Igniting Creativity in the Classroom: The Power of Design Thinking

Discover how design thinking can transform your classroom into a hub of innovation and critical thinking.

We'll explore practical strategies that foster student engagement and creativity through intentional learning evolution.

A presentation by

Nishreena Nisham (she/her/hers)

Professor of Math and Finance

George Brown College

Land Acknowledgment

As we gather for this congress, we acknowledge that George Brown College is located on the traditional territories of the Huron-Wendat, the Haudenosaunee, the Mississaugas of the Credit, and other Indigenous peoples who have been stewards of this land for generations. We honor their enduring relationship with this land and recognize their significant contributions to the community and to education. In this space, we pay respect to their histories, cultures, and ongoing efforts in preserving and protecting these lands. We commit to fostering an atmosphere of respect, learning, and collaboration, supporting Indigenous communities in their sovereignty and continued contributions to our collective future.

AGENDA

- Introduction: The Four C's
- Challenges
- Pygmalion effect
- Pedagogical shift
- Intrinsic Vs. Extrinsic Motivators
- Redesigning the learning
- Transferable skills for the 21st Century
- Design Thinking Framework
- Failing forward
- Tips for Educators
- Conclusion
- References

THE FOUR C'S

The **National Education Association (2014)** identifies the **Four C's** as essential 21st-century skills:

1. Critical Thinking – The ability to analyze, evaluate, and make reasoned judgments.
2. Collaboration – The ability to work effectively with others towards a common goal.
3. Communication – The ability to convey information clearly and effectively, both verbally and in writing.
4. Creativity – The ability to think outside the box and generate new ideas or approaches. (National Geographic Learning – ELT, n.d.)

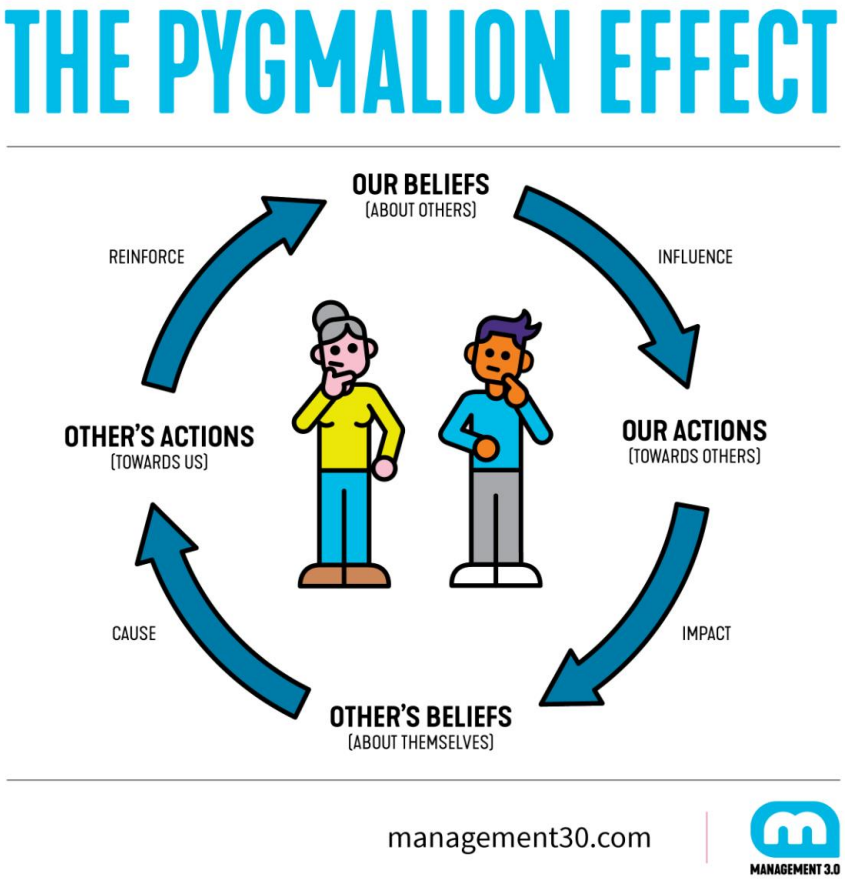
Reflect on specific teaching strategies or activities that can promote these four C's in students.

My Classroom Challenges

- Learner agency
- Passive recipients of information
- No voice
- Dysregulated learning
- Anxiety
- Mental health and wellbeing

What is the Pygmalion Effect?

This effect is often observed in educational settings (e.g., a teacher's expectations **influencing** a student's performance)



Source: Rosenthal R. & Jacobson L (1992) Pygmalion in the classroom: Teachers Expectation and Pupils' Intellectual development

The Pedagogical Shift

- Learning is seen as a dynamic process where students co-construct knowledge through interaction with their environment, peers, and teachers.

- Pedagogical shifts may also prioritize developing skills that are relevant to real-world contexts and preparing students for future careers.
- Learner autonomy involves learners being aware of their own ways of learning, so as to utilize their strengths and work on their weaknesses (van Lier, 1996).
- Self-regulation helps students understand the purpose of learning and develop their purpose.

What factors do you think contribute to the noticeable difference between learners who consistently engage, meet their learning goals—both big and small—and those who seem to struggle despite similar opportunities and resources?

Intrinsic and Extrinsic Motivators

Extrinsic Motivation - Eternally mediated rewards. Efficient in the short term

•Scenario #1: A teacher announces that the top-performing student in an upcoming math quiz will receive a gift card as a reward. As the quiz approaches, a student who is not particularly interested in math but is motivated by the prize spends extra time studying to improve their performance. Their focus on achieving a high score is driven by the external incentive (the gift card), rather than a genuine interest in the subject matter.

Intrinsic motivation: Internal desire for personal accomplishment, solely because of the value of the task/activity to the individual.

•Scenario #2: A student is assigned a project where they are asked to research a topic of their choice related to the course. Instead of simply completing the project for a grade, the student becomes deeply interested in the topic and enjoys the process of discovering new information. They take the initiative to explore additional resources beyond the minimum requirements because they find the subject matter genuinely intriguing and fulfilling. The student's motivation comes from a personal interest and the satisfaction of learning, rather than from external rewards like grades or praise.

Redesigning the learning environment

Future-Ready Skills

Prepares students with critical 21st-century capabilities essential for tomorrow's challenges.

Collaborative Growth

Fosters teamwork and communication skills through shared problem-solving experiences.

Student Empowerment

Cultivates agency and intrinsic motivation by giving learners voice and choice.

Transferrable skills

"We are currently preparing students for jobs that don't yet exist, using technologies that haven't been invented, to solve problems we don't even know are problems yet".

Richard Riley, former US Secretary of Education,

Education is shifting toward the application of **transdisciplinary competencies** or skills that will prepare our students to be successful in a future we cannot yet imagine.

Source: Ross, J. (n.d.) *ET Magazine*. Retrieved May 19, 2025, from https://et-mag.com/teaching-disruptive-technologies-to-prepare-students-for-the-future/

The Framework: Design thinking in education

In education, design thinking can be leveraged to craft powerful, transformative, and engaging student-centred learning experiences.

These experiences not only foster creativity and problem-solving but also promote resiliency, empathy, and self-confidence.

The Five Phases of Design Thinking 1 of 2

1. **Empathize -** Understand the needs of both learners and educators by collecting feedback and conducting classroom observations to identify barriers.

2. **Clarify Learning Objectives**: Frame learning outcomes in practical terms, focusing on problem-solving skills. Students will engage in a group case study presentation where they read a case scenario and present strategies related to the context of the case for problem-solving.

3. **Ideate -** Generate Ideas and Solutions**:** Authentic assessments. For example, in my foundational math course, students create a budget or calculate costs for a business venture instead of merely solving abstract problems.

The Five Phases of Design Thinking 2 of 2

4. **Prototype:** Develop a Curriculum Framework with Technology Integration**:** Platforms like Quizlet, or Slido for interactive presentations and formative assessments. For visual exploration of math concepts – OER repository. Course textbook – OER resource.

Formative Assessments**:** Develop low-stakes skill-building activities to assess student understanding. They complete these in class at the end of a lesson. These assessments help identify areas where students may need more support.

5. **Test and implement –** This Spring of 2025, I implemented the revised content after gathering feedback from faculty. Many of the assessments were adjusted based on cultivating transferable skills among students. For example, one of the formative assessments aimed to apply the concept of menu pricing by having students design a sample menu for a new restaurant.

Implement: Roll out the refined course plan across the class, monitor student performance, and continue gathering feedback.

Failing Forward: Growth Through Iteration

Encounter Setback

Initial attempts rarely succeed fully

Gather Feedback

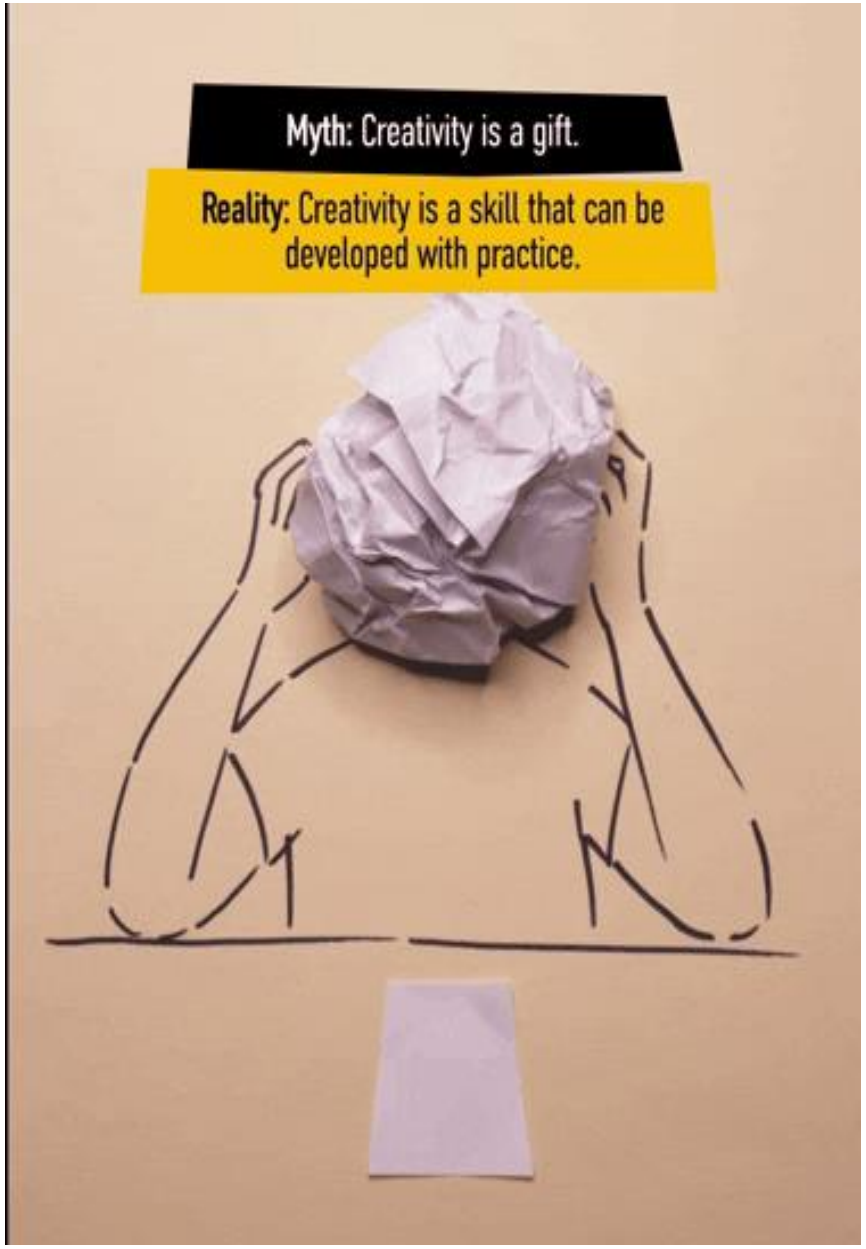
Learn what worked and what didn't

Refine Approach

Make thoughtful adjustments

Improve Outcome

Achieve better results through persistence



Tips for Educators: Igniting Creativity Daily

Cultivate Curiosity

Ask open-ended questions that encourage divergent thinking. (Lucas,2022)

Model Empathy

Demonstrate perspective-taking in your teaching and interactions.

Celebrate Process

Recognize effort, iteration, and risk-taking over perfect outcomes.

Design Your Space

Create classroom environments that support ideation and prototyping.

Conclusion: The Lasting Impact of Design Thinking

Nurture Core Skills

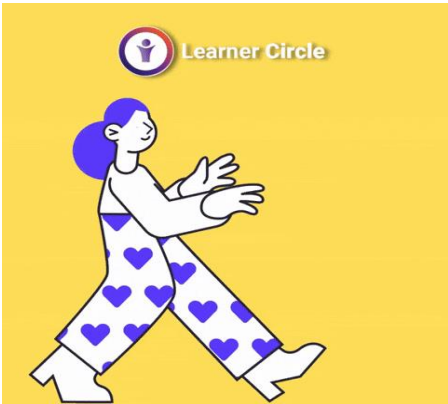
Design thinking fosters creativity, critical thinking, and confidence.

Empower Active Learning

Students become creators of knowledge and innovative solutions.

Transform Your Classroom

Start small by integrating a design thinking element into your teaching tomorrow.



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Source: *Teaching disruptive technologies to prepare students for the future*. ET Magazine. Retrieved May 19, 2025, from https://et-mag.com/teaching-disruptive-technologies-to-prepare-students-for-the-future/

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