



An Approach For Understanding And Engaging Gen Z Mindset

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ABSTRACT

The study explores the unique characteristics, learning preferences and engagement strategies suitable for Generation Z learners, born between 1997 and 2012. Raised in a digital-first environment, Gen Z values authenticity, inclusivity, purpose-driven engagement and flexible learning. Traditional teaching methods often fail to address their needs, creating gaps in conceptual understanding, motivation and skill development. This action research employed quantitative methodology and experimental design, incorporating teaching-learning materials, storytelling, collaborative learning, role play and digital tools to enhance cognitive, affective and psychomotor learning domains. Pre- and post-test analyses demonstrated significant improvements in conceptual clarity, retention, engagement, creativity and 21st Century skill development. The findings underscore the importance of integrating technology, interactive pedagogies, experiential learning and value-based education to foster holistic development and prepare Gen Z students for academic, emotional and social success. The study provides actionable recommendations for educators to adopt innovative, student-centered and digitally enhanced teaching strategies that resonate with the evolving mindset of Generation Z learners.

Keywords: Generation Z, Digital Natives, Experiential Learning, 21st Century Skills, Interactive Teaching, Conceptual Understanding, Value-Based Education

INTRODUCTION

Understanding Generation Z (born 1997–2012) is essential for educators, organizations and brands seeking meaningful engagement. Raised in a digital-first world amid rapid social, technological and environmental changes, Gen Z values authenticity, inclusivity, individuality, diversity, mental well-being and innovation. They are pragmatic yet idealistic, seeking active participation, purpose and meaningful experiences. Effective engagement requires interactive, technology-integrated, collaborative and socially conscious approaches that go beyond mere digital adaptation. By aligning teaching, communication and organizational strategies with their motivations, learning styles and digital fluency, educators and leaders can foster stronger connections, enhance participation and support holistic growth for this emerging generation.

NEED AND IMPORTANCE

Generation Z, as digital natives, have unique learning styles shaped by technology, offering advantages but also challenges like short attention spans, weakened moral values and reduced real-world interaction. Excessive screen time and performance pressures affect mental health. To address this, educators use interactive, technology-based and collaborative strategies, emphasizing future skills, inclusivity, mental well-being and learner autonomy to promote holistic intellectual, emotional and ethical growth.

STATEMENT OF THE PROBLEM

The current educational system and traditional teaching methodologies often fail to meet the evolving needs interests and learning styles of the new generation students. There is a needy situation for a new adaptive and student centered educational approach that integrate the technology and concentrate on the affective and the psychomotor domain.

OBJECTIVES

1. To identify the characteristics and learning preferences of Gen Z students.
2. To develop and implement selected new gen teaching approaches in the classroom.
3. To bridge a gap between traditional approach and gen Z student by implementing creative approach of teaching.
4. To suggest research based suggestion for teachers to handle gen Z students efficiently.

CAUSES OF THE PROBLEM

1. The educators will be lacking behind the digital literacy
2. The teachers are failed to cope up with the resistance to change
3. Some of the institution were lacking behind the proper infrastructure due to the financial constrain.
4. Rigidity of curriculum and the policy constrains through which the teachers were forcefully made to follow the traditional method of teaching and learning
5. Insufficient training and professional development among teachers often led them to continue using traditional teaching methods rather than adopting innovative approaches.
6. Socioeconomic barriers had also been a major constraint, preventing teachers and students from evolving with new skills and modern methodological approaches.
7. Language barriers had been another challenge, making it difficult for educators and learners to connect with contemporary and trending skills.
8. The Indian education system had traditionally placed greater emphasis on rote learning rather than skill-based and experiential learning.
9. There had been a noticeable lack of focus on developing global competencies and 21st century skills among learners.
10. The educational framework had faced hindrances in fostering collaboration and in promoting technological proficiency among teachers and students.

PRIORITIZED CAUSES

1. Education system had emphasized more on cognitive learning.
2. There had been a significant lack of digital literacy, which limited both teachers and students in effectively using modern technological tools.
3. The training and professional development of teachers had been insufficient
4. There had been a lack of focus on developing global competencies and 21st Century skills among students
5. The system had faced hindrances in collaboration and in becoming teaching-savvy, which affected teamwork and innovation in the classroom.
6. The rigidity of the curriculum and policy constraints had restricted educational reforms

REVIEW OF THE LITERATURE

1. **Afshin.M, et.al.,(2019)**The paper *Instructional Strategies for Motivating and Engraining Generation Z Students in Their Own Learning Process* has emphasized on the new strategies that can be incorporated for the upcoming generation along with the Gen Z students the methodologies opted in their paper work are Free-classroom Creative Assignment, Project-based-Learning, Flipped Learning Model, Health and Wellness Center, Use of Analogies in the Classrooms, Use of YouTube in the STEM Courses, Pedagogical Course Concept Map. Studies have shown that analogical thinking and the use of analogy motivates learners, accelerates learning, Integrating the use of YouTube videos in planning curriculum, in teaching and selecting the learning material and in assessing student learning and understanding can help faculty in their efforts to increase the rate of student satisfaction, performance and retention. Concept Map It helps students not only to see how they can make the connection between the learned knowledge and their potential application, but also how students themselves might contribute to the growing field by constructing new related knowledge and information.
2. **Curtis.P et.al;(2019)** This study has emphasized on the New Approaches to Learning for Generation Z students the authors has chosen survey methodology to take the study. The survey was distributed to a diverse group of students including graduate and undergraduates at Monmouth University Graduate students were included in the study to discover if their attitudes toward learning. The student population in the study was comprised of majors from the General Business, Communication, Healthcare, Criminal Justice, Accounting, Finance and Marketing programs. One-hundred and thirty-three students were surveyed over two semesters during the fall 2018 and spring 2019 semesters at Monmouth University. The survey consisted of 11 questions inquiring about student preferences conserving various aspects of the of course delivery and teaching methods. This study indicates, students want to be actively engaged in the learning and benefit when instructors provide space for students to flexibly interact with others who are also allowed to problem-solve on their own.

3. **Mayildurai.R.et.al;(2016)** Conducted research on the teaching methodologies for engaging generations Z learners by using different strategies, challenges and implications and by using the strategies like think-pair-share method, role playing and simulations, interactive lectures methods and applied some of the collaborative learning techniques such as the group discussions and debates, peer learning and mentoring, team based activities and included experiential learning methods and integrated technological approaches and inculcated the 21st century skills to approach the generation Z students. After implementing this techniques the case study was conducted that highlighted the successful implementation of the efforts and insights from educators who had effectively engaged Gen Z learners.
4. **Sharan S et.al., (2016):** The study of Educating generation Z Psychosocial dimensions of the clinical learning environment that predict student satisfaction. This study has emphasized on the affective domain of the Gen Z students the study opted a method of for the larger study in 2016, investigators recruited a non-probability sample of junior and senior students from two traditional. The aim was to document predictors of student satisfaction in the medical-surgical clinical learning environment among a cohort of Gen Z nursing students. The total number of samples collected for the study was 230 generation Z students. One case had missing data. Hence, regression analysis was completed for 202 cases. Results of the regression showed that all three Revised CLEI-32 subscales significantly predicted Enjoyment of Clinical Learning and had approximately the same.

CONCEPTUAL FRAMEWORK

Meaning of the Gen Z Students:

Gen Z students refer to students who are part of generation Z, a generational cohort typically born between 1997 and 2012 and they are shaped by the social, technological and cultural influences of the 21st century.

Characteristics of Gen Z

1. Tech-Savvy and Digitally Fluent:

Gen Z students grew up surrounded by technology. They are highly skilled in using digital devices, social media and online learning tools for communication, collaboration and research.

2. Visual and Interactive Learners:

They prefer visual, multimedia and hands-on learning experiences over traditional text-based methods. Videos, infographics and simulations capture their attention more effectively.

3. Independent and Self-Directed:

Gen Z learners often prefer to explore topics on their own using digital platforms. They value autonomy and like to take responsibility for their learning outcomes.

4. Socially Aware and Value-Driven:

This generation is deeply concerned about social, environmental and ethical issues. They expect education to address global challenges such as sustainability, diversity and inclusion.

5. Entrepreneurial Mind-set:

Many Gen Z students demonstrate creativity and innovation. They are open to start-ups, freelancing and new career paths rather than following conventional job structures.

6. Preference for Flexibility:

Gen Z learners prefer flexible schedules, blended learning environments and personalized education pathways that suit their individual learning paces and interests.

7. Collaborative and Team-Oriented:

They enjoy working in groups and value peer collaboration, both in-person and through online platforms, as a way to share ideas and solve problems collectively.

8. Short Attention Span:

Due to constant exposure to digital media, Gen Z students tend to have shorter attention spans and prefer quick, engaging and concise learning materials.

9. Career and Skill-Focused:

They are highly aware of the job market and seek education that directly contributes to employability, skill acquisition and real-world application.

10. Global Mindset:

With easy access to information and global connectivity, Gen Z students view themselves as global citizens and embrace cultural diversity and cross-border communication.

Learning Priorities of Gen Z Students**1. Technology-Integrated Learning:**

Gen Z students prioritize the use of digital tools, online platforms and multimedia resources to make learning interactive, accessible and engaging.

2. Skill-Based Education:

They prefer education that emphasizes the development of practical, employable and 21st Century skills such as communication, collaboration, critical thinking and creativity.

3. Personalized and Self-Paced Learning:

Gen Z learner's value learning experiences tailored to their individual interests, strengths and pace rather than uniform, traditional classroom methods.

4. Experiential and Hands-On Learning:

They seek real-world learning opportunities through internships, projects, simulations and experiential activities that bridge theory with practice.

5. Collaborative and Social Learning:

Group discussions, peer collaboration and teamwork are key priorities for Gen Z students, who learn effectively through shared knowledge and social interaction.

6. Flexibility in Learning Modes:

They prefer flexible learning environments both online and offline that allow them to balance academic, personal and social commitments.

7. Global and Intercultural Awareness:

Gen Z students prioritize learning that fosters global citizenship, cultural awareness and understanding of diverse perspectives.

8. Ethical and Sustainable Learning:

This generation is motivated by values-based education that promotes social responsibility, sustainability and community well-being.

9. Career-Oriented and Future-Ready Education:

They seek academic programs that align with career goals, provide industry exposure and prepare them for future challenges in the global job market.

10. Continuous Feedback and Mentorship:

Gen Z learners value constructive feedback and personalized mentorship to guide their growth and help them achieve academic and personal success

RESEARCH METHODOLOGY

Research method: Researcher has opted the methodology of *quantitative research method and the observation schedule*.

Research designs: The selected research design is *experimental research design*.

Research tools: Researcher has developed questionnaire, consist 5 sections.

PROCEDURE OF CONDUCTING ACTION RESEARCH

The researcher had first identified the problems through the general interaction and listed some of the needs of the students with respect to their teacher, parents and the curriculum frame work. Then researcher had conducted the open ended discussion and narrated a story of a Angulimala to inculcate the value based learning, then the second activities collaborative learning of different disciplinary subjects through the aid of technologies has been conducted, later the group discussion has been conducted regarding the present environmental issues to make them understand the importance of the peer group interaction. The researcher had collected the pretest data from the formative assessment test which was conducted by the institution. Later the researcher had conducted the post test on the topic of the plant tissues and the questionnaire consists of the objective type questions, open ended questions and the long answer type questions to check the impact of pupil learning process and to check the impact of the concept attainment among the learners. Later the researcher compare the data of the post-test and the pre-test and to plan some of the remedial measures.

ACTION PLAN**Table 1: List of the activities has been conducted**

Sl. No.	Activities	Duration	Number of Days
1	Value inculcation through narrating a story	15 min	1
2	Collaborative learning concept based experiment	15 min	1
3	Group discussion on real life situation.	20 min	2
4	Role Play	20 min	1

DESCRIPTION OF THE ACTION PLAN

- 1. Value inculcation through narrating a story:** To inculcate the value among the students the teacher narrated the story of the transformation of the Angulimala from a sinner to generous personality so that student can develop some moral and ethical values in their life.
- 2. Collaborative learning concept based experiment:** The collaborative learning was conducted by selecting 2 students and the experiment was conducted to show the importance of oxygen for the combustion process. One student conducted the experiment in the presence of oxygen, while other student conducted the experiment with breaking down the supply of the oxygen to the combustion process just by covering it with the glass jar. Then asked the children to observe the experiment and allowed them to think how did the combustion process just get shut down just by placing a glass jar over it and what criteria was aiding the combustion process. So this can bring about the hands on experience for the students.
- 3. Group discussion on real life situations:** The group discussion was conducted regarding real world situation. Where 4 groups were formed with 4 members in each group and was given with the different environmental issues and societal issues such as air pollution, ganga river water pollution, poverty in India and the child labor and made them to discuss in the classroom and shared their opinion to control the present environmental hazardous environmental issues and societal issues.. This activity has helped the students to come open with their ideas. Through this method they were able to socialize with the peer group.
- 4. Role Play:** The researcher conducted the role play for the concept of reflex action of nervous system to deal with the concept in an easier way as students of 9th were facing difficult in understanding the concept, so 4 students were considered one student was given a role of external stimulus, sensory neuron, CNS and motor neuron. The main objective of conducting the role play was to enable the students to visualize and stimulate the sequence of events that occurs in a process of reflex action including sensory receptor, sensory neuron, spinal cord, motor neuron and effector organ, In order of conducting the role play the pupil were able to clearly explain the pathway of a reflex action and were able to enumerate the role of different parts that involves in the mechanisms of reflex action and helped the students to attain a conceptual clarity, long term retention of the reflex action concept.

DATA ANALYSIS

Pre-Test

Table 2: Frequency distribution of Pre-Test Scores

Class Interval	Frequency	Mid-point	fx
4-7	1	5.5	1
8-11	3	9.5	28.5
12-15	4	13.5	54
16-19	3	17.5	52.5

Central Tendency: Mean = 12.36, Median = 12.98, Mode = 14.22

Post-Test**Table 3: Frequency distribution of Post-Test Scores**

Class Interval	Frequency	Mid-Point	fx
11-13	3	12	36
14-16	3	15	45
17-19	4	18	72
20-22	1	21	21

Central Tendency: Mean = 15.81, Median = 10.89, Mode = 1.05

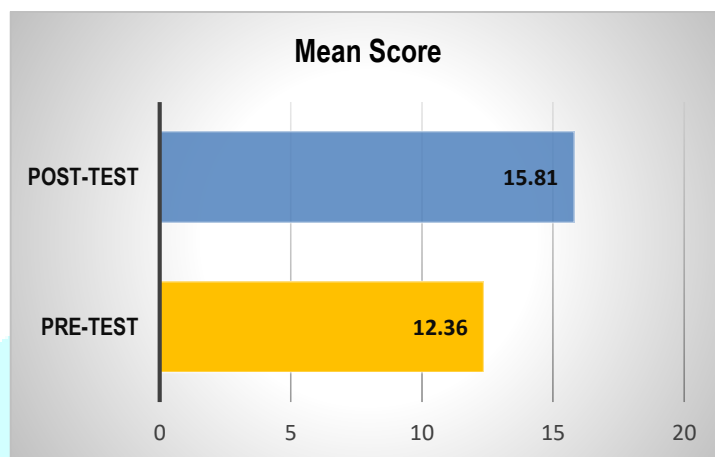
GRAPHICAL REPRESENTATION

Figure 1: Bar graph of Pretest and Post Test performance of students

INTERPRETATION OF RESULT**1. Without TLMs:**

- Students struggled to understand and recognize different parts of plant tissues.
- Lack of visual aids caused confusion and disengagement among learners.

2. Use of Chart Representations:

- Charts helped students comprehend and recall the structural details of plant tissues more effectively.
- Visual reinforcement through diagrams improved memory retention and conceptual clarity.

3. Effect of Audiovisual (A-V) Aids:

- Led to increased classroom participation and curiosity.
- Encouraged active engagement and question-based learning.
- Helped students develop deeper conceptual understanding of tissue classification.

4. Integration of Virtual Simulation Lab (Vizuara Biology Lab):

- Enabled visualization of 3D structures of plant and animal tissues.
- Made abstract concepts more tangible and easier to understand.
- Promoted hands-on learning, curiosity and critical thinking.
- Supported effective internalization of knowledge.

5. Open-ended Question-based Learning:

- Encouraged discussion on real-life issues like fossil fuel usage.
- Developed creativity, analytical thinking and problem-solving skills.
- Helped students connect theory with real-world contexts and propose preventive measures.

6. Closed-ended Question Challenges:

- Students struggled with abstract topics like the formation of coal.
- Difficulties were due to lack of prior experiential learning and contextual understanding.
- Highlighted the need for more context-based and visual learning methods.

7. Use of Role Play (Reflex Action Concept):

- Improved comprehension by linking roles of characters with parts of the nervous system.
- Made the concept of reflex action more relatable and engaging.
- Showed higher conceptual accuracy compared to traditional methods.

8. Quiz Activity (Using “Slido” Platform):

- Effectively assessed students understanding in an interactive way.
- Reinforced learning through immediate feedback and participation.

Overall Findings:

Inclusion of TLMs, A-V aids, virtual simulations and interactive pedagogies significantly enhanced:

- a) Cognitive engagement
- b) Conceptual clarity
- c) Retention of knowledge
- d) Curiosity and creativity
- e) Real-world application of concepts

Traditional teaching without such tools resulted in lower comprehension and engagement levels. Use of various Teaching-Learning Materials (TLMs) and interactive pedagogical approaches had a positive impact on students' learning outcomes and conceptual understanding in science classrooms.

RESEARCH FINDINGS

1. Improved Concept Retention:

- Students who followed the **constructivism and experimental approach** demonstrated a higher level of concept retention compared to those taught through traditional methods.
- The hands-on experience enabled students to connect theoretical concepts with real-life examples, leading to deeper understanding and long-term memory retention.

2. Enhanced Student Engagement through Digital Tools:

- The use of interactive platforms such as **Slido** during the evaluation stage significantly increased student participation.
- Compared to the traditional method of oral questioning, the digital platform made the assessment more engaging, inclusive and less intimidating for students.

3. Effective Use of Teaching-Learning Materials (TLMs) and Audio-Visual (AV) Aids:

- Incorporating TLMs and AV aids (charts, videos, 3D models, etc.) greatly improved students' conceptual clarity and interest in the subject.
- Visual representation helped in better comprehension of complex biological structures, especially in topics like *plant and animal tissues*.

4. Impact of Virtual Simulation Labs:

- When *virtual simulation labs* were used, students could easily identify and label different parts of plant and animal tissues.
- This virtual experience helped them to visualize microscopic structures and enhanced their ability to draw and differentiate between various tissue types.

5. Comparison with Traditional Teaching:

- In classes taught using traditional lecture-based methods, students' concept attainment levels were comparatively low.
- Their pre-test scores reflected limited understanding, while post-test scores improved remarkably after exposure to the innovative and constructivist teaching approaches.

6. Moral and Behavioral Development:

- Integrating *moral storytelling* within lessons fostered positive behavioral changes among students.
- It helped in developing empathy, cooperation and respect for others during collaborative learning activities.

7. Encouragement of Creativity and Scientific Thinking:

- Asking *open-ended questions* encouraged students to think critically and creatively.
- It enhanced their scientific temperament, problem-solving ability and curiosity about ongoing research and recent advancements in science.

8. Development of 21st Century Skills:

- The concept-based approach promoted key 21st Century learning skills such as collaboration, communication, creativity and critical thinking.
- Students became more self-directed learners, capable of exploring knowledge beyond the textbook.

9. Positive Learning Environment:

- The interactive and experimental learning environment reduced classroom monotony and increased intrinsic motivation among students.
- Learners became active participants rather than passive recipients of information.

SUGGESTIONS

1. Adopt interactive and student-centred methods:

Teachers should use innovative methods such as role play, storytelling, project-based learning and group discussions to make learning more engaging and meaningful.

2. Integrate technology effectively:

The use of digital tools, educational apps, multimedia presentations and virtual simulations should be encouraged to make lessons more dynamic and relatable for digital-native learners.

3. Balance technology use:

While integrating technology, teachers should maintain a balance to prevent over-dependence on gadgets and digital content.

4. Enhance teacher training and professional development:

Institutions should organize regular workshops and training sessions to improve teachers' digital literacy and equip them with creative pedagogical strategies.

5. Revise the curriculum:

Curriculum planners should include more flexible, creative and skill-based content that promotes 21st Century competencies such as communication, collaboration, critical thinking and creativity.

6. Promote collaborative and inclusive learning environments:

Encourage peer learning, team-based projects and mentoring activities to foster cooperation, empathy and leadership among students.

7. Focus on mental health and emotional well-being:

Schools should integrate mindfulness practices, counselling services and stress management programs to support students' mental and emotional health.

8. Include moral and value-based education:

Teachers should use storytelling and real-life examples to instil ethical values and empathy, helping students build strong character and social responsibility.

9. Upgrade school infrastructure:

Educational institutions should ensure access to digital resources, stable internet connectivity and modern classroom facilities to effectively implement technology-driven teaching.

10. Encourage reflective teaching practices:

Teachers should continuously evaluate their teaching methods, reflect on classroom outcomes and adapt their strategies to suit the evolving needs of Gen Z learners.

LIMITATIONS OF THE STUDY

1. The study was conducted with a small sample of students.
2. It was limited to one school, so results may not generalize.
3. The intervention lasted only a few days.
4. Only selected teaching strategies and topics were tested.

SCOPE FOR FURTHER RESEARCH

1. It is suggested to explore how storytelling and role play can enhance creativity, empathy, and moral development among students.
2. Further research may investigate the impact of collaborative and experiential learning on teamwork and real-life problem-solving skills.
3. It is recommended to examine the role of value-based education in fostering ethical awareness and social responsibility.
4. Future studies could focus on strategies that support the emotional well-being and holistic development of Generation Z learners.

CONCLUSION

In conclusion, the study reveals that effectively engaging Generation Z learners requires a balanced integration of technology, creativity and human connection. By adopting flexible, innovative and empathetic teaching methods, educators can enhance student engagement, foster holistic development and prepare learners to become academically successful, emotionally balanced and socially responsible individuals.

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