



Learning Style Preference Of Gen Z Students

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ABSTRACT

Generation Z (Gen Z) students, born in the digital era, have unique preferences shaped by technology and instant information, relearning how they process and absorb knowledge. Traditional teaching approaches may not fully engage them, making it important to recognize their preferred learning styles. Understanding Gen Z's learning styles is necessary to create productive and engaging educational experiences. In the digital era, students prefer interactive, digitally enhanced and personalized learning techniques instead of traditional lecture-style approaches. The purpose of this study is to examine the learning style preferences of Gen Z students and how these preferences influence their academic performance. This study was conducted using a non-probability, convenience sampling method, collecting data from 135 Gen Z students through surveys. The survey assessed their preferred learning styles based on learning methods. This study found that Gen Z students predominantly prefer interactive, technology supported methods and visually engaging learnings over traditional lecture-based approaches. The findings emphasize the importance of modern, technology-enhanced teaching methods to align with Gen Z's learning preference.

Keywords: Gen Z students, learning style, use of technology.

INTRODUCTION:

Have you ever wondered why traditional classroom lectures seem to bore Gen Z students while interactive videos and gamified lessons keep them engaged for hours? Gen Z the generation born between the mid-1990s and early 2010s, has grown up in a world dominated by technology, social media and instant access to information. Unlike past generations, Gen Z has used digital devices from young age, influencing how they learn and absorb information. Traditional teaching methods, such as long lectures and textbook

learning, no longer resonate with them in the same way. Instead, they learn best through interactive, visual, and technology-based methods that keep them engaged and actively involved. Recognizing these preferences is essential for educators and institutions to design effective learning environments that meet Gen Z's unique needs. It is important to understand Gen Z's learning preferences because they represent a large part of today's student population and the future workforce. Traditional teaching methods may not work as well for this digitally fluent generation, and not adopting could result in disengagement and lower academic performance. By understanding Gen Z's preferred learning styles interactive, digital, and flexible educators can create more engaging and effective learning experiences. This change not only supports students but also helps institutions remain relevant in the constantly evolving education system. This article examines Gen Z students' learning preferences, emphasizing the move toward interactive, digital, and adaptable education. It examines the factors shaping their learning styles and discusses how educators can adapt their teaching methods to create more engaging and effective learning experiences. It will also examine the limitations of traditional teaching methods, the advantages of adopting modern approaches, and effective strategies educators can use to improve engagement and learning outcomes for this generation.

LITERATURE REVIEW

A literature review provides a critical analysis of existing research, identifying key theories, trends and gaps to establish the foundation for a study. It ensures the research is relevant, builds on prior work, and contributes new insights.

Understanding the learning style preferences of generation Z (Gen Z) is crucial in making modern educational practices. As digitally fluent generation, Gen Z learners have distinct preferences influenced by technology, interactivity, and personalized learning experiences.

Kolb's experiential learning theory (1984) emphasizes learning through experience, including both concrete and abstract methods. **Gardner's Multiple Intelligences Theory (1983)** broadens the understanding of learning by identifying various intelligence types, including linguistic, spatial and interpersonal. These theories provide a foundation for exploring how Gen Z students interact with content.

Gen Z born between 1997 and 2012 (**Pew Research Centre; 2019**), has been raised in a technology supported world. Studies indicate that they favour interactive, self-directed, and digitally enhanced learning experiences (**Schwieger & Ladwig, 2018**). Unlike earlier generations, Gen Z prioritizes instant concise and engaging content, and collaborative learning settings (**Seemiller & Grace, 2017**). Their tendency towards shorter attention spans (**Nguyen, 2021**) and preference for multitasking and multimedia-based learning influence how educators develop curricula and teaching strategies.

Research suggests that Gen Z students prefer visual and interactive learning methods over traditional lecture-based approaches (**Moore et al., 2020**). They respond more effectively to infographics, and gamified content rather than lengthy lectures or traditional reading (**Prensky, 2010**). Gen Z places great importance on collaborative learning, actively engaging in group projects, online discussions, and mutual learning interactions (**Smith & Ainsworth, 2022**). Technology is central to shaping Gen Z's educational experiences.

Studies indicate that e- learning platforms, mobile applications, and AI tools improve engagement and knowledge retention (**Brown & Jones, 2021**). Incorporating game-like elements into learning, known as learning gamification, has been shown to enhance motivation and participation (Hamari et al., 2016). However, concerns regarding screen fatigue, distractions and excessive dependence on technology (Carr, 2020).

Objective of the Study:

- To identify the predominant learning style among students
- To assess the relation between learning style, use of technology and academic performance.

RESEARCH METHODOLOGY:

This study employs a descriptive research method to analyse the learning style preferences of Gen Z students. The research is conducted in Coimbatore city, with a non-probability (Convenience sampling technique used to select participants. The study utilizes both primary and secondary data for analysis, with a sample size of 135 respondents. TO interpret the findings, various statistical tool such as simple percentage analysis, correlation, ANOVA, and regression are utilized.

The sampling method used for this study is non-probability (convenience sampling), as the participants were selected based on their availability and willingness to participate. This method was chosen because it allows for easy access to students from various Arts and Science colleges in Coimbatore, ensuring a smooth data collection process.

Method of data collection that primary data was collected from Gen Z students in various Arts and Science colleges in Coimbatore. Primary data is information that is collected directly from its original source for a specific research purpose. It is also referred to as first-hand information or raw data. Primary data is 'pure' in the sense that it is original and has not undergone statistical process. Secondary data was collected from the various sources like journal articles, books, library sources, Internal records, magazines and others authorized websites. In order to identify knowledge gaps, analyse and synthesize existing knowledge, and expand on recent findings, researchers employ secondary data. We refer to this type of research as secondary research.

The sample size is calculated from the sample size calculator with the formula of confidence level 75%, Margin of error 5%, Population Proportion 50% for the population size is unlimited. Result sample size as 133 respondents must be collected in this research.

The questionnaire used in the study has seven independent variable and one dependent variable. This contains 12 demographic questions and 40 Likert scale questions.

Variables used for the study (1. Learning style preference - Visual learning, Auditory learning, Kinesthetic learning, Tactile learning, Group learning, Individual learning, 2. Use of technology, 3. Academic performance).

Questionnaire is validated using reliability test with a Cronbach alpha value (.949).

DATA ANALYSIS AND INTERPRETATION

Demographic Data Interpretation:

The study reveals that the majority of respondents are ages 19-20(51.9%) and 16-18 (40.0%), as they are currently in college. Most respondents are female (74.1%), compared to male (25.9%), indicating higher female participation in the survey. In terms of education level, undergraduates (88.1%) form the largest group, followed by graduates (6.7%) and postgraduates (5.2%), as undergraduate students are more prevalent in educational institutions. Regarding academic disciplines, the highest proportion of respondents are from commerce (40.7%), followed by science (29.6%), while computer science (14.8%) and Management (14.8%) have fewer participants, reflecting the larger presence of commerce students in the study. When it comes to learning preference, most respondents prefer watching videos (35.6%) over reading text, as videos are more engaging, enhance retention through visuals and sound, and offer flexibility in learning anytime and anywhere. The majority (40.0%) also prefer studying in a quiet environment, as it minimizes distractions and improves focus and productivity. The preferred study time for most respondents is Evening (6 PM-12AM) due to few distractions and a more comfortable, stress free atmosphere for absorbing information. In terms of learning mode, in person classes (74.1) are the most preferred, while online (13.3%) and hybrid learning (12.6%) are less favoured as physical classrooms provide structure, discipline, and direct interaction with instructors. Additionally, 54.5% of respondents are book readers, while 45.5% do not read books, with reading being a common way to gain knowledge and develop skills, while others prefer alternative learning methods. Among readers, 37.1% prefer fiction books, as they offer entertainment, imaginative experiences, and emotional connection with characters. The study also finds that 89.6% of respondents visit the library, primarily for a quiet and distraction free study environment, with 51.2% visiting weekly, indicating a routine of reading, studying and continuous learning.

CORRELATION ANALYSIS

Table :1 showing that correlation analysis

VARIABLES	PEARSON CORRELATION	SIGNIFICANCE LEVEL
AVGVL	.587	.000
AVGAL	.500	.000
AVGGL	.464	.000
AVGTL	.542	.000
AVGKL	.507	.000
AVGIL	.629	.000
AVGUT	.634	.000
AVGAP	1	



Source: Primary Data

The above table finds AVGUT (use of technology) highly positively correlated with AVGAP (academic performance) at $r = 0.634$, $p = 0.000$. This means that students who use technology more tend to perform better academically. That technology provides easy access to educational resources, interactive learning tools, and personalized learning, enabling students to progress at their own pace and review difficult topics as necessary. Moreover, online platforms facilitate group discussions, knowledge sharing, and group learning, all of which contribute to improved academic performance. The above table finds AVGIL (Individuals Learning) highly positively correlated with AVGAP (Academic performance) at $r = 0.629$, $p = 0.000$. This means that students who prefer individual learning tend to perform better in academics. Individual learning helps students to stay disciplined, think critically, and solve problems on their own. It allows students to learn at their own speed, spending more time on difficult topics and moving quickly through easier ones. Individual learning builds self-motivation, helping students take initiative and stay engaged in their studies. The above table finds AVGIL (Individual learning) moderate positively correlated with AVGAP (Academic Performance) at $r = 0.587$, $p = 0.000$. Visual learning helps with understanding using pictures, charts, and videos, visual learning makes ideas easier to understand by presenting information clearly and engagement and motivation. It helps students organize information better by using visuals to sort and understand content easily.

ANOVA

NULL HYPOTHESIS

HO: There is a significance different in academic performance among students with learning styles preference when exposed to technology-based learning.

ALTERNATIVE HYPOTHESIS

HO1: There is no significance different in academic performance among students with learning styles preference when exposed to technology-based learning.

2. Table showing different in academic performance among students with LSP

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	508.547	1	508.547	74.089	.000 ^b
Residual	906.042	132	6.864		
Total	1414.589	133			
Regression	646.298	2	323.149	55.100	.000 ^c
Residual	768.291	131	5.865		
Total	1414.589	133			
Regression	693.455	3	231.152	41.670	.000 ^d
Residual	721.134	130	5.547		
Total	1414.589	133			
Regression	731.303	4	182.826	34.516	.000 ^e
Residual	683.286	129	5.297		
Total	1414.589	133			

Source: Primary Data

INTERPRETATION:

The ANOVA results indicate that the regression models significantly explain variations in academic performance (AVGAP), as shown by the p-values of 0.000 in all models. Model 1, which includes Use of Technology (AVGUT) as the sole predictor, explains a substantial portion of the variance (Sum of Squares Regression = 508.547) with a high F-value of 74.089, demonstrating a strong predictive ability. As additional predictors are introduced, the model improves further. Model 2, which includes Visual Learning (AVGVL), increases the explained variance to 646.298, reducing the residual error and maintaining significance (F = 55.100). Model 3 incorporates Individual Learning (AVGIL), further enhancing the model's predictive strength with an explained variance of 693.455 and a slightly lower F-value of 41.670. Finally, Model 4, which includes Group Learning (AVGGL), achieves the highest explained variance of

731.303, with the lowest residual error and an F-value of 34.516, still highly significant. The findings confirm that technology use, visual learning, individual learning, and group learning all play significant roles in academic success, with technology use and individual learning having the strongest influence.

REGRESSION ANALYSIS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.416	.412	2.50142
2	.704 ^b	.495	.487	2.33484

a. Predictors: (Constant), AVGS

b. Predictors: (Constant), AVGS, AVGUT

INTERPRETATION:

Model 1: 0.645 → Moderate positive correlation between AVGS and AVGAP.

Model 2: 0.704 → Stronger correlation when AVGUT is added, indicating an improved model.

(Coefficient of Determination):

Model 1: 41.6% of the variation in AVGAP is explained by AVGS.

Model 2: 49.5% of the variation in AVGAP is explained when both AVGS and AVGUT are included.

FINDINGS

Correlation: That technology use ($r = 0.634$), individual learning ($r = 0.629$), and visual learning ($r = 0.587$) are positively correlated with academic performance ($p = 0.000$), suggesting that learning approaches enhance students' academic performance.

ANOVA: This finds that technology use and individual learning having the strongest influence and technology use, visual learning, individual learning, and group learning significantly impact academic performance.

Regression: The results finds that technology use significantly impact academic performance. Technology use enhances the effectiveness of study strategies. The both variables learning styles and use of technology explains nearly 50% of academic performance variation.

SUGGESTION

- Investigate how Gen Z's learning preferences differ from those of Gen Alpha to identify emerging trends.
- Compare and contrast Gen Z's learning preferences across cultures and countries to identify global patterns and regional differences.
- Analyse the impact of emerging technologies, AI, and innovative educational methods on shifts in learning styles.

CONCLUSION

The study on learning style preference of Gen Z students provides valuable insights into how different learning styles and the use of technology influence academic performance. The findings indicate that learning preferences, combined with technology-based learning, significantly impact students' academic success. These findings highlight the importance of personalized learning approaches in modern education. Gen Z students are digital natives, and technology-driven learning enhances their engagement, comprehension, and retention. Moreover, recognizing different learning preferences allows educators to design flexible and adaptive teaching strategies that improve student performance. Educational institutions can enhance learning outcomes by leveraging technology to accommodate diverse learning styles, ensuring a more inclusive and personalized educational experience that supports students' individual needs.

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