Fostering Creativity for Students with Special Needs Through Innovative Learning Environments

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Abstract

The purpose of this article is to address the urgency of creating an innovative learning environment in marginalized K-12 special education classrooms in the United States. This article considers the following topics: (a) the definition of creativity and innovation; (b) the importance of innovative learning environments, (c) key conditions and resources needed for innovation to occur; and (d) the impact of fostering creativity in learning environments.

Introduction

Presently, two main global challenges educators must tackle are: skills inequality and skills uncertainty (Winthrop et al., 2018). The U.S. K-12 education system favors some groups, while penalizing others (Kubota, 2015). Sadly, K-12 schools marginalize people with special needs (Kubota, 2015). By prioritizing innovation in K-12 classrooms for students with special needs, skills inequality and skills uncertainty may be diminished. School districts that seek to remedy disparities in skill acquisition can empower marginalized students to take control of their future, to be on par with society, and thereby reduce oppression (Friere, 1972; Gonzalez et al., 2017). Skill acquisition can be distributed diversly and equally for the future (Kubota, 2015).

The purpose of this article is to address the urgent need to create an innovative learning environment in marginalized K-12 special education classrooms in the United States. This article seeks to meet the following goals: (1) Define creativity and innovation; (2) Describe the importance of innovative learning environments; (3) Describe conditions and resources needed for innovation to occur; and (4) Discuss the impact of fostering creativity in learning environments.

Definition of Creativity and Innovation

To proceed with a shared view of creativity and innovation, we offer the following conceptions. Creativity is the ability to engage and test solutions to possible hypotheses when problem solving (Mikhailove, 2018). Applied creative design leads to innovations, which is defined as the process of putting new things into practice (Robinson, 2017). Innovation involves conjuring creative ideas, articulating design solutions, prototyping, and implementation. In K-12 school systems, innovations usually result in increasing K-12 student achievement (Graziano & Navarrete, 2012). An essential and complementary theme is that educators must realize that all learners, especially those with special needs must also experience creative approaches to learning.

Why Are Innovative Learning Environments Important?

Innovative learning environments in K-12 school-districts are important to diversify and distribute skill acquisition to the communities that schools serve (Kubota, 2015). Currently, the U.S. K-12 education system focuses on standardization, especially in marginalized communities. This focus can inhibit innovation (Robinson, 2017; Winthrop et al., 2018). Standard models may not allow student exploration. This may hold students back from developing the skills beyond academics that are required to succeed in a fast-changing world and especially for those who have been identified as having a disability (Gonzalez et al., 2017; Robinson, 2017; Winthrop et al., 2018). A systemic shift of K-12 educational classrooms to one that nurtures innovative spaces inspires both a brighter future and a platform for learners with special needs.

What Are Key Conditions in an Innovative Learning Environment?

The goals are to foster an innovative K-12 environment and to encourage schools to develop the whole child: mind, body, and spirit (Robinson, 2017). A focus on developing the whole child in K-12 schools favors a future of economic growth for marginalized learners that includes those with special needs (Kubota, 2015, Robinson, 2017). This innovative environment is defined as a student-centered, flexible learning environment that fosters both seven essential characteristics and five crucial mindsets (Kariippanon et al., 2019). As students with special needs are centered in the environment, their ability to develop to their full potential is enhanced.

Seven Characteristics of Creative Environments

Educators should be encouraged and supported to create learning spaces that nurture innovation. This requires risk taking, new methods and ways to act and think, enthusiastic people, and supportive environments (Keinänen, Ursin, & Nissinen, 2018). This also requires that we consider a framework for systemic adoption. This framework cultivates seven characteristics that provide educational experiences for mastery of the necessary skills for innovative practices. **Table 1** lists and describes each of those characteristics. This framework identifies characteristics students must possess for their future (The Innovative Educator, n.d.). Students with special needs are thus empowered when they practice and master these essential seven characteristics (Robinson, 2017).

These seven characteristics call for a flexible classroom environment for successful implementation. A classroom environment like this would be characterized as one where student-centered flexible learning and hands-on approaches that cater to multiple learning modalities are the rule rather than the exception (Ovbiagbonhia et al., 2019). Creative learning requires change from teacher-led to student oriented instructional emphases to assure the cultivation of these seven characteristics (Kariippanon et al., 2019; Ovbiagbonhia et al., 2019). These instructional shifts ensure students are active learners in hopes of their mastering skills for the ever-changing future (Kariippanon et al., 2019).

Five Crucial Mindsets

School leaders' and teachers' emphases on the seven characteristics for creativity should lead to innovation that develops five crucial mindsets within all students with and without special needs. These mindsets encourage listening skills, student voice, and critical thinking through feedback (O'Grady, 2008). The five mindsets encouraged are: (a) the disciplined mind; (b) the synthesizing mind; (c) the creating mind; (d) the respectful mind; and (e) the ethical mind (Winthrop et al., 2018). **Table 2** summarizes these five crucial mindsets As these crucial mindsets develop within students in the K-12 education system, students become better equipped to narrow the disparity in global skills inequality and skills uncertainty (Winthrop et al., 2018).

Centering Students with Special Needs in The Learning Environment

Student-centered learning places students with special needs as the primary driver of learning in the classroom by creating a democratic environment. It empowers student voices to inform and drive re-formulation of educational practices in the classroom (Gonzalez et al., 2017). When student voice is centered in learning, O'Grady (2008) stated, "people focus on their own generative questions and responses instead of being passive receivers of officially sanctioned knowledge" (p. 364). As a result, teachers have students actively participate, and empower teacher and student creativity through

Table 1	
Seven Characteristics to Foster Creativity in Students	
Characteristic	**Description**
Creativity	Harness and nurture creativity in students, differentiation
Collaboration	Share a common vision, diverse expertise, new insights and perspectives
Courageous	Not afraid to take risks, view mistakes as opportunities for growth
Connected	Takes initiative, confident, motivating, develop themselves professionally
Compassionate	Students feel like their teacher cares about them
Committed	A life-long learner, value reflection to improve teaching
Curious	Inquisitive, wanting to explore new ideas
Note: Not all characteristics need to be cultivated, though preferable, in the learning environment	

which all participants can see student contributions to the classroom structures and lesson designs (Gonzalez et al., 2017; O'Grady, 2008). The contributions of the special education students are valued when they are placed in leadership positions in the classroom.

When creativity and student voice are nurtured in students with special needs, they perform better academically. For example, students can generate their own questions and suggestions for learning tasks (Sproton, 2007). This promotes student engagement in learning as well as critical thinking. Also, teachers can redraft lesson designs to include student voice into class structures and activities. This personalizes learning, which leads to enhanced student participation, self-management, retention of learning, and connections to the real world. When students with special needs gain some control over their learning, the power dynamics in the class shift to them in a shared experience which enhances their learning as a whole child (Sproton, 2007; Winthrop et al, 2018). This partnership between student and teacher is associated with students who have higher rates of intellectual thinking (Mikhailova, 2018). Empowering marginalized students with disabilities favors educational equity (Gonzalez et al., 2017).

What Needs to Be Established for An Innovative Learning Environment?

Teacher-to-student and school-to-community partnerships help to establish an innovative learning environment (Lynn & Parker, 2006). Schools can empower communities to share what they believe students need for success and vice versa (Lynn & Parker, 2006). As noted in **Table 3**, four key elements must be considered when seeking to establish an innovative learning environment.

Learners/Students

Marginalized students with disabilities need feelings of safety in their classroom to be active learners. If not, feelings of inadequacy fuel passive learning. This leads to poor performance in school (Lynn & Parker, 2006). An actively engaged classroom can be structured as a microcosm of society, where instead of living in marginalized ways, students with special needs are placed at the center of the learning process (Gonzalez et al., 2017). An example of the classroom as a microcosm is found in a study centered on student voice (Falter Thomas, 2014), where students shared their own thoughts and posed their own questions. In that learning environment, Falter Thomas (2014) found students were more engaged and motivated in their learning as opposed to classes where students did not drive the lesson. Elevating student voice inspires students to think and speak critically about instruction and to discuss what is learned and how to best learn (Gonzalez et al., 2017; Ovbiagbonhia et al., 2019). When student voice is elevated, there is focus on what the learner knows and its application (Winthrop et al., 2018). From actively engaging in re-formations of their thoughts and actions, students with disabilities can be empowered to develop their creativity.

Teachers

Traditionally, teachers are viewed as the gatekeepers of knowledge. To shift this power dynamic, professional development can be geared toward teacher collaboration (Graziano & Navarrete, 2012) and the values of care and community (Lynn & Parker, 2006; Winthrop et al., 2018). At times, teachers can engage in self-reflection where they consider one's privilege in relation to students they are teaching (Kutoba, 2015). Moreover, teachers can

Table 2	
Five Mindsets to Foster in Students	
Number	**Mindset**
1	*The disciplined mind:* fully mastering a particular discipline
2	*The synthesizing mind:* taking into account multiple factors
3	*The creating mind:* developing fresh ways of thinking about things and unexpected answers,
4	*The respectful mind:* seeking to understand and work effectively with others
5	*The ethical mind:* questioning the "givens" in society and considering how citizens can best improve society
Note: Not all mindsets need to be cultivated, though preferable, in the learning environment	

Table 3

Key Elements of an Innovative Learning Environment

Key element	Key characteristics
Learners/Students	Active learners
Teachers	Create a classroom focused on student-centered learning
Content	Driven by student interest primarily, standards secondary
Resources	Focus on teacher and school administration development

include reflections on the idea of control, taking calculated risks, power dynamics, and the idea of distributive leadership (OECD, 2015). Some purposes of reflection are: to nurture a teacher mindset that is flexible, to shift power dynamics onto students and encourage students to be their own gatekeepers of knowledge (Gonzalez, 2017; Kunnari & Ilomäki, 2016). Teacher reflections can shift outcomes for marginalized students with disabilities.

Content

Currently, the U.S. K-12 education system prioritizes standardization of content and programs for students with disabilities (Robinson, 2017). Standardization is a form of conformity that stifles creativity since everything should be done a prescribed way at all times (Robinson, 2017). Content standardizations obstruct students from developing the skills pertinent to successfully adapt in a fast-changing world (Robinson, 2017; Winthrop et al, 2018). Teachers who use a prescribed curriculum with little input from students will stifle diversity in ideas and thoughts (Winthrop et al, 2018). In comparison, teaching and learning experiences led by students' interests and needs effectively increases skill acquisition of the five mindsets and seven characteristics of creativity that skill development requires (Winthrop et al., 2018). Standardization indicates how many students are in each classroom in public K-12 education (Mlambala, 1992). Thus, standardization can lead to economic resources being shared unequally between people of color (Kubota, 2015) and the majority population.

There appear to be few resources available to address the growing diverse populations of students. Standardization reinforces a one-size-fits-all approach to learning in spite of the fact that needs are diverse. Differentiation is difficult in a growing, diverse population. (Winthrop et al., 2018). To combat standardization, school structures and culture can prioritize collaboration among all stakeholders Kunnari & Ilomäki, 2016). School staffs can collaborate to

provide diverse teacher development in instructional practices that enable teachers to differentiate appropriate instruction to student needs. Also, scheduling teacher time to collaborate in the school day with others can be effective. A shift to focusing on creativity and innovation in K-12 education impacts positive societal growth and mastery skills distribution (Kubota, 2015 & Winthrop et al., 2018).

What Impact Do Innovative Learning Environments have on Students with Disabilities?

Innovative learning environments impact students with disabilities positively within their microcosm of the world (Gonazlez et al., 2017, Lynn & Parker, 2006). The education system is an institution that can be an equalizer for marginalized students with disabilities (Lynn & Parker, 2006). Everyone has a social responsibility to empower school communities by fostering creativity. **Table 4** summarizes key impacts of innovative learning environments.

Impact of Student-Centered Learning Environments

Due to rapid social and economic change, it is unclear what skills students will need to thrive in the world (Winthrop et al., 2018). Therefore, prescribed curricula and teaching practices cannot adequately prepare students for the world beyond school. A student-centered learning environment empowers marginalized students with disabilities to adapt to change through development of a creative mind. Students are empowered to make decisions that engage in evaluative thinking (OECD, 2015).

Those marginalized must be their own drivers in the struggle for their progression in society (Friere, 1972). However, in order to take on the role of driver, students must be encouraged to develop advocacy skills so that they can speak up for their rights as learners. As drivers of their own learning, students are encouraged to be collaborative and be critical in moments of uncertainty or in making decisions

Table 4

Impacts of Innovative Learning Environments

Aspect	Implications
Student-centered learning	Student driven practice cultivating seven characteristics of creativity and five crucial mindsets in the classroom and outside the classroom
Future Society	All people, including those oppressed, can contribute to solutions to better society
Social responsibility of everyone	Everyone in society is responsible to assist in empowering those who are oppressed and marginalized

(Winthrop et al., 2018). Rather than stifle creativity, teachers must carefully consider how they encourage risk-taking in the classroom, how they support alternative solutions and creative ideas, and how they structure the classroom for full collaboration among all students. Positive attention to these domains prepares all students to be active participants in a diverse society where all are valued.

Impact on The Future of Society

Keeping marginalized K-12 education classrooms standardized while the world changes keeps marginalized students with disabilities oppressed (Fiere, 1972, Gonzalez et. al., 2017, Winthrop et al., 2018). For society to positively grow, innovation must involve successful implementation of creative ideas, procedures, theories, and strategies (Ovbiagbonhia et al., 2019).

Social Responsibility of Everyone

Social responsibility is an individual's duty that requires decisions for the betterment of society and the drive to follow-through (Ganti, 2020). It is socially responsible to provide all students with disabilities opportunities to adapt to the changing world (Kubota, 2015). Policies that promote the best interest of society involve all individuals, including people who are identified as having disabilities and marginalized. Their creative minds, ready to design and innovate, should be celebrated and their voices heard. There is a responsibility to continue to train future educators to celebrate diverse innovations (Keinänen, 2018). The current education system places overwhelming barriers and challenges on marginalized communities (Gonzalez et al., 2017). Education can aid in fighting these barriers and challenges through fostering the practice of freedom in the classroom first (Friere, 1972). The practice of freedoms empowers people who are oppressed to become creative and transform their own world (Friere, 1972).

Conclusion

Innovative classroom spaces allow students to experiment and test boundaries freely and safely. Being innovative is literally being an activist in education. The activism of key stakeholders in school districts can benefit our future society. Fostering a creative environment for innovation empowers marginalized students with disabilities to become critical thinkers, innovators and creative. By fostering innovative spaces, students benefit from diverse ideas, perspectives, and personal achievements.

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