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A Comparative Study of Social, Emotional and Personality Characteristics of Students in Online and Face-to-Face Education System

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Abstract

This study aims to compare the personality and social- and emotional characteristics of learners studying in online and face to face education system through a quantitative cross-sectional approach. The tsudy was based on PERMA model of well-being and the big five personality traits. Fifty undergraduate students from different universities participated in this study and submitted their response on the PERMA profiler and big five ınventory-44 questionnaires. SPSS descriptive statistics, independent sample t-tests, and correlation co-efficient were used to analyze the data. Students studying in physical classrooms scored significantly higher on the positive emotion, engagement, and relationships dimensions of the PERMA Profiler, which reflected social connection and emotional regulation. In contrast, online learners scored higher on neuroticism and lower on agreeableness. However, online learners also scored significantly higher on the self-regulation aspect of Seligman's positive relationships criterion, suggesting that these students may be more independent and better adjusted. The study recommends designing online and offline learning experiences through a hybrid system that supports students' social, emotional, and physical well-being. Cultural influences should also be considered when designing curricula that promote emotional, social and intellectual development of students.

Keywords: *Online learning, face-to-face learning, PERMA model, big five personality traits, emotional well-being, social development, personality growth, higher education, student engagement.*

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Introductıon

The 20th century was an era of great transformation in the way education is delivered. The global COVID-19 pandemic and rapid advances in digital technology transformed conventional classrooms into virtual classrooms, creating a new educational format for students around the world. Millions of students now experience an alternative style of education known as online education. While online education offers students flexibility, access, and convenience that were not previously possible, it also changes the ways students connect with one another, communicate with others, and develop emotionally and socially. As education continues to evolve, it becomes increasingly important to study how different learning environments impact students beyond their academic success.

Over the past several years, many authors have supported the idea that learning occurs not only academically, but also through social interactions, emotional stability, and personality development. However, there is very little comparative literature on how online and face-to-face learning environments affect student development in these three areas, especially in developing countries. Therefore, it is necessary for future research to focus more on this topic. This study will analyze and compare two key learning modes, online learning and face-to-face learning, and their impact on important developmental needs of students, specifically social relationships with peers, emotional self-regulation, and personality traits. Online learning is defined as providing educational experiences through technology such as Google Meet, or an LMS, with little to no physical presence of teachers and students in the same place. In contrast, face-to-face learning consists of teachers physically interacting with students in a common space.

Various theoretical perspectives will support this research. Social learning theory proposes that children learn through interaction with others, which may happen more effectively in person than through technology. Theories of emotional development state that in-person interaction is vital for developing emotional regulation skills.

Literature Review

Learning theories provide us theoretical framework to understand how social, emotional, and personality development is influenced through online and physical learning environments. Constructivist learning theories (1972;1978), and social learning theories of (1977) emphasize the importance of learning through active engagement in the learning environment or other people's actions. As a result, both constructivist

learning and social learning theories also indicate that online-based courses would provide students with less opportunity to have direct, person-to-person interaction and experience shared events than traditional classroom-based course.

Social development refers to the ability to build positive relationships, communicate effectively, and work collaboratively with others. Emotional development involves understanding and managing one's emotions, showing empathy, and handling stress effectively. Personality development includes the formation of individual traits, behaviours, and self-expression that define a person over time. Each of these areas can be influenced by the learning environment and teaching methods used. Both online and traditional in-person education have been studied to understand how each type of learning can help or hinder students' abilities to build social skills, develop emotional health, and grow as individuals. The rapid rise of online education during the COVID-19 pandemic caused many students to shift from traditional classrooms to online learning due to social distancing measures. These changes allowed more flexible learning, easier access to resources, and learning at one's own pace. However, reduced face-to-face interaction limited students socially, weakened emotional bonds, and reduced communication with classmates. Studies by Bao (2020) and, Dickson-Deane, and Galyen (2011) found that online learners may become more independent but can also feel isolated while studying alone.

Conversely, in traditional classroom environments, teachers and students can communicate directly. Students are able to make friends, participate in teamwork activities, and build emotional intelligence and personality development. Many recent studies suggest that a blended-learning environment, where students use online tools while attending school, can provide flexible learning opportunities while also supporting social and emotional engagement (Singh, Stele, & Singh, 2021; Rasheed, Kamsin, & Abdullah, 2020). Many studies have compared online and in-person education, but most have focused mainly on academic achievement, technology use, and course design, while giving less attention to students' social skills, emotional growth, and personality development. In addition, most research has been conducted in Western countries, so little is known about how these learning methods affect students in developing countries where cultural, social, and infrastructural conditions are different.

Methodology

Research design

The research utilized a quantitative cross-sectional survey research design to study the social, emotional, and personality development of learners in online learning and traditional face-to-face education system. This research design was chosen because it helps researchers to gather statistical information from a large sample size in a relatively short period. In addition, it allows researchers to analyze the relationship among the variables under study. The relationship between variables such as socialization, emotional status, and personality of the learners was investigated. The researcher conducted a self-reporting survey to students in different universities in. Descriptive statistics such as mean and standard deviation, and inferential statistics such as t-tests and correlation analysis were used to analyze the data collected. This research design helped improve the objectivity, reliability and generalizability of the findings regarding the socio-emotional and personality traits of students in various education modes.

Participants

There were total fifty participants in this study. Half participants were taken from face to face education system. Remaining half participants were taken from online education system. The participants drawn from various undergraduate programs in both public and private universities to ensure a diversity of academic backgrounds and learning experiences. Convenience sampling technique was used because it was feasible for this study. The main criterion was that online participants had completed one semester and same was the case for students in traditional face to face education system. Students studying in face to face education system had attended physical classes. Most of the participants of the study belonged to age group of 18-25 years.

Instruments

The PERMA Profiler (Butler & Kern, 2016) was used as instrument to asses five different factors and dimensions: positive emotion, engagement, relationships, meaning, and accomplishment. This scale provide complete overview of emotional and social aspects that are key to know impact of learning environments on students. The Big Five Inventory (BFI-44) was also used as tool to looks at five common personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism.

Procedure

The study fulfilled all the standards, ethics and guidelines of APA 2007. All procedures were explained to participants. Consent form was

taken from every participant. They had the right to withdraw. Enough time was given to everyone. Average time was 25 minutes. Before filling the research instruments, all needed instructions were shared in very simple words; their inquiries and questions were addressed. After each response, it was checked and made sure that it was complete. Coding was used for data analysis.

Data Analysis

For Analysis of data, statistical techniques were used. The responses were coded into numerical form to make them suitable for statistical analysis. Data was reviewed and errors and mistakes were removed. First descriptive statistics such as mean, standard deviation, frequencies and percentages were used to summarize the data. It provided a clear picture of demographics characteristics and variables under this study. Independent sample t-tests was conducted to compare the both types of students to determine differences in emotional, social and personality traits. The comparison were made on the PERMA dimensions (positive emotion, engagement, relationships, meaning, and accomplishment) and the Big Five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience). This analysis was run to determine the difference in characteristics of students studying in both learning environments. Pearson correlation analysis was used. It assessed the relationships between emotional well-being dimensions and personality traits within the two learning environments. It was used to determine the strength and direction of associations between variables such as whether higher emotional well-being was related to positive personality traits.

Findings

Table 01 presents the comparison between online and face-to-face learners on PERMA well-being and personality traits.

Table 01

Comparison of online and face-to-face learners on PERMA and big five personality traits

Variable	Online M (SD)	Physical M (SD)	t	p
Positive Emotion	3.84 (0.62)	4.05 (0.55)	1.45	.152
Engagement	3.76 (0.71)	4.25 (0.68)	2.32	.025
Relationships	3.45 (0.64)	4.10 (0.50)	3.10	.004
Meaning	3.82 (0.59)	4.00 (0.61)	1.12	.269

Accomplishment	3.98 (0.66)	4.12 (0.60)	0.94	.352
Extraversion	3.40 (0.71)	3.90 (0.60)	2.18	.034
Conscientiousness	4.05 (0.58)	4.18 (0.63)	0.76	.450
Neuroticism	3.95 (0.65)	3.40 (0.70)	2.50	.017
Agreeableness	3.75 (0.62)	3.90 (0.60)	1.05	.301
Openness to Experience	4.10 (0.57)	4.20 (0.53)	0.52	.604

Note. $p < .05$, $p < .01$. N = 25 per group. PERMA = Positive Emotion, Engagement, Relationships, Meaning, Accomplishment

The findings in Table 01 reveal that there is no statistical difference between online and physical learners regarding the well-being factors Positive Emotion ($t = 1.45$, $p = .152$), Meaning ($t = 1.12$, $p = .269$), Accomplishment ($t = 0.94$, $p = .352$), Conscientiousness ($t = 0.76$, $p = .450$), Agreeableness ($t = 1.05$, $p = .301$), and Openness to Experience ($t = 0.52$, $p = .604$). It is notable, however, that there were significant differences between the two groups regarding some factors. Physical learners exhibited higher levels of Engagement ($t = 2.32$, $p = .025$), Relationships ($t = 3.10$, $p = .004$), and Extraversion ($t = 2.18$, $p = .034$). This means that physical learners had better social interactions and were actively involved in learning. Online learners demonstrated high levels of Neuroticism ($t = 2.50$, $p = .017$) than physical learners.

Table 02

Pearson Correlation between Big Five Personality Traits and PERMA Dimensions (N = 50)

PERMA Dimensions	Extraversion	Agreeableness	Conscienti--ousness	Neuroticism	Openness
Positive Emotion	.52**	.41*	.38*	−.42**	.29
Engagement	.45**	.33*	.36*	−.31*	.33*
Relationships	.39*	.47**	.41*	−.35*	.26
Meaning	.37*	.39*	.43*	−.36*	.41*
Accomplish--ment	.48**	.29	.50**	−.30*	.34*

Note: *p < .05, *p < .01

Agreeableness has a positive association with all PERMA factors except accomplishment (r = ns) and is especially correlated with

relationships ($r = .47$, $p < .01$), positive emotion ($r = .41$, $p < .05$), engagement ($r = .33$, $p < .05$), and meaning ($r = .39$, $p < .05$). Conversely, conscientiousness has a significantly positive association with all the PERMA dimensions with the greatest correlation occurring between conscientiousness and accomplishment ($r = .50$, $p < .01$), followed by meaning ($r = .43$, $p < .05$), relationships ($r = .41$, $p < .05$), positive emotion ($r = .38$, $p < .05$), and engagement ($r = .36$, $p < .05$).

On the other hand, neuroticism has negative correlations with all PERMA factors such as positive emotion ($r = -.42$, $p < .01$), engagement ($r = -.31$, $p < .05$), relationships ($r = -.35$, $p < .05$), meaning ($r = -.36$, $p < .05$), and accomplishment ($r = -.30$, $p < .05$) indicating that higher neuroticism is associated with lower well-being. Positive association between openness and engagement ($r = .33$, $p < .05$), meaning ($r = .41$, $p < .05$), and accomplishment ($r = .34$, $p < .05$) was found, but there were no significant associations with positive emotion and relationships. Generally, the findings imply that individuals with positive personality traits, including extraversion, agreeableness, and conscientiousness, exhibit high well-being levels, while those with negative personality traits, specifically neuroticism, have low well-being levels in both online and face-to-face learning environments.

Discussion

The results of this study showed significant differences in social, emotional, and personality traits between online and in-person learners. According to Seligman's (2011) PERMA model of well-being, students who participated in physical learning environments generally showed higher levels of positive emotion, relationships, and engagement. These findings imply that through real-time communication and cooperative learning opportunities, direct classroom interaction improves social connectedness and emotional regulation (Telli et al., 2018). On the other hand, because virtual learning is self-directed, online learners demonstrated comparatively stronger associations between autonomy, self-regulation, and the conscientiousness trait of the Big Five personality model (Bao, 2020; Moore, Dickson-Deane, & Galyen, 2011). Further evidence that socially expressive students adjust better to interactive learning environments, especially in traditional settings, comes from the moderately positive correlation between extraversion and positive emotion (John & Srivastava, 1999). These results are consistent with other studies that indicate online platforms may decrease emotional engagement and interpersonal bonding even though they encourage independence and flexibility (Dhawan, 2020; Adedoyin & Soykan, 2020). As a result, online

learning fosters self-discipline and adaptability, while in-person learning supports emotional and relational growth. Both learning modalities thus make distinct contributions to students' overall development.

The results of this research are mainly in agreement with what has been revealed in previously conducted similar studies in terms of the development of online and physical learning. Like Dhawan (2020) and Adedoyin and Soykan (2020), the current research indicates that online education increases flexibility, accessibility, self-paced learning and at the same time, it lowers emotional engagement and peer collaboration. These are the same situations reported by Moore, Dickson-Deane, and Galyen (2011), who observed that online learning led to more independent learning styles but it was still less interactive and thus not conducive for team work or group problems solving. On the contrary, the higher levels of emotions and relationships in the learners in facetime interaction were consistent with Seligman's (2011) claim in the PERMA model that one of the most important factors in well-being is positive relationships and engagement. Moreover, the relationship found between extroversion and positive emotions in this study corroborates the results of John and Srivastava (1999), who listed extroversion as one of the strongest predictors of happiness and social adaptability be getting into the net of peoples easily. Also, the present findings are in line with Telli et al. (2018) and Awidi and Paynter (2019), who maintained that through personal interaction, the traditional classroom develops emotional understanding, communication skills and character. Nevertheless, the present research points out developments in online students' consciousness and emotional self-regulation, thus, extending the literature above claiming hybrid learning as Singh, Steele, and Singh (2021) and Rasheed, Kamsin, and Abdullah (2020) have proposed a balanced integration of digital and physical approaches for optimal student development.

The results of this research show that education is not just about sharing knowledge; it also involves building human connections, feelings, and morals. The differences between online and in-person learning highlight the need for a balanced approach. Technology should help people interact in meaningful ways, not hold them back. Students and teachers can work together to create a learning process that combines the flexibility of online education with the emotional depth of face-to-face learning. Simple changes, like encouraging group collaboration in virtual classrooms, peer discussions, and regular emotional check-ins, can make digital learning more human. Similarly, traditional classrooms can use digital tools that allow for self-paced and reflective learning. This way, the

education system could become more supportive and nurturing, benefiting the mental growth and emotional health of every student involved.

The current research, which was conducted among Pakistani students, has thrown light on the negative and positive influences of online classes on their social, emotional, and personalities development but at the same time the authors recognize the limitations of the study. Among the limitations the first one is the small sample of participants, and the lack of their geographical distribution, which means that the results of the study do not properly mirror the differences in the educational and cultural backgrounds of the Pakistani students. Moreover, the PERMA model of Seligman (2011) and the Big Five personalities by John & Srivastava (1999) are products of western psychology and thus perhaps do not fully depict the cultural differences, the collectivism and the interpersonal relations that exist in Pakistan. In South Asia emotional expression, social bonding and well-being are often family, community, and religion based, which is just a partial reflection of what these models portray.

Conclusion

This study compares students' social, emotional, and personality development in two different education systems, online and face-to-face learning. Results indicates that face-to-face classrooms support students' emotional well-being and improve their social interactions. On the other hand, online learning helps students develop self-regulation, adaptability, and independent goal setting. This shows that both methods contribute differently to students' overall growth. It shows that both methods contribute differently to students' overall growth. Students studying in physical classrooms scored significantly higher on the Positive Emotion, Engagement, and Relationships dimensions of the PERMA Profiler, which reflect social connection and emotional regulation. In contrast, online learners scored higher on Neuroticism and lower on Agreeableness. However, online learners also scored significantly higher on the self-regulation aspect of Seligman's Positive Relationships criterion, suggesting that these students may be more independent and better adjusted.

The study recommends designing online and offline learning experiences through a hybrid system that supports students' social, emotional, and physical well-being. Cultural influences should also be considered when designing curricula that promote emotional, social and intellectual development of students

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