Education for Sustainable Consumption: A Social Reconstructivism Model

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Abstract

Social reconstructivism is suggested as an appropriate curriculum philosophy for education for sustainable consumption (ESC). Couched in framing the consumer culture as a powerful social institution that needs to be challenged and reformed, the position paper begins by defining sustainable consumption, including symptoms of unsustainable consumption and barriers to consuming sustainably. This is followed by a description of the social reconstructivist curriculum philosophy and model. Related contributions include ESC values, principles, and issues, the notion of catalytic education, and a description of instructional strategies recommended to help put social reconstructivism-informed ESC curricula into motion. The intent is to create a generation of learners who see themselves as social change agents by assuming that ownership of learning leads to ownership of actions.

Keywords: education for sustainable consumption, social reconstructivism, catalytic education, consumer culture, social institutions

Résumé

Dans cet article, le reconstructivisme social est présenté comme une philosophie de curriculum appropriée en éducation à la consommation durable (ÉCD). Poussé à qualifier la « culture de consommation » d'institution sociale puissante nécessitant d'être contestée et réformée, ce document de synthèse commence par définir la consommation durable, incluant les signes extérieurs d'une consommation non durable et les obstacles à la consommation durable. Ensuite, une description de la philosophie et du modèle du curriculum de reconstruction sociale est présentée. Les sujets abordés : les valeurs, les principes et les enjeux de l'ÉCD, la notion d'éducation catalytique et une description des stratégies éducatives recommandées afin d'aider la mise en œuvre de programmes d'études ÉCD axés sur le reconstructivisme social, font également partie des apports de cette synthèse. L'intention est de former une génération d'apprenants qui se considèrent comme des agents de changement social sur la présomption qu'une prise en charge des apprentissages mène à une prise en charge des actions.

Mots-clés : éducation à la consommation durable, reconstructivisme social, éducation catalytique, culture de consommation, institution sociale

Introduction

We live in a world with rampant unsustainable consumption; things have to change. Position papers, "a legitimate and important form of [scholarly] discourse" (Kennedy, 2007, p. 139), entail an explicit expression of a position on an issue. This position paper develops the idea that schools need to become agents of change for education for sustainable consumption (ESC), which inherently reflects the social reconstructivist curriculum orientation. This approach holds that the curriculum is responsible to and serves society and that schools are powerful agents for reconstructing society for the betterment of all. It deals with using schools to teach students how to effect cultural and societal change. It involves altering cultural and social institutions from the perspectives of critical consciousness, reflexivity, and social responsibility (Sowell, 2000).

One such institution is the consumer culture, which sorely needs to be reformed and reconstructed, starting with socializing younger generations of learners to their deep role in making this happen (Thoresen, 2010). If the consumer culture "represents one of the primary arenas in which elements of social change are played out" (Miles, 2017, para. 1), it stands to reason that this arena itself can be changed to effect further social change. One mechanism for such change is curricular reform focused on societal reform. Before explaining what a social reconstructivist approach to ESC might look like in practice, the discussion turns to an overview of the consumer culture as a key social institution, followed by definitions of sustainable consumption including symptoms of unsustainable consumption and barriers to consuming sustainably. The argument developed in this position paper advances the body of knowledge and literature on consumer education by enriching it with a social reconstructivist educational philosophy. Using the latter, consumer educators can challenge the consumer culture and use school as the agent of change to do so.

Consumer Culture

Examples of familiar social institutions include marriage, family, and the market. They all shape everyday life. Institute (verb) is from the Latin *instituere*, "to set up, establish, put in place." Institution (noun) is from the Latin *institutionem*, "an arrangement, instructions" (Harper, 2019). Institutions are established, stable, secure, and influential elements or organizations in a people's social, daily life (Huntington, 1968). They are an enduring

and densely interwoven system of behaviours, role expectations, and relationship patterns that function across an entire society. Institutions order, regulate, and structure people's behaviour (Verwiebe, 2014). They comprise familiar, valued, and recurring routines and patterns as well as complex practical activities played out each day, creating a people's way of life (Huntington, 1968; Preston, 1997).

Drawing on sociological theories, Verwiebe (2014) further explained that institutions structure social relationships and catalyze role expectations. They legitimize prevailing power relations, advantaging some people and marginalizing others. And they can actually unburden people by making their environments more predictable, leading people to not question embedded routines used to solve everyday problems. Unfortunately, this can lead to desensitization to reality and resultant uncritical engagement with life. Such is the way with a consumer culture where social status, values, identities, and activities are centred on the consumption of goods and services (Mattar, 2011; McGregor, 2010; Thoresen, 2010; Wright & Rogers, 2011).

The consumer culture fits Verwiebe's (2014) aforementioned profile of a powerful societal institution. It is a culture of false relationships, misplaced self-identity, disenchantment, dissatisfaction, and alienation (McGregor, 2010). In more detail, people relentlessly seek their identity through what and how much they consume, thereby creating false relationships with things instead of people. This leads to dissatisfaction because the consumer culture promises everything but never fully delivers. People's expectations are never met, leaving them not only dissatisfied but also disenchanted and disillusioned. A terrible sense of alienation leads people to spend and spend (i.e., materialism) trying to fill the void. This self-defeating and hard-to-defeat social institution has created a lifestyle (i.e., patterns and habits of living) that is not sustainable for self, others, other species, environments and ecosystems, or even the Earth itself (McGregor, 2010).

"The consumer culture lies at the heart of the relationship between structure and agency in contemporary society" (Miles, 2017, para. 1). This means that "getting to the heart of things" (pun intended) entails opening that heart to critical examination and change. Hence the call for changes in the curriculum (using social reconstructivism) so citizens can fight back against this powerful societal institution through sustainable consumption. This necessitates an appreciation of the full (big) picture, including understanding what constitutes sustainable consumption, recognizing evidence of excessive consumption, and acknowledging barriers to consuming sustainably. People need to know

what they are doing wrong so they can effectively address this in any efforts to effect societal change.

Sustainable Consumption

To consume is from the Latin *consumere*, "take up," and the Old French *consumer*, "to destroy by separating into parts that cannot be reunited" (Harper, 2019). In practice, in a consumer society, to consume means to search for, select, purchase (or not), use, or have delivered and dispose of products and services to satisfy wants and needs (McGregor, 2012). Sustainability is from two words, sustain and able. Sustain is from the Latin *sustainere*, "to hold up or support from below." Able is from the Old French *ableté*, "expert at handling something" (Harper, 2019). Thus, "sustainability refers to people becoming experts at holding up or supporting something from below" (McGregor, 2011, Slide 3).

In the context of sustainable consumption (and production) one thing needs to be sustained—all life (including humans, nonhuman species, ecosystems, the environment, and the Earth; McGregor, 2011). Succinctly, sustainable consumption refers to consuming goods and services without harming the environment or society. The 1994 Oslo symposium on sustainable consumption defined it as "the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials, as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations" (Norwegian Ministry of the Environment, 1994).

Although this is the prevailing definition (Chaturvedi, 2018), Jackson (2014) has suggested that sustainable consumption is better viewed as an umbrella term for a collection of key issues that deal with enhancing quality of life, improving efficiency, minimizing waste, meeting basic needs, respecting equity, and embracing a life cycle perspective. The latter refers to the production and consumption of goods and services in ways that are socially beneficial, economically viable, and environmentally benign over their whole life cycle.

We need sustainable consumption because the way people are consuming is making it very hard to provide life support for everything and everyone, those living now (near and afar) and those not yet born (McGregor, 2011). Current consumption patterns

are undermining the support structures that sustain all life. Without this support, everyone and everything become weakened and vulnerable, exposed to profound risks and harm—even extinction for some species and geographic locales (McGregor, 2011). Before a curriculum can be developed for consuming sustainably, educators need to appreciate the symptoms of excessive consumption and the powerful barriers that prevent or mitigate changing this behaviour. These become the issues that ground learning in social reconstructivism-informed ESC.

Evidence of Unsustainable Consumption

The social and environmental costs of unsustainable consumption are mounting (Assadourian, 2010, 2017; Chaturvedi, 2018; Thoresen, 2010). Social costs include untenable exploitation and oppression of labourers (women, children, slaves, prisoners) and excessive consumer debt and alienation due to a materialistic lifestyle. Other societal costs include an increase in personal and structural violence (including crime), a widening gap between the haves and have nots (income and wealth inequality), and compromised health and quality of life (including psychological health) along with life stress and work-related tension (i.e., the earn-more-to-spend-more treadmill). Society also now disrespects spiritual values leveraged by shifts in values and norms favouring consumerism. Personal relationships are suffering due to isolation. Equity and empowerment are compromised. And the world is witnessing a massive diversion of money from health, social welfare, and education to the consumption and production of frivolous goods and services (Assadourian, 2010; McGregor, 2010; Shukla, 2017; Thoresen, 2010; United Nations Environmental Programme, 2012; Wright & Rogers, 2011).

Environmental costs are mostly attributable to the production processes used to make goods and services but are also tied to excessive consumption. They include both climate change (i.e., shifts in long-term patterns of temperature, humidity, wind, and precipitation) and global warming (i.e., rising surface temperature of the planet due to greenhouse gases, a symptom of climate change). Other costs include previously inconceivable levels of pollution (air, water, land), loss of biodiversity and habitats, and loss of renewable resources. Still other ecological costs include untenable accumulation of garbage and waste, deforestation and loss of arable land, compromised food security, loss

of rainforests, and, paradoxically, rising ocean levels along with fresh water depletion and scarcity (Assadourian, 2010, 2017; Chaturvedi, 2018; Shukla, 2017; Thoresen, 2010).

In short, the global consumer economy is relentlessly predicated on "horrific ecological and societal abuses" (Assadourian, 2017, p. 7). The core belief of consumerism is that consumption and material possessions are at the centre of all happiness. Consumption is the centre of life, a belief perpetuated by a market system that shapes peoples' preferences excessively in favour of consuming regardless of the social and environmental costs (Wright & Rogers, 2011).

Barriers to Consuming Sustainably

Mattar (2011) identified 11 barriers to sustainable consumption that reflect the aforementioned negative features of consumer culture (McGregor, 2010). The most compelling barrier is that the consumer lifestyle with its attendant behaviours is part of the culture of most societies today, making it very difficult and time-consuming to expose, challenge, and change. This entrenched culture is made more complicated by the fact that a consumer society bases identity on consuming. Also, people struggle to define their real needs, meaning that they consume needlessly and excessively. They often do not recognize the relationship between their consumption and the problems in society and the environment. They do not think the consumption activities of one person can have a significant impact. They do not see themselves as part of a collective. Worse, they do not see themselves as agents of change or mobilizers of change in other people (see also McGregor, 2010; Thoresen, 2010).

Aibana, Kimmel, and Welsh (2017) identified several other barriers to consuming sustainably. First, couched in the understanding of consumer culture as a key social institution (Verwiebe, 2014), consumers thrive on habitual routines and behaviours, making it very difficult to change them. Habitual behaviours are not consciously "about values" (Aibana et al., 2017, p. 17), although they are of course deeply grounded in the values and intentions of creating an identity, seeking relationships, and not feeling alienated (McGregor, 2010).

Second, this barrier is compounded by another in that consumption behaviour is influenced by peers and social groups, as well as social norms. Consumers can take cues from these norms, which are sometimes so strong they serve to override beliefs and the

best of intentions (Aibana et al., 2017). Indeed, third, ironically, pushing back against social norms is also a barrier to consuming sustainably. For example, despite their ethical concerns, some people may find it very difficult to "take a bus to work in a community where owing a car is considered a key signifier of success" (Aibana et al., 2017, p. 20) because they would be perceived as going against the norm of owning a car. These complex ethical decisions can be identity-risky because they can marginalize and alienate people from the norm.

Fourth, for some people, consuming sustainably may not seem personally relevant, either because they fail to see how they are complicit or the idea is so abstract that they cannot associate it with their lives. Fifth, those who are committed to consuming sustainably soon discover how hard it is to follow through. They are further hampered by the reality that it is hard to discern the consequences of unsustainable consumption (Aibana et al., 2017). People living in a consumer culture are so disengaged and alienated that they cannot empathize with people they cannot see. When given the opportunity to frame people as "the other," it is very easy to dismiss any sense of responsibility toward them (McGregor, 2010).

Social Reconstructivist Curriculum Philosophy and Model

The social reconstructivist curriculum philosophy has been called "an antidote to the easy virtue of materialism" (Mondelo, 2015, Slide 19). This is a powerful assertion because antidotes counteract the effects of a poison (Anderson, 2014) and a consumer culture is a destructive and corrupting influence; that is, it is poisonous. Social reconstructivism is now presented as an appropriate philosophy to inform education for sustainable consumption (ESC). This curriculum philosophy holds both that schools should reflect real life and education should provide deep learning opportunities to support life (Hill, 2006). This idea aligns well with sustainable consumption, which, as explained, means consuming in a manner that supports life (McGregor, 2011).

Origins of Social Reconstructivism

Social reconstructivism emerged along with the progressive education movement in the United States at the turn of the twentieth century. Progressives believed that education

per se should help students solve relevant problems to advance social change and do so by providing freedom and democracy. Social reconstructivists (who aligned with pragmatism) believed that schools, and teachers in particular, should be agents of social reform, which includes inculcating this belief in students. Adherents to this approach believe that current society is in trouble because it is not willing to revision and reconstruct social institutions in order to meet the challenges of a changing world. In this gap, schools are envisioned as agents for societal reconstruction and reform (Gutek, 1997). To reconstruct means to rebuild (build anew), which can entail fixing, mending, repairing, and reparation (Anderson, 2014). Reform refers to making changes to improve something, from the Latin *reformare*, "form or shape again" (Harper, 2019).

John Dewey, Jane Addams, and George Counts were strong proponents of this curriculum philosophy (Gutek, 1997). Dewey positioned the school institution as an important impetus for social change. He recommended that teachers use the demands and challenges of the social situations in which students find themselves to stimulate students' power to effect social change. Because schools are social institutions, they must represent real life. If the curriculum does not relate to the lives that students are living within their communities (i.e., is not relevant), then the curriculum fails (Addams, 1937; Reed & Johnson, 2000). What students learn must be meaningful for them, with the content ideally originating from their life experiences as articulated to educators (Dewey, 1916).

Blend of Disciplinary and Social Justice Concepts

To clarify, the social reconstructivist curriculum should involve a blend of both (a) disciplinary (academic subject) concepts (e.g., math, history, home economics) and (b) social justice concepts. This way, curriculum planners and teachers can help students to develop skills and knowledge that enable them to be socially progressive during and long after they leave school. Students would develop an ethical conscience and leadership skills predisposing them to better the lives of people and communities suffering immense social injustice. The social reconstructivist curriculum should balance instruction so it gives learners a chance to develop as culturally literate and social and environmental advocates while still preparing for both academic and work force success. Educators should use traditional disciplines, as they facilitate students' identification of social problems, help

them to critically understand them, and instill problem-solving skills to address them (Bagh, 2014; Chapman & Counts, 1924; Null, 2011; Schiro, 2008).

Social Reconstructionism: Philosophy and Model

The social reconstructivist approach involves a productive dance between students and teachers. First, students identify and choose social justice issues with which they are concerned. Second, teachers introduce relevant disciplinary concepts and content to help students collect, analyze, and critique data pursuant to these issues. Third, students and teachers discuss the issues together, with teachers especially involved in facilitating dialogue using both cognitive and affective (values and emotions) questions (Schiro, 2008).

In more detail, to facilitate means to help or assist learning by making something easy or easier (Anderson, 2014). Most significantly, teachers become facilitators for critical analysis and social change (Mondelo, 2015). Through this process, teachers "foster critical discontent [instead of helping] students adjust or fit in with existing society" (Mawson, 1986, p. 48). Instead of learning how to be "agents of the state" by perpetuating the status quo, students learn how to be "agents of social change" by challenging the status quo (Mawson, 1986, p. 50).

During the third stage, teachers should also help students to clarify their values and how these affect their decisions on what actions to take. This can involve the values clarification process, wherein students delve deep into themselves to tease out their existing value set (see Mawson, 1986). This third stage can entail media such as drama, music, art, dance, and literature (especially poetry and plays) to help students express their thoughts and feelings. Fourth, the now intellectually and emotionally involved students devise and, ideally, fifth, implement an action plan. In a perfect world, this plan would involve interacting with their local community (place-based learning) to promote awareness of and gain support for the issue and proposed solutions (Schiro, 2008).

Teachers play a crucial role in this entire learning process (Null, 2011). They cannot be neutral and are charged with passing on a controversial side-taking and questioning attitude to students (Mawson, 1986). Teachers have to help students learn that both disciplinary and life content is never neutral either, inciting them to continually ask "In favour of whom?" (McNeil, 2015). Rejecting neutrality involves being open-minded,

with an "attitude of mind which actively welcomes suggestions and relevant information from all sides" (Dewey, 1916, p. 175).

In this process, teachers carry a heavy burden in that they are challenged with helping students to both (a) develop a critical awareness of social problems and pressures (i.e., revealing power imbalances and interest investment) and (b) be motivated and inspired to improve their world by seeking change to the very structure of society. Teachers have to find engaging approaches that focus learning on critically analyzing local and world events, exploring controversial issues, developing a better vision of the world, and taking concrete, risky action that challenges the status quo (McNeil, 2015; Mondelo, 2015).

In a social reconstructivist curriculum, teachers are in a special relationship with students—no longer a "sage on the stage." Teachers build a curriculum and learning program around student-identified problems and, in turn, students practice problem solving and critical thinking about these problems. This collaborative relationship helps students build courage and confidence in taking a stand on social injustice, ultimately leading to the creative restructuring of societal elements. Throughout all of this, the teacher is the responsible guide and facilitator with much initiative left to the students, who should have as big a role as possible in their own learning (Mawson, 1986). Social reconstructivism holds that education rests on the relationship between teachers and students in real-life activities (Hill, 2006). In short,

> the task for teacher educators is to recognise, value and build upon the immediate knowledge of our students, to understand and help them understand the social conditions of their lives, to guide them to look inward into their experiences and then outward to the world, to treat their own students as precious individuals but also as world citizens like themselves. (Breithorde & Swiniarski, 1999, p. 4)

Figure 1 represents this curricular process (adapted from Bagh, 2014). It is not as linear as it appears, but a certain logic is involved. Working for student-identified social injustices, teachers and learners work together to help the latter come to a committed stance on which, if the curriculum allows sufficient time and resources, they follow through and take action (McNeil, 2015). To state the obvious, per the process (heuristic) outlined in Figure 1, it is each teacher's responsibility to know their students and the classroom dynamic and to lead and manage the learning process. Each teacher (working

with students) has to figure out how to deal with things that emerge that could mitigate getting to any meaningful action to address unsustainable consumption. This especially involves a deep respect for the messiness and complexity of being in the world (Counts, 1932/1959).
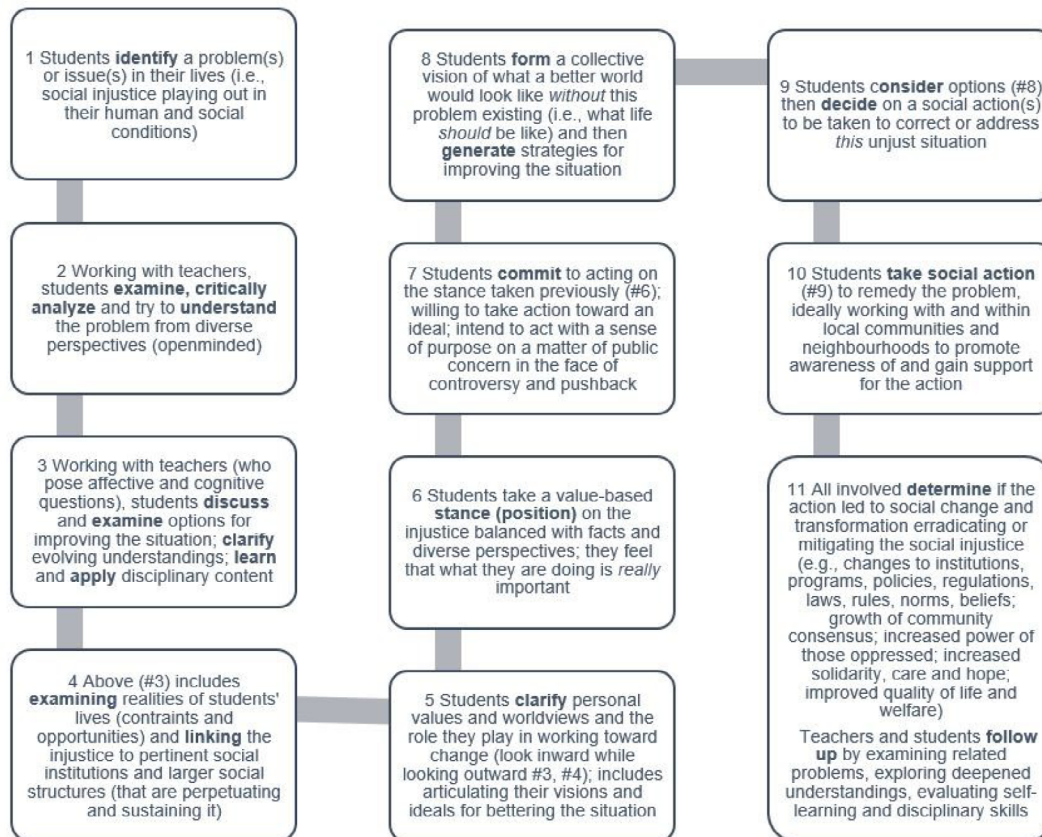

Figure 1. Social reconstructivist curriculum model (adapted from Bagh, 2014).

Per Figure 1, the teacher's role includes relating local, national, and global stances to the students' lived or observed injustice. Teachers must stress student cooperation with their local community and neighbourhoods, which can include the arts, service learning, and participatory action. The intent is for students to learn interdependence and social consensus while gaining autonomy, inner power, and self-efficacy to effect change. When possible, teachers and other adults need to treat students as equals, which includes giving

them responsibilities while concurrently challenging their beliefs and helping them to develop critical consciousness (McNeil, 2015).

As a caveat, teachers need to appreciate that many students will find the process of arriving at a plan of action very challenging. As Addams (1937) put it, "it required… years…to formulate my convictions even in a least satisfactory manner, much less reduce them to a plan of action" (p. 64). But taking action on tentative, untested convictions is more ensured if the problems are real for students and they learn about and how to solve them by being actively engaged and doing something. Ideally, when dealing with social justice issues permeating society, students should have opportunities to "at least see the size of another's burdens" (Addams, 1902, p. 6), thereby creating much more than just sympathy and instead ensuring empathetic engagement.

Counts (1932/1959) concurred, believing that educators must give students a chance to "face squarely and courageously every social issue, come to grips with life in all of its stark reality [and] establish an organic relation with the community" (p. 7). If successful, a social reconstructivist curriculum will give students a full and deep understanding of the world in which they live. Counts further believed that educators should embrace deep social responsibilities and "grasp the opportunity which the fates have placed in their hands" (p. 50).

Acting on this fate-ordained opportunity means educators can ensure that students learn how to engage in each of organizational work, cooperative undertakings, and social planning so they can intelligently address societal issues and problems. If successful, learners become independent of the teacher and can direct themselves while managing relations with others in their family, neighbourhood, community, and school (Counts, 1946). They will in effect have learned to live intelligently in an ever-shrinking world, always appreciative of changing world power patterns (engendering social injustice) that they approach as judicious and critically analytical thinkers, problem posers, and solvers (Hill, 2006).

Social Reconstructivism-Informed Education for Sustainable Consumption

As a caveat, when consumer education curriculum planners decide to draw on the social reconstructivist approach to design curricula for ESC, it is important that they realize how this will differ from conventional consumer education. The latter tends to focus on how to help people make decisions in the marketplace so their interests are served when buying and owning goods and receiving services. It focuses on economic and financial growth and security, assuming the consumer is a major economic agent with sovereignty in the marketplace. People are taught that their role is to serve the market, and this is perpetuated by teaching market values including efficiency, scarcity, profit, growth, and competition. They are charged with preserving their economic interest, responsibly using credit to keep spending, valuing individualism (freedom of choice), and making rational choices to get the best value for their limited dollar. This approach to consumer education strives to ensure that people know their rights as consumers relative to more powerful producers, retailers, marketers, and advertisers (McGregor, 2011, 2012; Thoresen, 2010).

ESC Concepts, Principles, and Values

Sustainable consumption practices are better viewed as the embodiment of "relations between individuals" rather than the sole purview of individuals' rational choices to meet needs and wants (Dolan, 2002, p. 170). To that end, education for sustainable consumption is predicated on different concepts, assumptions, principles, and values than mainstream consumer education. These include diversity, fellowship, stewardship, solidarity, self-sufficiency, critical awareness, and equity (fairly give everyone what they need to succeed) as well as equality (treat everyone the same/evenly—it's up to them to succeed). They also include integrity, connections, empathy, peace, nonviolence, accountability, responsibility, and freedom. Other important values and principles are interconnectedness, tolerance, self-awareness, respect, compassion, community, and justice in all its forms. Together, these are key ideas because they unlock doorways to sustainability (McGregor, 2011; Thoresen, 2010). Once unlocked, students can choose to walk through these doorways and effect social change to ensure sustainability. This is a powerful metaphor for social reconstructivism.

ESC Issues

Specific sustainability-related issues that can be used to focus social reconstructivist learning include those previously profiled pursuant to evidence of unsustainable consumption and barriers to consuming sustainably. These issues lead to grave social injustices in the form of exploitation, infringement of human rights, denial of human dignity, bodily harm and illness, poverty and insecurity, oppression (i.e., prolonged unjust treatment or control), marginalization, and exclusion (from society, political arena, development and the economy). Just picture child labourers or women working in sweatshops (McGregor, 2010).

Some of these ESC issues are playing out close to home, thereby providing students with real-life and real-time opportunities to address them. Examples include local garbage and waste, local loss of habitats for endangered species, stream and river pollution, loss of green areas in the community, and invasive consumerism-oriented marketing in social media platforms. Issues playing out at a distance yet still hinged to excessive consumption include child labour to make consumer products, loss of rainforests to create pastures to grow food products consumed in the North, and urbanized poverty experienced by disenfranchised subsistence farmers in countries with developing economies. This framing of ESC issues illustrates viewing sustainable consumption as an umbrella term for a collection of key issues that sharply influence quality of life, waste minimization, meeting basic needs, and respecting equity and freedom (Jackson, 2014).

Catalytic Education

Not surprisingly, given the entrenched and encroaching nature of these and other issues, ESC assumes that education is a catalyst for a just, more secure society and more sustainable lifestyle and livelihood (McGregor, 2011), especially when informed by the philosophy of social reconstructivism. The consumer culture, as a social institution, catalyzes role expectations (Verwiebe, 2014); therefore, we need catalytic education to confront it. Catalyst is from the Greek *katalyein*, "to loosen things up" (Harper, 2019). Catalysts speed up the rate of an important event, helping to make it happen. They cause significant and fundamental change without changing themselves during the process (Anderson, 2014).

Chemical catalysts facilitate a reaction between two substances. Most life-sustaining chemical reactions that occur in the body would not happen as fast as they do without enzymes (the catalyst). Catalysts are involved in making soap, fermenting wine, and leavening bread. When combined under pressure in the presence of iron (the catalyst), nitrogen and hydrogen form ammonia (Science Clarified, 2016). A business executive who hires workers and then helps them work together smoothly and seamlessly is a human catalyst. So is a mediator who brings two discontented people together and facilitates saving their relationship. Anyone who facilitates system or learning processes is a human catalyst as well (Thims, 2017). The latter could include curriculum planners who, in the face of the untenable consequences of climate change, speed up and facilitate the process of educating people to consume sustainably.

Warom (2018) described catalytic education as an approach that "develops responsible citizens, authentic learners and credible change agents" (para. 1). It involves establishing strong relationships between the teacher and students, managing learning teams, facilitating high-level change, and working collaboratively with students and communities. Catalytic education "is based on high examples and the adoption of human values [that create] citizens who are active both in mind and profession" because they have learned to analyze society well (Taleb, 2017, para. 33).

Catalytic education, if done effectively, would loosen things up, shake things loose, and create a space for deep change to occur. Catalytic teaching involves the provision of a "stimulating and motivating force to promote a transformation of raw ability into talent" (Rogerson & Chomicz, 2014, p. 4). Like any catalyst, these teachers strive to change the rate of learning (i.e., the "learning reaction") without being consumed, allowing them to continue teaching this way and guiding students.

Instructional Strategies and Teaching Style

On the ground and in action, a social reconstructivism-informed ESC pedagogy is very student-centred and teacher-facilitated with powerful links to the community (Hill, 2006). Teachers guide and help students to direct their own learning, starting from where they are right now (e.g., their knowledge, skills, beliefs, attitudes, values, experiences, mindsets) and what they perceive or know as problematic issues. The instructional strategies in Table 1 (McGregor, 2011) are the foundation of a social reconstructivist curriculum in

that they help learners analyze society and its issues and then focus on a deliberate plan for action so that society can be changed in proactive ways (Latriz, 2016; Peterson, n.d.). These reforms can include changes to behaviour, legislation, policy, programs, belief systems, mindsets, value sets, community solidarity and consensus, a sense of empowerment, and improved quality of life and welfare (Hill, 2006; McGregor, 2011; Thoresen, 2010).

Table 1. Instructional strategies of social reconstructivism-informed education for sustainable consumption

- active learning principles and strategies (students engage in meaningful activities [not passive recipients] and think about what they are doing)
- inquiry-based learning (driven by students' problem posing and problematization—they *own* the inquiry)
- project-based learning (work together to create a tangible project)
- problem-based learning (work together to solve a problem)
- issues-based approach (learning is grounded in authentic, meaningful, controversial issues played out through deep questioning)
- concept mapping and mind maps (facilitated by teacher)
- case studies (use others' and make up their own)
- debates (articulate, argue, and justify one's position)
- discussions (talk about [investigate] something in detail, ideally leading to conclusions)
- dialogue and study circles (discourse to respectfully listen and collectively explore and resolve a problem)
- cooperative learning (students have respective roles within and are accountable to the group as they work jointly toward the same end)
- collaborative learning (students progress individually while working in a group)
- thematic teaching of controversial issues (use themes to help students make disciplinary and other connections from multiple perspectives)
- field trips into the community (community is "a classroom" ripe with locally relevant learning)
- bring community into the classroom (guest speakers, keynotes, life stories, narratives)
- service learning continuum (learn while providing service to the community)
- art, drama, music, games, sports
- scenario building and future-forecasting workshops
- action competence approach (critically and democratically informed solutions)
- critical pedagogies of place (learning happens outside the classroom, in the world)
- place-based education (locales are major places of learning)

Teachers should also purposefully explain to students the nuances of the joint deep learning and discovery work involved per the social reconstructivist educational philosophy set out in Figure 1 and put into action using strategies profiled in Table 1.

Students need to appreciate that the classroom learning environment created by teachers has been intentionally created so that students are in control of their own learning, with teachers serving as facilitators who make the progression of this self-directed learning easier and more achievable.

To respect that learning about sustainable consumption through a social reconstructivist philosophy also happens outside the formal classroom (scaffolded by in-class learning), educators are encouraged to take an action competence approach using critical pedagogies of place (Gruenewald, 2003; Jensen & Schnack, 2006). This pedagogical strategy respects that (a) the learning environment is the planet (place) and (b) students can develop the capacity to critically select and democratically take specific actions to solve societal and environmental problems (action competence). Ownership of learning leads to ownership of actions.

Conclusion

The hope of the social reconstructivist curriculum (see Figure 1 and Table 1) is that engaged learners will become responsible, engaged citizens, leading to reformed societal institutions. This potentiality is imperative in light of the dire future playing out at the hands of people consuming unsustainably. The tenets of the consumer culture have to be challenged if any societal change is to happen. Redesigning all education (but especially consumer education) so it focuses on sustainable consumption is possible if educators turn again to a social reconstructivist curriculum philosophy. This would shine a spotlight on the stark realities of consuming unsustainably and the barriers to effective change. Current and future generations would be socialized to view schools as an institution suitable to teaching them how to challenge the consumer culture institution.

Social reconstructivism applied to ESC would enable students to become actors of change because it stimulates their awareness of the central role they play in forming and reforming society. The ebb and flow of social and cultural processes, replete with shifting power relations and struggles, are part and parcel of what "enables alternative visions of society to emerge" (Dolan, 2002, p. 170). Social reconstructivism-informed ESC deeply respects this dynamic, envisioning a future where consumerism is muted, replaced with a sustainable consumption culture and supportive, reinforcing curricula.

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