# E-learning and Levels of Interpersonal Relationships among Postgraduate Students in Selected Universities in Kenya

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## ABSTRACT

**Background:** The shift to e-learning, particularly during the COVID-19 pandemic, has transformed higher education. However, there is limited understanding of how e-learning affects the emotional well-being of postgraduate students. This study addresses this gap by examining the impact of different e-learning modalities on interpersonal relationships and emotional well-being in postgraduate students in Nairobi County, Kenya.

**Objective**: The study investigates how e-learning modes influence emotional well-being, focusing on the role of interpersonal relationships and the moderating effect of perceived social support.

**Methods:** A mixed-methods approach was employed using an embedded-correlational design. Quantitative data were collected through the PERMA Adult Profiler, while qualitative insights were gathered from open-ended interviews. The sample included 323 postgraduate students from nine universities in Nairobi County, with an additional eight participants for qualitative analysis.

**Results:** Findings revealed high levels of interpersonal support and satisfaction with personal relationships. However, no e-learning mode significantly predicted interpersonal relationships (p > 0.05). Blended Learning, which combines online and in-person sessions, achieved the highest mean score, followed by Pure Online Teaching. These findings suggest that while e-learning mode does not critically influence interpersonal relationships, both Blended Learning and Pure Online Teaching foster strong social connections.

**Implications:** The study underscores the importance of institutional and supervisory support in enhancing the e-learning experience. Future research should explore diverse contexts and long-term effects to further understand e-learning's impact on interpersonal relationships and academic success.

**Keywords:** E-learning, Emotional well-being, Postgraduate students, Interpersonal relationships, Blended Learning, Social support, Higher education, Mixed-methods approach, Psychological well-being, Institutional support.

## INTRODUCTION

The rapid adoption of e-learning has significantly transformed the global landscape of higher education. E-learning, defined as the utilization of telecommunications technology to deliver educational content remotely, presents numerous advantages, including flexibility, accessibility, and the capacity to transcend geographical barriers. However, the increasing prevalence of e-learning has engendered concerns regarding its impact on interpersonal relationships and emotional well-being, particularly among postgraduate students who often depend on robust social networks for academic and emotional support. This article aims to investigate the effects of e-learning on interpersonal relationships among postgraduate learners in selected universities in Kenya.

Interpersonal relationships are pivotal to academic success, especially for postgraduate students who frequently navigate the pressures of balancing academic obligations with personal lives. Research has demonstrated that social support systems, both within and outside academic contexts, are vital for reducing stress, enhancing academic performance, and promoting psychological well-being (Evans et al., 2018). In traditional learning environments, personal connections with peers and faculty cultivate a sense of belonging and community (Hish

et al., 2019). Conversely, the distance and isolation inherent in e-learning may undermine these connections, leading to professional and social isolation, which can adversely affect students' well-being and academic performance (Tsai & Muindi, 2016).

Various studies have highlighted the unique challenges associated with e-learning environments. Evidence suggests that learners in online settings often experience a disconnection from their instructors and peers, contributing to feelings of loneliness and diminished motivation (Madge et al., 2019). For instance, students in the United Kingdom engaged in e-learning reported higher levels of mental health issues compared to their campus-based peers, a phenomenon attributed to the absence of face-to-face interaction (Venturino & Hsu, 2022). Similarly, postgraduate students in remote learning environments across Asia have reported elevated stress levels due to isolation from academic communities (Reeves, 2009). These findings underscore the necessity of understanding how e-learning influences the social and professional networks of postgraduate students, particularly within the context of Kenyan universities.

The ascent of e-learning in Kenya has been propelled by government policies and external factors, notably the COVID-19 pandemic (Reuge, 2021). The Kenyan government's implementation of Open Distance and e-Learning (ODeL) policies has led universities to adopt e-learning as a viable instructional modality (MOEST, 2012). While e-learning provides flexibility and convenience—particularly beneficial for postgraduate students who may also be working professionals—its implications for interpersonal relationships and emotional well-being remain inadequately explored. The transition from in-person interaction to virtual learning has altered the dynamics of student engagement, potentially restricting opportunities for cultivating meaningful social connections essential for psychological well-being (Nyerere, 2016; Kibuku et al., 2020).

Moreover, the psychological demands placed on postgraduate students—such as academic workload, work-life balance, and professional isolation—are exacerbated by the challenges posed by e-learning. In Kenya, the proliferation of e-learning programs in higher education has increased, yet limited research has been conducted on how these programs impact students' social networks and support systems (Njihia et al., 2016). Understanding the interplay between e-learning, interpersonal relationships, and emotional well-being is crucial for developing effective interventions that enhance student support within these programs.

This study seeks to address the existing research gap by examining the effects of e-learning on interpersonal relationships among postgraduate learners in Kenyan universities. It will investigate whether e-learning has resulted in increased social isolation or if postgraduate students have adapted by forming novel types of relationships that bolster their academic and personal well-being. Through this exploration, the research aims to contribute to a deeper understanding of the socio-psychological implications of e-learning and to inform strategies for improving student well-being in these educational settings.

## METHODS

### Mixed-Methods Approach

This study employed a mixed-methods approach, integrating both quantitative and qualitative data to comprehensively investigate the impact of e-learning on the emotional well-being of postgraduate students in Nairobi County, Kenya. This design was chosen to leverage the strengths of both quantitative generalizability and qualitative depth. An embedded-correlational research design was utilized, allowing qualitative data to be integrated within a quantitative framework. This approach facilitated an exploration of how various e-learning modalities influence emotional well-being and how perceived social support may moderate these effects. The combination of methods was intended to provide a more nuanced understanding of the research problem, capturing both statistical trends and individual experiences.

### Study Area and Population

The research was conducted in Nairobi County, a prominent educational hub in Kenya with extensive higher education institutions and robust internet infrastructure, making it an ideal setting for studying e-learning environments. The target population comprised postgraduate students enrolled in e-learning programs across

various universities in Nairobi County. The study focused on master's and doctoral students participating in e-learning during the September to December semester of 2023. This context was selected due to its relevance to current e-learning practices and its representative nature of the broader e-learning experience in Kenya.

## Sampling Procedure

To ensure a representative sample, a multi-stage stratified random sampling method was employed. Initially, universities offering e-learning programs were categorized into public and private institutions. Using a 50% probability ratio, universities were randomly selected from each category, resulting in the inclusion of nine universities—two public and seven private. Within these institutions, a stratified sampling approach determined the sample size proportionate to each university's enrollment figures, resulting in a total of 323 participants. Additionally, purposive sampling was used to select eight participants for the qualitative phase, aiming to gather in-depth insights into individual experiences and coping strategies related to e-learning.

## Measures

Quantitative data were collected using the PERMA Adult Profiler (Seligman, 2018), a standardized instrument designed to measure various dimensions of psychological well-being, including positive emotions, engagement, relationships, meaning, and accomplishment. This tool was chosen due to its established validity and reliability in assessing well-being across different contexts. Qualitative data were gathered through open-ended interviews, which were conducted to explore participants' personal experiences with e-learning, including perceived challenges and coping strategies. These interviews provided context and depth to the quantitative findings, offering a comprehensive view of the impact of e-learning on emotional well-being.

## Data Analysis

Quantitative data were analyzed using statistical methods, including regression analysis and ANOVA, to identify patterns and correlations between e-learning modalities and emotional well-being. This analysis aimed to test hypotheses related to the effects of different e-learning formats on psychological outcomes. Qualitative data were analyzed thematically, involving coding procedures to identify common themes and insights related to participants' experiences with e-learning. This integrative analysis allowed for a nuanced understanding of how e-learning impacts emotional well-being and the role of social support.

## Ethical Considerations

Ethical considerations were considered in this study, ensuring that the rights and well-being of participants were protected. Informed consent was obtained from all participants, who were briefed on the study's objectives, methodologies, and their right to withdraw at any point without consequence. This process not only fostered transparency but also empowered participants by allowing them to make informed decisions about their involvement. To safeguard participant confidentiality, all data were anonymized and securely stored in compliance with data protection regulations. These measures were essential in upholding the integrity and validity of the research while addressing potential biases that could compromise the study's findings.

The research received ethical approval from the Kenya Methodist University Institutional Scientific and Ethics Review Committee, alongside authorization from the National Commission for Science, Technology, and Innovation (NACOSTI) and the relevant participating universities. Informed consent was systematically acquired through various means; for the online questionnaire, participants indicated their consent by clicking a submission button, while verbal consent was collected during telephone interviews. Throughout the study, participant anonymity was rigorously maintained, with responses anonymized and data access secured through password protection. These ethical safeguards were integral not only to protect participant rights but also to enhance the credibility of the research outcomes.

# RESULTS

## Sample Characteristics of the Respondents

The sample consisted of postgraduate students from selected universities in Nairobi County, Kenya. The age distribution of participants revealed that 48.4% were between 31 and 45 years, 28.5% were over 45 years, and

23.2% were aged between 23 and 30 years. Gender distribution was nearly balanced, with 51.2% identifying as male and 48.8% as female. In terms of marital and family status, 48.0% were married with children, 30.9% were single or unmarried, 11.4% reported other statuses, 5.3% were single parents, and 4.5% were married without children. Employment status varied among participants, with 69.9% engaged in full-time employment, 8.9% unemployed, 6.9% in alternative forms of employment, 5.3% in part-time employment, 5.3% involved in part-time income-generating activities, and 3.7% in full-time income-generating endeavors.

**Interpersonal Relations of Postgraduate Learners**

The study assessed interpersonal relationships among postgraduate learners using the PERMA Adult Profiler questionnaire. The results, summarized in Table 1, indicated that participants generally reported high levels of support and satisfaction in their personal relationships. Mean scores revealed that respondents felt loved (mean = 7.11), expressed satisfaction with their personal relationships (mean = 7.09), and reported receiving help and support when needed (mean = 7.07). These elevated scores suggest that the majority of students experienced supportive relationships with peers, family, and academic institutions.

Table 1. Interpersonal relations of postgraduate learners

| | N | Min. | Max. | Mean | Std. Dev. |
|---|---|---|---|---|---|
| R1. Since you started e-learning. To what extent do you receive help and support from others when you need it? | 246 | 1 | 10 | 7.07 | 2.11 |
| R2. Since you started e-learning. To what extent do you feel loved? | 246 | 0 | 10 | 7.11 | 2.014 |
| R3. Since you started e-learning. How satisfied are you with your personal relationships? | 246 | 0 | 10 | 7.09 | 2.172 |
| Valid N (listwise) | 246 | | | | |

Institutional and supervisory support emerged as significant factors in enhancing interpersonal relationships. Many respondents commended the support received from their institutions and supervisors, highlighting its crucial role in their positive experiences. For instance, one participant appreciated the IT support provided, which significantly enhanced their e-learning experience, while another emphasized the helpfulness of their supervisor's engagement. However, not all students reported positive experiences; some noted minimal support and encountered significant administrative challenges.

**Modes of E-learning and Interpersonal Relations**

The study also examined the impact of various modes of e-learning on interpersonal relationships among postgraduate learners, as detailed in Table 2. The analysis indicated that no specific mode of e-learning significantly predicted interpersonal relationships ($p > 0.05$). However, the Blended Learning mode (which combines online teaching with in-person sessions) achieved the highest mean score (7.52) compared to other modalities. This was followed by Pure Online Teaching (mean = 7.42), a Combination of Online Sessions & Video Recordings (mean = 7.41), and Distance Learning with Video Recordings (mean = 7.26).

Table 2. Modes of e-learning and interpersonal relations of postgraduate learners

| Interpersonal relations | . | Pure On-line Teaching | Distance Learning with video recording | Combination of On-line sessions & video recording | Blended (On-line teaching + In-Person Sessions) |
|---|---|---|---|---|---|
| | Mean | 7.42 | 7.26 | 7.41 | 7.52 |

| | Std. Dev | 2.028 | 2.046 | 1.938 | 1.861 |
|---|---|---|---|---|---|
| | F | 0.967 | 0.88 | 1.338 | 1.14 |
| | Sig. | 0.507 | 0.621 | 0.149 | 0.306 |

Interestingly, both the Blended Learning and Pure Online Teaching modes exhibited higher scores regarding interpersonal relations, which was unexpected. This finding suggests that while interpersonal relationships are essential, the mode of e-learning may not serve as a critical determinant. For mature learners, who may possess more established social networks outside of their academic environment, the significance of classroom-based interpersonal interactions could be less pronounced. This may explain why higher education modalities that promote self-directed learning, such as Pure Online Teaching, still yield high scores in interpersonal relationships.

# DISCUSSION

This study aimed to investigate the impact of various modes of e-learning on the interpersonal relationships of postgraduate learners. The findings indicated that participants reported high levels of perceived affection (mean = 7.11), satisfaction with personal relationships (mean = 7.09), and support from colleagues (mean = 7.07). These elevated means suggest that, despite the physical distance inherent in e-learning environments, many students have cultivated strong supportive relationships with peers, family, supervisors, and educational institutions.

## Institutional and Supervisor Support

A critical component of interpersonal relationships within the e-learning context is the support provided by institutions and supervisors. Institutional support encompasses technical assistance, access to training materials, and opportunities for collaboration, all of which can significantly enhance learners' experiences (Ahmed, 2010; Ang et al., 2021). For instance, one participant underscored the pivotal role of IT support in resolving technical issues, illustrating how institutional resources positively influence students' perceptions of their e-learning experiences. Additionally, another participant highlighted the importance of supervisory support in fostering engagement and motivation. These findings resonate with the Job Demands-Resources (J D-R) framework, which posits that adequate resources, including support and engagement from academic communities, are essential for maintaining psychological well-being and mitigating stress (Demerouti & Bakker, 2011; Ryan et al., 2022).

Nevertheless, not all learners experienced such support uniformly. Some participants reported limited assistance, indicating variability in institutional and supervisory support. This inconsistency suggests that while many students benefit from robust support systems, others may encounter challenges that adversely affect their overall experience, emphasizing the necessity for equitable support structures (Ivankova et al., 2007).

## Modes of E-Learning and Interpersonal Relationships

The study also compared the impact of different modes of e-learning on interpersonal relationships. The results indicated that the various e-learning modes did not significantly predict interpersonal relationships ($p > 0.05$). However, blended learning (a combination of online teaching and in-person sessions) received the highest scores (mean = 7.52), followed by pure online teaching (mean = 7.42), a combination of online sessions and video recordings (mean = 7.41), and distance learning with video recordings (mean = 7.26). This suggests that blended learning may provide a more balanced approach to maintaining interpersonal connections compared to exclusively online or recorded formats.

The higher scores associated with blended learning align with Ascenso et al.'s (2018) expanded conceptualization of interpersonal relationships, which includes social ties, social networks, received support, and perceived support. Blended learning may facilitate more frequent and meaningful interactions by integrating both virtual

and physical engagement, thereby enhancing the quality of social connections. This finding is consistent with research by Charles and Carstensen (2010), which indicates that older adults often benefit from smaller, emotionally close networks. Given that 76.9% of participants in this study were over the age of 30, the blended approach may cater to their preference for more substantial personal interactions.

Conversely, the relatively high scores for pure online teaching may be attributed to the expectations associated with higher education and adult learning. Andragogical learning theory emphasizes self-directed learning and independent study, which may diminish the necessity for constant interpersonal engagement within the course context (Hanna et al., 2000). Mature learners often approach online education with a focus on self-management and independent goal-setting, which could elucidate their satisfaction with online formats despite the absence of physical interactions.

**Comparison with Existing Literature**

The findings of this study are corroborated by existing literature that underscores the significance of support and interpersonal relationships in the e-learning context. For example, Ascenso et al. (2018) emphasize the role of social support in enhancing the e-learning experience, while Demerouti and Bakker (2011) discuss how adequate resources contribute to improved psychological outcomes. Furthermore, the results align with Ivankova et al. (2007), who identified support and assistance as critical predictors of students' persistence in e-learning programs.

In conclusion, while the modes of e-learning did not significantly impact interpersonal relationships, the positive outcomes associated with blended and pure online teaching suggest that these formats can effectively support students' social connections and overall well-being. These findings highlight the necessity for ongoing support and flexible learning options to enhance the e-learning experience for postgraduate learners. Implications

**Limitations and Future Research**

This study's limitations include its focus on postgraduate learners in Nairobi, which may not be generalizable to other contexts or educational levels. Additionally, the reliance on self-reported measures might introduce bias (Ahmed, 2010). Future research could address these limitations by exploring diverse populations and employing longitudinal designs to assess changes over time. Future studies should investigate the long-term effects of different e-learning modes on interpersonal relationships and academic success. Exploring the role of cultural and institutional factors in shaping e-learning experiences could provide further insights into optimizing e-learning environments for diverse learner populations (Ivankova et al., 2007).

In conclusion, this study highlights the positive aspects of e-learning on interpersonal relationships, emphasizing the importance of institutional and supervisory support. While the modes of e-learning did not significantly impact interpersonal relations, the blended approach showed potential benefits. These insights offer valuable guidance for enhancing e-learning practices and support systems in higher education.

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