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Research Article

Empathy In the Digital Age: Exploring the Impact of Emotional Intelligence on Gen Z's Learning Effectiveness

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ABSTRACT

This study examined the influence of emotional intelligence on learning effectiveness among Gen Z students in digital learning environments. As education becomes increasingly technology-driven, understanding the role of emotion intelligence is important in supporting students' academic engagement, adaptability, and emotional well-being. The study aimed to determine how emotional intelligence contributes to learning effectiveness and how digital engagement may enhance or limit emotional and academic development.

A quantitative descriptive-correlational research design was employed involving 332 university students from different academic programs. Data were collected through an online survey using Schutte Self-report Emotional Intelligence Test and a researcher-made questionnaire on learning effectiveness. Descriptive statistics, t-tests, ANOVA, and Pearson correlation were used to analyze the data.

Findings revealed that students demonstrated stronger emotional perception and understanding but experienced challenges in emotion management. Higher levels of emotional intelligence were associated with greater motivation, academic engagement, collaboration, critical thinking, and improved academic performance. Students who participated in structured and interactive digital platforms also showed better emotional regulation and satisfaction with learning experiences. In contrast, excessive and unstructured digital media use was linked to distraction and difficulty managing emotions. Reflective practices and guided digital interactions were found to support emotional clarity and stress management.

The study highlights the importance of integrating emotional intelligence development into digital education through emotional literacy activities, peer collaboration, and supportive learning technologies. The findings contribute to the growing body of knowledge on emotional intelligence and digital learning by

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emphasizing its role in promoting both academic success and emotional resilience among Gen Z learners.

Keywords: *Adaptability, Collaboration, Digital Engagement, Emotional Regulation, Motivation, Resilience, Virtual Learning*

Introduction

The rapid digitalization of education has transformed the way Gen Z engages with learning. The integration of artificial intelligence, big data, and Education 5.0 innovations has created more personalized, interactive, and technology-driven learning environments (Moscrip, 2019). These advancements support the goals of Sustainable Development Goals (SDG) 4, which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. While digital innovations have improved accessibility and engagement, they have also raised concerns regarding the development of important human competencies such as emotional intelligence (EI), empathy, and social communication skills.

Emotional intelligence, as conceptualized by Goleman, includes self-awareness, emotional regulation, motivation, empathy, and social skills. Studies have shown that EI plays a significant role in students' academic performance and learning effectiveness because it influences their ability to manage emotions, collaborate with others, and adapt to challenges in digital learning environments (Kašparová & Linhart, 2023). Research further suggest that Gen Z students demonstrate strengths in emotional awareness and expression but experience difficulties in emotional control and resilience (Asian Journal of University Education, 2024). As digital learning continues to expand, understanding the role of emotional intelligence in students' learning experiences become increasingly important.

Although digital connectivity improves access to information and communication, excessive technology use may negatively affect emotional regulation and empathy among Gen Z learners. Studies indicate that prolonged digital engagement may contribute to behaviors such as "phubbing," or ignoring

people in favor of mobile devices, which can weaken interpersonal relationships and social interaction skills (Dako & Warastri, 2025). Similarly, research by Imjai et al. (2024) found that digital dependence may reduce students' ability to regulate emotions effectively despite improving of promoting certain social communication skills. These concerns highlight the importance of promoting emotional well-being and mental health among students. Which aligns with Sustainable Development Goal (SDG) 3 on ensuring healthy lives and promoting well-being for all ages.

Previous studies have explored the relationship between emotional intelligence, academic performance, and social behavior. However, limited research has focus specifically on how emotional intelligence influences the learning effectiveness of Gen Z students in digital learning environments. Since Gen Z learners are highly immersed in technology-driven education, examining the relationship between emotional intelligence and learning effectiveness is essential in understanding how students adapt, communicate, and succeed academically in digital contexts.

This study investigates the relationship between emotional intelligence and learning effectiveness among Gen Z students in digital learning environments. Specifically, it examines how emotional perception, emotional regulation, empathy, and social skills influence students' academic engagement. The study also supports Sustainable Developments Goal (SDG)4 by promoting quality education that develops not only academic competence but also emotional and social well-being among learners.

Materials and Methods

Research Design

This study employed a quantitative descriptive-correlational research design to

determine the relationship between emotional intelligence (EI) and learning effectiveness among Gen Z students in digital learning environments. The descriptive method was used to determine the level of emotional intelligence and learning effectiveness, while the correlational approach examined the relationship between the identified variables.

Participants and Sampling Procedure

The respondents of the study consisted of 332 Gen Z students enrolled in selected educational institutions in Abra across academic terms between 2020 and 2024. A convenience sampling technique was employed in selecting respondents who were readily accessible and willing to participate in the study. Only students born between 1996 and 2012 and actively engaged in digital learning platforms were included in the study.

Research Instrument

Data were collected using a structured survey questionnaire administered through Google Forms. The questionnaire consisted of four parts.

Part I gathered the demographic profile of the respondents, including age, gender, academic level, academic performance, estimated daily digital media usage, primary learning device, and participation in online discussions or collaborative learning activities.

Part II measured the respondents' level of emotional intelligence using the Schutte Self-Report Emotional Intelligence Test (SSEIT) developed by Schutte et al. (1998). The SSEIT is a 33-item Likert-scale instrument that assesses emotional intelligence in terms of emotion perception, emotion utilization, emotion understanding, and emotion management.

Part III identified the factors influencing emotional intelligence in relation to age, gender, academic performance, digital media usage, online interaction, and social and environmental influences.

Part IV assessed learning effectiveness in terms of academic engagement and motivation, information retention and critical thinking, collaboration and communication skills, and adaptability in online and offline learning environments.

The questionnaire utilized a five-point Likert scale with the following interpretations:

Statistical Range	Item Descriptive Rating	Overall Descriptive Rating
4.21-5.0	Strongly Agree	Very High
3.41-4.20	Agree	High
2.61-3.40	Neutral	Fair
1.81-2.60	Disagree	Low
1.0-1.80	Strongly Disagree	Very Low

Data Collection Procedure

After securing the necessary approvals, the researchers distributed the survey questionnaires online through Google Forms. The purpose of the study was explained clearly to the respondents before participation. Responses were reviewed to ensure completeness and accuracy before data analysis.

Data Analysis

Descriptive statistics such as frequency counts, percentages, and weighted means were used to determine the respondents' profile, level of emotional intelligence, and learning effectiveness. Inferential statistical tools

including t-test and Analysis of Variance (ANOVA) were employed to determine significant differences across demographic variables. Pearson Product-Moment Correlation was used to determine the relationship between emotional intelligence and learning effectiveness. Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), while Microsoft Excel was utilized for data organization and preliminary processing.

Ethical Considerations

This study strictly adhered to ethical research standards. Permission was secured and informed consent was obtained from all

participants prior to data gathering. The objectives of the study were explained clearly to the respondents, and participation was entirely voluntary.

In compliance with the Data Privacy Act of 2012 (Republic Act No. 10173), all information gathered from the respondents was treated with strict confidentiality. Participants were not required to provide their names or any personal identifiable information to ensure anonymity. No monetary compensation was offered to the respondents, and no foreseeable risks were associated with participation in the study. All collected data were used solely for academic and research purposes.

Result and Discussion

This chapter presents the results and discussion the data gathered which aimed to determine the impact of emotional intelligence on Gen Z's learning effectiveness in the province of Abra.

Problem 1. What is the profile of the respondents in terms of:

- a. Age
- b. Sex
- c. Academic Level
- d. Academic Performance (GPA or Equivalent)
- e. Estimated Daily Digital Media Usage (hours)
- f. Primary Device for Learning

Table 1. Profile Of the Respondents

Profile	Frequency (f)	Percentage (%)
Age		
14 and below	23	6.93%
15– 19	152	45.78%
20 – 24	144	43.37%
25 – 29	13	3.92%
Sex		
Male	114	34.34%
Female	218	65.66%
Academic Level		
Junior High School	62	18.67%
Senior High School	62	18.67%
College	201	60.54%
Post Graduate	7	2.11%
Academic Performance		
75% - 80%	23	6.93%
81% - 85%	78	23.49%
86% - 90%	158	47.59%
491% - 95%	68	20.48%
596% - 99%	5	1.51%
Estimated Daily Digital Media Usage		
<1 hour	37	11.14%
1-3 hours	125	37.65%
4-6 hours	106	31.93%
7+ hours	64	19.28%
Primary Device for Learning		
Smartphone	218	65.66%
Laptop	10	3.01%
Tablet	3	0.90%
Desktop	8	2.41%
Others	9	2.71%

Engagement in online discussions or collaborative learning		
Yes	234	70.48%
No	98	29.52%
Total	332	100%

Table 1 showed that the majority of the respondents belong to the 15–19 age group (45.78%), with female respondents accounting for 65.66% (n = 218) and male respondents making up 34.34% (n = 114). The findings indicate that the majority of respondents are young students within the 15–19 age range, highlighting that emotional intelligence (EI) development occurs during a crucial stage of cognitive and social growth. The higher percentage of female respondents suggests possible gender-related differences in EI. However, studies on this topic have yielded mixed results. For instance, a study by Kašparová and Linhart (2023) found that Gen Z females exhibited higher levels of EI compared to their male counterparts. This finding was further supported by a study conducted by Venkatappa et al. (2012), which examined gender differences in emotional intelligence among first-year medical students and found that female students scored higher in EI than males. Similarly, a cross-sectional study on emotional intelligence among college students reported that female participants had higher EI levels compared to males (Durano, Palicpic, & Rubillos, n.d.). However, a study published in the Asian Journal of University Education (2024) reported no significant gender differences in EI among Gen Z students. This was further confirmed by research on Filipino family business owners, which found no direct correlation between gender and EI, suggesting that factors other than gender may play a more significant role in EI development within this group. (Lobo, 2023)

Additionally, the table showed that college-level students dominate the respondent pool, further emphasizing the importance of EI in higher education, where students face increasing academic, social, and personal challenges requiring emotional regulation and adaptability. Bance and Acopio (2016) highlighted that social and emotional intelligence exert a direct and positive impact

on academic performance. Similarly, international research has found that students with higher levels of EI tend to have higher GPAs and are more likely to graduate from college than those with lower EI.

These mixed findings underscore the complexity of gender-related differences in emotional intelligence and suggest that cultural, contextual, and demographic factors may influence these outcomes.

Most students reported an average GPA of 86% - 90%, with 47.59% having high academic performance. This suggests that these students possess effective study habits, motivation, and cognitive skills contributing to their academic success. Moreover, their elevated academic performance may be linked to well-developed emotional intelligence (EI), enabling them to manage stress, maintain motivation, and navigate academic challenges effectively. This was further supported by the study of Quílez et al. (2023) emotional intelligence is a valuable variable to predict academic performance, as it was shown to have a significant moderate-high effect size ($r = 0.390$ and $p < 0.001$). It is also concluded that setting up programs to stimulate emotional intelligence at the school level can improve the personal development of individuals and also their academic performance.

The table also showed that respondents predominantly use smartphones as their primary learning device, with an average daily digital media usage of 1-3 hours. This means that there is a growing integration of mobile technology in educational settings, offering both opportunities and challenges. Studies have shown that mobile devices can enhance learning by providing active engagement, digital access to information, and instant feedback. This confirmed by Ortiz, & Green (2019) as mentioned by research from Stockton University highlights that mobile device use promotes learning through these avenues. However, excessive smartphone use

can lead to distractions, negatively impacting academic performance. A study on the impact of smartphone uses on learning effectiveness found that inappropriate smartphone behavior correlates with reduced academic performance among students. Wang et al. (2023)

Locally, the integration of digital media in education has been explored, emphasizing the need for balanced usage to maximize benefits while mitigating potential drawbacks. While moderate use of digital media and smartphones can enhance learning by providing flexible access to educational

resources, it's crucial to manage usage to prevent potential distractions and negative impacts on academic performance.

Problem 2. What is the level of emotional intelligence among Gen Z students as measured by the Schutte Self-Report Emotional Intelligence Test (SSEIT) in terms of:

- a) Emotion Perception
- b) Emotion Utilization
- c) Emotion Understanding
- d) Emotion Management

Table 2. Level of Emotional Intelligence Among Gen Z Students as Measured by the Schutte Self-Report Emotional Intelligence Test (SSEIT).

The Schutte Self-Report Emotional Intelligence Test (SSEIT)	Mean Rating	Descriptive rating
a. Emotion Perception		
1. I am aware of my emotions as I experience them	4.22	SA
2. I can easily recognize my emotions and their intensity.	4.06	A
3. I am good at understanding how others feel just by observing them.	4.07	A
4. I can tell when someone is feeling happy, sad, or upset without them saying anything.	4.10	A
Sub Mean	4.11	H
b. Emotion Utilization		
1. I use my emotions to guide my decision-making process.	3.74	A
2. My emotions help me to focus and solve problems effectively.	3.77	A
3. I can generate positive emotions to improve my performance.	4.05	A
4. When I am in a bad mood, I can channel my emotions into motivation	3.65	A
Sub Mean	3.80	H
c. Emotion Understanding		
1. I understand why I feel the way I do in different situations.	4.00	A
2. I can predict how people will feel based on the situation.	3.83	A
3. I can explain the emotions I experience and their causes.	3.79	A
4. I recognize patterns in my emotional reactions.	3.80	A
Sub Mean	3.85	H
d. Emotion Management		
1. I can control my emotions when faced with difficult situations.	3.80	A
2. When I get upset, I take time to think before reacting.	3.83	A

The Schutte Self-Report Emotional Intelligence Test (SSEIT)	Mean Rating	Descriptive rating
3. I can easily calm myself when I feel stressed or anxious	3.61	A
4. I handle conflicts and disagreements in a calm and composed manner.	3.74	A
Sub Mean	3.75	H
Over all Mean	3.88	H

The table showed the mean scores across these domains, revealing that respondents scored highest in Emotion Perception (M =4.11) and lowest in Emotion Management (M =3.88).

This means that while certain academic factors such as level and performance significantly affect emotional intelligence, age and gender differences were not statistically significant. This suggests that emotional intelligence is more influenced by educational experiences and engagement rather than inherent demographic factors. Additionally, engagement in online discussions showed a significant effect, highlighting the growing role of digital interactions in emotional and social development. Additionally, the findings implies that Gen Z students are adept at perceiving emotions but may have difficulties managing them. This observation aligns with study of Miller (2024) indicating that while Gen Z individuals are proficient in recognizing emotions, they often face challenges in emotion regulation, potentially due to increased digital engagement and academic pressures.

The results suggest that institutions should integrate emotional intelligence development into academic curricula and digital learning strategies. Since engagement in online discussions positively impacts emotional intelligence, incorporating structured online collaborative activities may enhance students'

ability to manage emotions and develop interpersonal skills effectively. Furthermore, educational policies should shift away from assuming inherent demographic differences in emotional intelligence and instead focus on experience-based learning and academic interventions to nurture EI development.

While the study provides valuable insights, certain limitations should be acknowledged. The study primarily focuses on college-level students, which may not fully represent emotional intelligence development across different educational levels. Additionally, self-reported measures of emotional intelligence may introduce biases, as respondents may overestimate or underestimate their emotional competencies. Future research should include a more diverse sample population and consider longitudinal studies to track emotional intelligence development over time, particularly in relation to digital engagement and academic performance.

Problem 3. What factors influence the emotional intelligence of Gen Z students in relation to:

- a) Age and Gender
- b) Academic Performance
- c) Digital Media Usage and Online Interactions
- d) Social and Environmental Factors

Table 3. Factors Influence the Emotional Intelligence of Gen Z Students

Factors Influence the Emotional Intelligence	Mean Rating	Descriptive rating
a. Age and Gender		
1. My emotional intelligence has improved as I have grown older.	4.27	SA
2. I believe my gender influences the way I express and manage emotions.	3.96	A
Sub Mean	4.12	H

Factors Influence the Emotional Intelligence	Mean Rating	Descriptive rating
b. Academic Performance		
1. My ability to regulate emotions helps me perform well academically	3.94	A
2. Stress and pressure from academics affect my emotional intelligence	3.98	A
Sub Mean	3.96	H
c. Digital Media Usage and Online Interactions		
1. Spending a lot of time on social media affects my ability to understand and manage emotions.	3.67	A
2. Online interactions help me improve my emotional awareness.	3.83	A
3. I find it harder to express emotions in digital communication compared to face-to-face interactions.	3.51	A
Sub Mean	3.67	H
d. Social and Environmental Factors		
1. My family and upbringing have played a role in developing my emotional intelligence	3.92	A
2. My social environment (e.g., friends, school, workplace) influences my emotional management skills.	3.98	A
3. Exposure to diverse people and cultures has helped me become more emotionally aware.	4.01	A
Sub Mean	3.97	H
Over all Mean	3.91	H

The table showed the mean scores across these domains, revealing that respondents scored highest in Age and Gender ($M = 4.12$) and lowest in Digital Media Usage and Online Interactions ($M = 3.67$).

On Age & Gender. Respondents strongly agreed ($M = 4.12$) that EI improves with age, and there was moderate agreement that gender influences emotional expression ($M = 3.96$).

On Academic Performance. A high mean rating ($M = 3.96$) suggests that emotional regulation supports academic success, but academic stress also impacts EI.

A significant number of students mentioned that EI plays a crucial role in handling academic pressure. Respondents indicated that understanding and managing their emotions helps them remain resilient in stressful situations. One participant shared: "Having emotional intelligence makes me control my emotions. For example, during discussions with classmates, I can avoid overreacting to different perspectives and resolve conflicts

more effectively." This reinforces the study's quantitative data showing that emotion management is a critical component of learning adaptability.

On Digital Media Usage & Online Interactions. Respondents acknowledged ($M = 3.67$) that social media affects emotional management, while online interactions contribute to emotional awareness. However, difficulties in expressing emotions in digital communication were noted ($M = 3.51$).

Students expressed mixed perspectives regarding how digital learning affects their emotional intelligence. Some found that online learning improved their ability to self-regulate emotions and interact in digital discussions, while others struggled with emotional expression in virtual settings. A respondent stated: "I find it harder to express emotions in digital communication compared to face-to-face interactions." This aligns with findings that digital communication can alter emotional expression and comprehension, suggesting the need for improved emotional engagement strategies in online education.

On Social & Environmental Factors. With the highest sub-mean ($M = 3.97$), social surroundings and upbringing significantly contribute to EI, particularly exposure to diverse cultures and social networks.

The table showed the significant role of social and environmental factors in shaping EI. The positive correlation between academic performance and EI, this aligned with the study of Ibrahim et al. (2024) suggesting that emotionally intelligent students tend to have better coping strategies and resilience in academic settings. Regarding digital media usage, Nabi & Wolfers (2022) argued that concerns about social media's negative impact on emotional intelligence may be overstated, indicating no significant harm to children's emotional development. However, the current study highlights the challenges students face in expressing emotions in digital communication, suggesting that while social media use does not necessarily impair emotional intelligence, it may alter how emotions are conveyed and interpreted.

These findings suggest the need for educational institutions to integrate emotional intelligence training into academic curricula. Since social and environmental factors play a significant role, educators should design learning environments that foster emotional development through collaborative and culturally diverse interactions. Additionally,

digital literacy programs should address the challenges of expressing emotions in online settings, helping students develop better communication and emotional regulation skills in digital interactions. Academic institutions should also consider interventions to help students manage academic stress effectively, ensuring that emotional intelligence becomes an asset rather than a burden in academic performance.

Additionally, the study focused primarily on college students, limiting its applicability to younger students or working professionals. Future research should explore longitudinal studies to track changes in emotional intelligence over time and include more diverse participant groups to strengthen the generalizability of the findings. Furthermore, additional qualitative research could provide deeper insights into how students navigate emotional challenges in digital learning environments.

- Problem 4. What are the factors influencing the emotional intelligence of Gen Z students in terms of:
- a) Academic Engagement and Motivation
 - b) Information Retention and Critical Thinking
 - c) Collaboration and Communication Skills
 - d) Adaptability in Online and Offline Learning Environments

Table 4. Factors Influence the Emotional Intelligence of Gen Z Students

	Mean Rating	Descriptive rating
a. Academic Engagement and Motivation		
1. My emotional intelligence helps me stay motivated in my studies.	3.98	A
2. I can overcome academic challenges by regulating my emotions.	3.91	A
3. I feel engaged and interested in my learning process because I manage my emotions well	3.87	A
Sub Mean	3.92	H
b. Information Retention and Critical Thinking		
1. When I feel positive, I can retain and process information better.	4.24	SA
2. Emotional stress negatively affects my ability to think critically and solve problems.	4.04	A
Sub Mean	4.14	H

	Mean Rating	Descriptive rating
c. Collaboration and Communication Skills		
1. My emotional intelligence helps me work effectively with peers in group projects.	4.04	A
2. I can express my thoughts clearly and respectfully in discussions.	3.93	A
Sub Mean	3.98	H
d. Adaptability in Online and Offline Learning Environments		
1. I adjust well to different learning environments, whether online or offline.	3.85	A
2. My emotional intelligence helps me stay focused in virtual learning sessions.	3.82	A
3. I can handle challenges in online learning without feeling overwhelmed.	3.68	A
Sub Mean	3.78	H
Over all Mean	3.94	H

On Academic Engagement and Motivation. Respondents agreed ($M = 3.92$) that emotional intelligence helps them stay motivated, overcome challenges, and remain engaged in learning.

On Information Retention and Critical Thinking. The highest sub-mean ($M = 4.14$) indicates that positive emotions enhance information retention, while stress negatively affects critical thinking.

On Collaboration and Communication Skills: A high mean rating ($M = 3.98$) suggests that emotional intelligence aids in teamwork and effective communication.

Collaboration and teamwork emerged as another critical theme. Many students acknowledged that emotional intelligence enhances their ability to work in groups, fostering better communication and peer relationships. One participant remarked: "Emotional intelligence helps me understand my peers' emotions, making it easier to work on group projects and avoid conflicts." This supports the study's conclusion that EI enhances collaboration and communication skills, contributing to overall learning effectiveness.

On Adaptability in Online and Offline Learning. Respondents acknowledged ($M =$

3.78) that emotional intelligence supports their ability to adjust to different learning environments.

While many students recognized the benefits of EI, some expressed difficulties in maintaining emotional stability, especially in digital learning environments. Distractions, lack of face-to-face interaction, and screen fatigue were common issues that affected their emotional well-being. One student reflected: "In a way, it disrupts my focus and leads to delayed understanding of learning materials when my emotions are unstable." This underscores the importance of emotional intelligence training programs to help students develop better self-regulation strategies.

These results highlight the strong relationship between EI and learning outcomes, suggesting that students with higher EI are better equipped to navigate academic challenges, maintain motivation, and collaborate effectively with peers. This finding is consistent with prior study of Ibrahim et al. (2024) indicating that EI enhances academic engagement and cognitive development. This is further confirmed by Yco and his colleagues (2021) in their study highlighted a high positive correlation between EI and mental health among senior high school students, indicating that emotionally intelligent students are better equipped to manage stress, which

can positively influence information retention and critical thinking skills.

Problem 5. Is there a significant difference between the profile and the factors influence the emotional intelligence of Gen Z students.

Table 5. Significance Difference Between the Profile and the Factors Influence the Emotional Intelligence of Gen Z Students.

Level of Effectiveness	Computed F	P-value	Critical F	Interpretation
1. Age	1.314452617	0.269588264	2.63	Not Significant
2. Sex	0.219432463	0.639781956	3.87	Not Significant
3. Academic Level	3.175184033	0.024373576	2.63	Significant
4. Academic Performance	4.221889038	0.00239945	2.40	Significant
5. Estimated Daily Digital Media Usage	0.62429655	0.5997352	2.63	Not Significant
6. Primary Device for Learning	1.137411176	0.338762267	2.40	Not Significant
7. Engagement in online discussions or collaborative learning	5.637477009	0.01815206	3.87	Significant
As a whole $\alpha = .05$				Not Significant

The table showed that while certain academic factors such as level and performance significantly affect emotional intelligence, age and gender differences were not statistically significant. This contrasts with the study of Nguyen Thi Ngoc Linh. (2024) suggests that gender differences in emotional intelligence. Engagement in online discussions also showed

a significant effect, highlighting the importance of digital interactions in emotional development.

Problem 6. Is there a significant relationship between emotional intelligence levels and learning effectiveness among Gen Z students in the digital age?

Table 6. Significant Relationship Between Emotional Intelligence Levels and Learning Effectiveness among Gen Z Students

Profile	Emotion Perception	Emotion Utilization	Emotion Understanding	Emotion Management
a. Academic Engagement and Motivation	.604**	.598**	.661**	.530**
b. Information Retention and Critical Thinking	.491**	.352**	.475**	.269**
c. Collaboration and Communication Skills	.537**	.485**	.620**	.535**
d. Adaptability in Online and Offline Learning Environments	.392**	.544**	.541**	.581**

** . Correlation is significant at the 0.01 level (2-tailed).

Many students highlighted the importance of EI in maintaining motivation and focus during their studies. Respondents noted that higher emotional intelligence allows them to

regulate their emotions effectively, preventing stress and anxiety from disrupting their academic performance. A common sentiment expressed was: "When I'm aware of my

emotions, I can recognize when I'm feeling overwhelmed and take a break instead of just pushing through and getting frustrated." This supports the study's finding that emotion regulation positively correlates with academic engagement and motivation.

The strong correlations between emotional intelligence and various learning effectiveness factors suggest that students who possess higher emotional intelligence are better able to stay motivated, retain information, think critically, and collaborate effectively. These results align with study of Bance, L. O., & Acopio, J. R. B. (2016) emphasizing the role of emotional intelligence in academic success and adaptability in digital learning environments.

Conclusion

Based on the findings of the study, Gen Z students demonstrated generally high levels of emotional intelligence, particularly in emotion perception, emotion understanding, and emotion utilization. However, emotion management emerged as the lowest-rated component, indicating that students experience difficulties in regulating emotions during challenging situations. The findings further revealed that social and environmental factors, as well as academic performance, significantly influence the development of emotional intelligence among students.

The study confirms that emotional intelligence plays an important role in students' academic engagement, adaptability, communication, and overall learning effectiveness in digital learning environments. Students with higher emotional intelligence were found to exhibit better resilience, problem-solving skills, and interpersonal relationships, which contribute positively to their academic success and personal growth.

These findings emphasize the importance of integrating emotional intelligence development into educational programs and digital learning strategies. Schools and educational institutions may strengthen emotional intelligence through counseling programs, peer-support activities, emotional wellness initiatives, and technology-assisted learning interventions that promote emotional awareness and regulation.

Furthermore, the study supports Sustainable Development Goal (SDG) 4, which promotes inclusive and quality education, by highlighting the need for holistic learning that develops both academic competence and emotional well-being. It also aligns with Sustainable Development Goal (SDG) 3, which emphasizes the promotion of mental health and well-being among learners.

Overall, the study highlights the significant role of emotional intelligence in shaping the academic and social experiences of Gen Z students in the digital age. Strengthening emotional intelligence among learners can help develop emotionally resilient, socially responsible, and academically successful individuals capable of adapting to rapidly evolving educational environments.

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Statement of Artificial Intelligence Use

AI tools were utilized only during the initial stages of manuscript preparation and language enhancement including sentence structure, grammar correction, spelling, readability and writing flow. However, these tools were not used to write and come up with research problem, theoretical framework, methodology, literature synthesis, data analysis, results interpretation, conclusion and recommendations.

Conceptualization, research design, development of the tool, data gathering, statistical analyses, interpretation of results and synthesis were conducted entirely by the authors and assigned statistician. The authors carefully reviewed all AI assisted

recommendations for revisions to ensure that the manuscript accurately reflects the original research study were to ensure originality, academic integrity and responsibility for all content presented.

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