cultural beliefs and assumptions. Educators can also gain knowledge about students’ histories by providing opportunities for them to share ideas about their cultural background, heritage (e.g., about their ways of knowing; values, beliefs, celebrations or their favorite playful activities), and previous learning experiences.

Both SRL and CRT researchers have identified that knowledge about learners is critical for creating a safe environment and connecting classroom instruction to learners’ prior knowledge and lived experiences. For example, the SRL literature emphasizes that teachers need to understand their students’ backgrounds and history (e.g., prior knowledge, metacognitive knowledge, identities, conceptions, experiences, strengths, challenges, interests, and work habit)

to develop effective instructional practices (Butler & Cartier, in press; Paris & Winograd, 2003). Similarly, CRT researchers have emphasized the importance of drawing on the experiences and background of culturally diverse learners as a resource for instruction and learning (Gay, 2013; Villegas & Lucas, 2002). Knowledge of learners might inform practices for addressing students' diversity in interests, ability and learning needs (Rahman, Scaife, Yahya, & Jalil, 2010).

The CRT literature emphasizes building on teachers' knowledge about their own and learners' cultural stances. With that in mind, educators can create a safe, caring and culturally responsive learning environment by building on recommendations from the SRL literature, including to: (a) build a community of learners; (b) create positive, non-threatening spaces for learning; and (c) establish clear classroom participation structures (see Table 1). In addition, culturally diverse learners are likely to feel welcomed in an environment that is connected to their cultures (e.g., including flags or cultural artifacts on class walls). Safe and caring learning environments create opportunities for learners to see each other as resources and co-learners (Butler et al., 2017), and, elicit all students' sense of belongingness, and sustain their interests in active engagement in the learning processes (Ginsberg & Wlodkowski, 2015).

Classroom foundational practices that combine CRT and SRL principles and practices have the potential to create contexts within which both teachers and students can: (a) develop metacognitive knowledge about their own and others' cultural backgrounds and beliefs; (b) appreciate and accommodate cultural diversity; (c) build interpersonal relationships in ways that reduce cultural misunderstandings; and (d) increase collaboration among teachers and students.

**Culturally responsive SRL practices.** Butler and Cartier's (in press; Cartier & Butler, 2016) situated model of SRL identifies that student engagement can be enhanced when educators design and embed support into classroom teaching and learning activities (Figure 1). Both CRT

and SRL research have identified classroom practices that support students' active learning engagement. For example, CRT research has found increased student engagement when learners are offered culturally responsive classroom practices (e.g., culturally diverse curriculum, cultural congruity; see Table 2) that are connected to learners' lived experiences, prior knowledge and interests (Lawrence-Pine, 2015). Simultaneously, Nancy Perry's (2013) research has found that students' SRL is developed in classrooms that, among other things, engage students in complex tasks.

Perry's description of complex meaningful activities offers a guide for developing SRL-promoting practices. Complex activities (a) have multiple instructional goals; (b) focus on large chunks of meaning; (c) integrate across subject areas; (d) extend over time; (e) involve students in making choices; (f) engage students in diverse cognitive and metacognitive processes; (g) include individual and social forms of learning; and (h) allow multiple ways of demonstrating learning and knowledge (Butler et al., 2017; Perry, 2013). Building on the CRT literature could add by suggesting how SRL-promoting activities can support culturally diverse learners when they are proactively enacted and woven into classrooms as culturally responsive tools for teaching and learning (Anyichie et al., 2016; Perry et al., 2015). For example, a teacher could foster students' active engagement in a "complex" animal habitation inquiry project by building-in culturally responsive resources such as allowing students to: (a) choose an animal of interest from their home; (b) interview a resource person from their home culture; and (c) demonstrate their knowledge in ways that are familiar to their cultural background.

Culturally responsive SRL practices include collaboration with specialists, involving students and parents in: (a) selecting, analyzing reading material and curriculum content; (b) designing home works and class activities including complex tasks; and, (c) using multicultural

textbooks. These collaborations might bridge the gaps between the classroom culture and students' home cultures. Also, these practices in addition to the benefits of foundational practices, can support students' ownership of learning, capacity for active knowledge construction, development of critical thinking, self-evaluation and problem solving skills. For example, offering students activities that connect to their cultural background will offer them opportunities to activate their prior knowledge and deepen understanding of learning content.

**Dynamic supportive practices.** The SRL literature suggests that students can be supported in part as learning unfolds through a range of practices, including formative assessment and feedback. Assessment *for* learning provides educators with information about students' strengths and weaknesses to differentiate and modify instruction, and also generates feedback for students to help them improve their learning engagement (Butler et al., 2017; Earl & Katz, 2006). Ideally, as Perry (2013) suggests, students are also engaged in self-assessment, during which they generate feedback for themselves and others. Building on CRT principles could expand the dynamism of assessment and feedback by considering students' community, home and learning contexts. For example, diverse learners' inquiry projects could inquiry expectations that students connect their learning to sociocultural contexts. Parents and peers can support students' learning by offering feedback based on co-constructed assessment criteria. Multidimensional assessment practices can also be woven into complex activities (e.g., inquiry homework) to create opportunities for all students' development of self-regulation and adaptive expertise (Bempechat & Shernoff, 2012; Butler et al., 2017); especially, when supports reflect students' sociocultural backgrounds and lived experiences. Overall, dynamic supportive practices increase students' self-reflection, SRL, motivation and engagement. When offering

dynamic supports to students, teachers can also gather information to improve on their SRL and CRT practices for addressing the challenges of classroom diversity.

**Summary.** In this section, we have identified three main themes around which the SRL and CRT literatures might inform the development of practices that support and empower culturally diverse learners. By combining practices, it might be possible to achieve the shared and unique goals associated with each of the frameworks. For example, the implementation of CRT principles can increase learner's cultural competence and metacognitive knowledge of the cultural tools they are bringing to the learning context. Thus, CRT lays the foundation for enhancing students' regulation of their learning as much as their prior knowledge, cultural background and lived experiences permit. On the other hand, SRL-promoting practices can also develop culturally diverse student's capacity for deliberate control in the use of their social and culturally acquired tools in directing their learning behaviours towards the achievement of personal and shared goals; and, thereby responding to their environmental demands and expectations.

### **Conclusions**

This theoretical analysis has several important implications for educational theory, research and practice. First, the development of a culturally responsive self-regulated learning framework can add to SRL and CRT theories by exploring the integration of SRL and CRT pedagogical practices into a framework for supporting culturally diverse learners. It adds to the SRL literature by drawing attention to the impact of social and cultural contexts on the development and exercise of SRL. It adds to CRT theory by initiating conversations about empowering diverse learners' deliberate and active engagement with culturally responsive practices.

Second, our analysis suggests directions for research that might extend sociocultural and situated perspectives on self-regulation. SRL research has been mainly conducted in, and with students from North American and European cultural backgrounds, with less research being done with other cultural backgrounds (McInerney, 2011). Research is needed that explores SRL in different cultural contexts; and for learners from various cultures who are living and learning together in North American schools. Our culturally responsive self regulated learning perspective can also inspire further research around the interdependence between individual and social processes of learning and knowledge (co)construction (John-Steiner & Mahn, 1996), by providing a framework for future research on supporting culturally diverse learners through SRL. Currently, benefits and challenges of this framework are being investigated in the first author's PhD research in Canada.

Finally, the integrated pedagogy we developed through this theoretical analysis might contribute to classroom teaching and learning practices, by providing teachers with an SRL framework that is culturally relevant and has potential for supporting all learners in their classroom contexts. Considering the possible challenges of in-service teachers in responding to the demands of classroom diversity, this framework can guide teachers in designing practices that take into account the intersection between the learning context and what learners are bringing to the classroom.

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## Appendix A

### Studies Referenced in the Analysis

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