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Pedagogy in Twenty First Century: Creativity & Innovation in Education

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Abstract

“Innovation in education is always seeking knowledge that will support new and unique ideas in instructional techniques that will reach the students in more effective and exciting ways.” – Mischelle Innovation in education means looking beyond past and current ideas to search for ideas that will work in the future. That is the world in which our learners will live. Innovation is fearless. It is able to ignore what’s been done in the past in order to reimagine what education can be in the future. It can extract the best of what worked while integrating and repurposing it for modern learners. Innovation begins with an understanding of the learner first, and tailors the content to suit their learning styles, needs and goals. Innovation is a continuous process. It involves continuous learning (also from our students). It involves searching for ideas, collaborating with other teachers, and keeping students engaged and motivated. It helps us to stay motivated and engaged. Innovation combines passion, new ideas, different minds, relevant action and meaningful transformation.

Key Words: Pedagogy, Innovation, Education, Creativity

Education has a hierarchy and always art is in the background, this is the reason why many people do not study dance or picture school are only focus in subjects that they Education system thinks are important. The same educational system around the world because great companies require more staff and more qualified for their jobs, they require smart people. Some companies are chemical or biological or it may be technology where they use many maths that is reason which education remains the same for a long time. Therefore, for students from developed countries develop their creative and innovative skills, it is necessary that schools use new ways of teaching, impart artistic education and provide students with periods of interaction so they have more opportunities to learn at home and by interacting with the society in general.

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“Innovation in education means doing what’s best for all students. Teachers, lessons, and curriculum have to be flexible. We have to get our students to think and ask questions. We need to pique their curiosity, and find ways to keep them interested. Innovation means change, so we have to learn that our students need more than the skills needed to pass the state assessments given every spring. We have to give them tools that will make them productive in their future careers.” – Kimberly¹

“Innovation, to me, means finding any way you can to reach all of your students. This means being willing and flexible to adjust what you teach and how you teach. We have to keep our students engaged and excited to learn. We have to create a safe place for them to make mistakes, take risks, and ask questions.” – Ashley²

Creativity means a different way of thinking and doing things. Each one of us is creative and this creative ability in students manifests in several ways. When students find themselves in unknown territories, they learn to move out of their boundaries. Creativity provides a deeper understanding of concepts. When teachers employ a creative and experimental form of teaching, they develop thinkers who are capable to explore their varied interests utilizing their own strengths. These creative methods develop young learners into creative, knowledgeable and independent thinkers who do not feel shy to express themselves. Being creative is essential for a successful career. By making the course curriculum creative especially boring subjects including Mathematics and Physics, the understanding of the subjects goes beyond books. Students need to know the real-life applications of any subject or topic to understand its significance and add a creative spark in the classroom. Encouraging the element of creativity and innovation in students can help them in expressing opinions and emotions through music, dance, theatre, art projects, or any other way out to test boundaries and explore the world. This enables the emotional development of students and enables them to realize their hidden potential.

What is innovation in education?- The TED-Ed ³Blog posed that question to educators from all around the world. Here are three responses:

"I think of the expression 'Don't put new wine into old bottles' when talking about innovation in education," said Hyuk Jang⁴, a languages teacher from South Korea. "The world is changing. However, people still teach and learn in a way that was invented in the Industrial Revolution. It doesn't work anymore."

"Innovation in education involves constant collaboration with colleagues -- a total last-minute redo of a teacher's lesson plan because there was something else out there that he or she just had to try, a

¹ Dr. Kimberly Noble, neuroscientist, pediatrician, associate professor of neuroscience and education at teachers college, Columbia University, speaker at Ted Ed blog.

² Ashley Updike, is a junior at LFHS, speaker at Ted ED blog, has done research on the effects of everyday actions, such as idling on the environment.

³ Ted Ed Blog, is a mission to amplify the ideas and lessons of educators and students around the world.

⁴ Hynk Jung, South Korean actor & rapper.

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change in the direction of a class because the students are driving the instruction," stated Jennifer Hesseltine⁵, middle school U.S. history teacher from New York.

"Innovation in education is about more than just technology. It's about how you can use technology to empower students to become lifelong learners who are agents of change," said Steven Sutanro⁶, teacher in Jakarta Barat, Indonesia.

There is no single definition of innovation in education. One thing is for sure: Innovation has a very important place in education. Innovation in education encourages teachers and students to explore, research and use all the tools to uncover something new. It involves a different way of looking at problems and solving them. The thinking process that goes into it will help students develop their creativity and their problem-solving skills. Innovation does not mean creating something from nothing. Just like with any good science project, it relies on researching existing solutions to come up with a new hypothesis to test. Innovation improves education because it compels students to use a higher level of thinking to solve problems.

The Significant Benefits Of Creativity In The Classroom

1. Creativity is Multidisciplinary
2. Creativity allows you to express yourself
3. Creativity promotes thinking and problem-solving
4. Creativity reduces stress and anxiety
5. Creativity allows you to enter your happy zone and have fun
6. Creativity gives you a sense of purpose
7. Creativity can lead to feelings of accomplishment and pride
8. Creativity can link you to others with the same passion
9. Creativity improves your ability to focus
10. Creativity promotes risk-taking and iteration
11. Creativity is a prerequisite for innovation
12. Creativity encourages us to be lifelong learners

⁵ Jennifer Hesseltine, K12 education consultant & strategist, education consulting at State University of New York college at Plattsburgh.

⁶ Steven Sutanro, a product designer & leader with international experiences based in Los Angeles, Jakarta, Singapore & Korean city, MO.

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The Benefits Of Creativity In The Classroom

So here are some innovative ideas that will help to reinvent teaching methods and make classes more interesting-

1. Creative Teaching- It take the help of tools to stimulate creativity. Include playful games or forms of visual exercises that will excite young minds and capture their interest. This is a time-tested method to identify every young student's creative abilities and encourage creative contributions. Bring aspects of creativity into all your subjects, be it mathematics, science, or history. Think of ways to develop their creative ideas. Encourage different ideas, give them the freedom to explore.

2. Audio & Video Tools- It incorporate audio-visual materials to supplement textbooks during your sessions. These can be models, filmstrips, movies, pictures, infographics or other mind mapping and brain mapping tools. Such tools will help their imagination thrive and grow. These methods will not only develop their ability to listen but will also help them understand the concepts better. For example, you can get some oral history materials, conduct live online discussions or playback recordings of public lectures. If you are tech-savvy, there are also a number of smart apps for preschoolers that you can utilize to create awesome slideshows or presentations

3. Real World Learning- Classroom Strategies Infusing real-world experiences into your instructions will make teaching moments fresh, and enrich classroom learning. Relating and demonstrating through real-life situations will make the material easy to understand and easy to learn. It will spark their interest and get the children excited and involved.

4. Brainstorming in Classroom - Make time for brainstorming sessions in your classrooms. These sessions are a great way to get the creative juices flowing. When you have multiple brains focusing on one single idea, you are sure to get numerous ideas and will also involve everyone into the discussion. These sessions will be a great platform for students to voice their thoughts without having to worry about right or wrong. Set some ground rules before you start. You can go for simple brainstorming or group brainstorming or paired brainstorming

5. Classes Outside the Classroom- Some lessons are best learnt, when they are taught outside of the classroom. Organize field trips that are relevant to the lessons or just simply take students for a walk outside of the classroom. Students will find this fresh and exciting. Without taking much effort, they will learn and remember what you teach them.

6. Role Play- Teaching through role-playing is a great way to make children step out of their comfort zone and develop their interpersonal skills. This method comes in handy, especially when you are teaching literature, history or current events. The role playing approach will help a student understand how the academic material will be relevant to his everyday tasks. Role playing is most effective for students of almost any age group. You just need to customize depending on the age group. You can

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even use this method for teaching preschoolers. Just make sure you keep it simple enough to capture their limited attention span

7. Storyboard Teaching- Rudyard Kipling rightly said, “If history were taught in the form of stories, it would never be forgotten.” Storyboarding is a great way to teach any subject which requires step-by-step memorization or visualization highly-conceptual ideas. History teachers can use a storyboard to recreate a famous event. Such visually stimulating activity will ensure that even complex ideas are easily put across to students. You can also encourage the use of storyboards as a form of communication and let the students tell a story in pictures using their imagination.

8. Stimulating Classroom Environment- A classroom environment that is well-decorated, fun, and engaging will help stimulate a student’s mind and will help think and learn better. Such a creative and stimulating environment will help them explore and will encourage them to learn about the subject. Children, especially young ones cannot be expected to sit all day and learn. An environment that positively impacts the children is beneficial for you as well. Schools associated with Early Years Foundation Stage(EYFS) will vouch for the fact that the learning environment has a prime role in learning and development.

9. Welcome New Ideas- An open-minded attitude can help you in innovating new teaching methods. Though you might claim to be open-minded, its human nature to resist change. Evaluate yourself and ensure you try out new ideas in the classroom.

10. Think About A New Hobby- Sometimes, a hectic workload may affect your engagement in teaching. If it happens to you, it’s natural. You can take a break for a couple of hours and engage in some other activity that you’re interested in. This will rejuvenate you and you can return to your work with more passion and interest.

11. Work Together As a Team- Teamwork in Classroom- As everyone knows, the end result of the collaborative effort is always immense. Think about spending some quality time with your colleagues. Ask them to share their views on improving teaching methods, you can see many of them come up with interesting strategies. So, collaborate and introduce innovative teaching methods.

12. Puzzles and Games- Learning is fun when puzzles and games are part of education. Children may not require taking conscious effort when their lessons are introduced through games. Puzzles and games help children to think creatively and face challenges.

13. Start School Clubs or Groups- Being a teacher you may not get enough time to work on interesting topics that you are passionate about. You can share your views and learn more from others when you have school clubs or groups.

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14. Refer to Books On Creativity- To be a creative teacher, you need to do some research on creative ideas and techniques. There are a lot of books on creativity. Choose some of the best works and start learning, it will be helpful for your professional development as well.

15. Love What You Do- You can give your best only if you truly love what you do. When you are not stressed, you will be more creative and inspired. Loving your work keeps you relaxed and gives you room to experiment with new ideas.

16. Introduce Lessons Like a Story- Just think, why do you watch movies with much interest? You like to watch movies because there is always an interesting story to keep you engaged. Like that, Learning sessions become more interesting when you introduce it as a story. If you are creative, even math lessons can be related to interesting stories. With even the Knowledge and Human Development Authority (KHDA) emphasizing on schools to take measures for improving the quality of teaching and learning, these innovative ideas are sure to make teaching methods more effective.

17. Artificial Intelligence (AI)⁷- It is the buzzword that was doing the rounds in education since the 1980s. Paving way for a modernized approach to impart knowledge to passionate learners, AI with all its inherent capabilities can pave way for better student engagement opportunities. While education is primarily meant to develop the mind of a student to assimilate information from the pool of knowledge, AI on the other hand comes as an instrument to picture the working of a human mind. Drifting away from the conventional text-book and closed-classroom learning patterns, AI through its digitized approach brings in a dynamism to the concept of gaining knowledge through schooling.

Examples of Innovative Educational Technology

Innovative educational technology might represent a completely new way of teaching, or it can reflect a better way to use an existing teaching tool. These three examples of innovative educational technology range from the most advanced electronic classrooms to the more modest technologies used in the developing world. These innovations illustrate how best practices in education technology can be shared and how you can tap into these great ideas.

Computer-assisted instruction

The current buzz in education surrounds Common Core State Standards implementation and computer-assisted instruction. Basically, computer-assisted instruction allows teachers to spend more time with individual students who are having difficulties. Meanwhile, other students in the class can work through their lessons at their own pace. This improves classroom efficiency and allows for one-on-one attention in larger classrooms. A study by Lisa Barrow et al. showed a marked improvement in

⁷ Artificial Intelligence (AI), is wide ranging branch of computer science concerned with building, smart machines, capable of performing tasks that typically require human intelligence.

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heterogeneous classes with more than 15 students. As states are forced to educate more students with tighter budgets, computer-assisted instruction offers a promise of higher test scores.

Websites and social media

A commonly overlooked trend in education technology is the use of websites and social media. Students, teachers and parents are all connected through social media and the Web. This allows parents and teachers to maintain communication about classroom events and assignments. This can be seen as the technological extension of the traditional schoolhouse and its connections with the community. In a way, these innovations are bringing the world back to a time when your parents knew what happened at school even before you returned home. This is because the whole community was, and increasingly still is, built around the local school.

XO laptops⁸

Although it is not the most high-tech device, the XO laptop is very innovative in its simplicity and its approach to global problems with access to educational resources. This computer is completely open-source, including the hardware, software and drivers. This means students using the device can begin by learning basic lessons in reading, writing and arithmetic. However, they can eventually progress to program and reconfigure the laptop in any way that suits their needs.

Project Based Learning

The application of project-based learning is another approach for spurring innovation and creative thinking. Instead of working on a single project in a math class, project-based learning combines multiple disciplines in one project. It promotes active and deeper learning. This project involves designing the community, creating a government and educational system, describing their neighborhoods, outlining employment, deciding on the climate for the community, and identifying technology views.

Conclusion

Innovation is critical to the continuous improvement of education. Different perspectives on possible ways of organizing learning that go beyond existing institutional arrangements can help create learning environments that equip people with the deeper knowledge and skills to participate in today's economy and society, and lead fulfilling and meaningful lives. Various factors can drive innovation. Information and communication technologies (ICT) hold a powerful potential to transform education. Learning sciences and brain research can improve our understanding of how learning unfolds and provide new perspectives on longstanding challenges, inform new practices or reinforce existing ones. Educational research and the production, sharing and effective use of knowledge is also a vital source of

⁸ Xo Laptop, is an inexpensive laptop computer intended to be distributed to children in developing countries around the world, to provide them with access to knowledge and opportunities to explore, experiment & express themselves.

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innovation. It can provide a useful basis to inform policy making and professional practice. However, the links between research and policy (and practice) are weak and the dynamics of innovation remain to be fully understood.

What we are doing now, or have done in the past, need not determine what we can do next, or in the future. Thus, to me, innovation in education means looking beyond past and current ideas to search for ideas that will work in the future. That is the world in which our learners will live. Innovation is fearless. It is able to ignore what's been done in the past in order to reimagine what education can be in the future. It can extract the best of what worked while integrating and repurposing it for modern learners. Innovation begins with an understanding of the learner first, and tailors the content to suit their learning styles, needs and goals. Innovation is a continuous process. It involves continuous learning (also from our students). It involves searching for ideas, collaborating with other teachers, and keeping students engaged and motivated. It helps us to stay motivated and engaged. Innovation combines passion, new ideas, different minds, relevant action and meaningful transformation. These are powerful ingredients in education. Innovation in education is about more than just technology. It's about how you can use technology to empower students to become lifelong learners who are agents of change.”

With so many developments already making waves in the sphere of education, the future is bright for artificial intelligence interfaces to become “learning companions for life”. Technology which will always come handy in collating information from students about the gaps in their learning will pave way for AI to assist them periodically in their quest for a bright future. In conclusion, in order for developing countries to think freely and develop their creativity and innovation capacities, it is important that educational institutions teach or use new learning models also to impart more subjects such as artistic education, and most important of all, they need periods of Interaction to interact with their environment and so be able to assimilate the knowledge received in classes.

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