

EXPLORING CROSS-BORDER E-LEARNING ENGAGEMENT AMONG CHINESE INTERNATIONAL GRADUATE STUDENTS AT THE UNIVERSITY OF BAGUIO TOWARDS A TRANSNATIONAL PERSPECTIVE

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ABSTRACT

Learning engagement holds paramount importance in the academic journey of graduate school students, directly influencing their success and overall educational experience. This research employed a quantitative descriptive approach to assess the engagement levels of 29 international Doctor of Education (Ed.D.) and 53 Master of Arts in Education (M.A.Ed.) students. The findings are enlightening, particularly within the context of a transnational perspective. International Ed.D. students demonstrated notably high levels of engagement in e-learning, actively participating and displaying unwavering commitment to their academic pursuits. Conversely, M.A.Ed. students exhibited a moderate level of engagement, indicating room for improvement in their online learning interactions. What is striking, however, is the shared understanding of academic intricacies among these groups, transcending programmatic differences. This study goes further by revealing the socio-emotional challenges experienced by international M.A.Ed. students as they navigate the online learning terrain. The findings emphasized the significance of fostering a supportive and inclusive virtual community to address these concerns. Additionally, this research underscored the unanimous acknowledgment among Ed.D. students of the substantial demands of research, affirming the rigor of scholarly endeavors. It is noteworthy that a majority of participants expressed comfort in openly sharing their thoughts, indicative of an environment that encourages open discourse. In conclusion, this research significantly contributes to the discourse on e-learning engagement among international graduate students, offering insights from a transnational perspective. The nuanced findings highlight the importance of tailoring interventions to enhance socio-emotional engagement and cultivate an inclusive virtual space, transcending international boundaries.

Keywords: e-learning, engagement, academic, socio-emotional, intellectual, transnational perspective

INTRODUCTION

Engagement in online learning has become a crucial aspect of education, especially for graduate students from diverse cultural backgrounds, driven by the practical and adaptable nature of e-learning in higher education due to technological advancements and the extensive availability of online materials. The transformative impact of e-learning on graduate education is evident as institutions rapidly shift towards e-learning environments, offering a range of online courses, virtual classrooms, and interactive tools. This transition provides students with increased flexibility, enabling them to learn at their own pace and access educational resources globally.

The significance of these developments extends beyond individual learning experiences to transnational perspectives in higher education. The effective engagement of international graduate students in cross-border e-learning environments is not only crucial for their academic

success but also holds broader implications for the transnational education landscape. Recognizing and addressing the unique challenges and needs of these students is vital for universities to deliver inclusive and effective e-learning experiences, thereby contributing to the success of cross-border education initiatives.

Furthermore, e-learning has made it easier for students and academics from different backgrounds and places to collaborate, building a worldwide community of scholars.

A meta-analysis study on current trends in educational technology from 2015 to 2020 was carried out by Yildiz (2020) which looked at a variety of angles on the topic and came to the conclusion that using educational technology for learning is appropriate. Albeit the enormous importance of classroom interaction in teaching

Although classroom interaction is an enormously valuable and unique aspect of teaching and learning, there has been a wider shift in how important stakeholders, such as regulators, higher education providers, academics, students, and families, view the effectiveness of e-learning (Tsiligiris, 2020).

Today's education landscape is increasingly dominated by e-learning, offering students flexibility and convenience in accessing materials and interacting online. Learner engagement is crucial for effective e-learning, encompassing active participation, motivation, and dedication, impacting academic success. The student engagement pillars, developed by Kearsley and Schneiderman, provide a technology-driven framework, including academic, intellectual, and socio-economic engagement.

Academic engagement involves active participation in online activities, while intellectual engagement requires critical thinking and knowledge application. Socio-emotional engagement focuses on building connections, emotional stability, and community in online settings, addressing stress, and fostering a positive outlook. Theoretical support comes from constructivism, sociocultural theory, and connectivism, emphasizing student-centered, collaborative, and networked learning, acknowledging the role of technology and the internet in today's interconnected world. The synthesis of these theories informs strategies for e-learning tailored to international graduate students' unique needs, contributing to scholarly dialogues in the field.

The study by Wekullo (2019) on international undergraduate student engagement highlights a gap between theory and practice in the early experiences of students on new campuses. To address this, a systematic evaluation of 48 publications from 2007 to 2018 was conducted, aiming to identify research gaps and investigate how and where international undergraduates are encouraged to participate, shedding light on their unique experiences during this process.

Wang and Brckalorenz (2017) examined the increasing number of international students in the U.S. and the concerns expressed by faculty and staff regarding their academic engagement and success. While prior studies focused on educational experiences, few delved into engagement at four-year institutions, leaving a gap in understanding faculty strategies and student behaviors. Tian et al.'s (2021) research in China introduced an engagement typology based on a survey of 801 international undergraduate students, contributing to a better understanding of learning experiences in Chinese higher education institutions. Kim et al.'s (2019) work emphasizes the importance of students' academic engagement and digital preparedness in evaluating e-learning, with strong digital abilities being crucial for active participation in university e-learning environments. In the context of the Philippines, Barrot et

al.'s (2012) study revealed a spectrum of online learning challenges faced by students during the pandemic, ranging from home learning environment issues to technological skill challenges.

Eliveria et al. (2019) argue that in a hybrid learning environment, active student participation challenges traditional educational methodologies, enhancing knowledge generation and perspectives. The study emphasizes the importance of understanding engagement levels and identifying influencing factors for designing and deploying effective hybrid learning experiences.

The University of Baguio (UB) is committed to upholding competence, integrity, and service through its Flexible Learning Approach, adapting to the new normal in education. Despite the comprehensive review of literature, a research gap exists in understanding the specific factors influencing e-learning engagement among international graduate students at UB. Investigating their engagement levels, challenges, and identifying variables affecting participation is crucial for addressing this gap and improving the educational outcomes of graduate international students.

The study's significance lies in shaping the educational experiences and outcomes of international graduate students at the University of Baguio. As e-learning becomes a prominent platform for academic growth, understanding the factors influencing engagement is vital. Effective strategies and interventions can be developed to enhance engagement, contribute to successful learning outcomes, and support overall academic success, aligning with UB's efforts to improve curricula and provide valuable academic experiences for international students. Additionally, the proposed study on higher education globalization aligns with the UN Sustainable Development Goal on Quality Education, emphasizing the importance of incorporating global viewpoints, cross-cultural competency, and international cooperation in achieving quality education.

This study aimed to assess the engagement levels of international graduate students at the University of Baguio in online coursework. By examining their active participation, the research sought insights to guide strategies for improving e-learning. Participants benefit by contributing to a deeper understanding of e-learning challenges and opportunities, potentially leading to enhanced resources and support services tailored to international students' unique needs, ultimately improving their performance and satisfaction with online learning at the University of Baguio.

Specifically, this study endeavored to attain the following objectives:

1. To determine the degree to which international students are engaging in online learning along the following three pillars of student engagement:
 - a. academic engagement
 - b. intellectual engagement
 - c. socio-emotional engagement;
2. To assess whether there is a substantial difference in the respondents' degree of online learning engagement based on the programs; and
3. To gauge the degree of agreement among international students on the challenges experienced in online learning, along the three pillars of engagement.

METHODOLOGY

This section presents the research design, population, and locale of the study, as well as the limits of the study, sampling plan, instrumentation, statistical tool, and treatment of data.

In this quantitative study, Likert scales were employed via a survey to gather structured data on the perceptions of Chinese international graduate students regarding their engagement in e-learning. The Likert scales allowed for nuanced quantification of attitudes, offering insight into respondents' experiences. Additionally, a descriptive research approach complemented the quantitative data, providing a comprehensive exploration of contextual nuances and characteristics surrounding participants' engagement in online courses.

The research focused on international graduate students in the University of Baguio's Doctor of Education (EdD) and Master of Arts in Education (MAEd) programs, with less than 200 participants in both online and in-person attendance modes. Employing a self-designed questionnaire with a reliable Cronbach alpha value of 0.735, the study aimed to gauge students' engagement and challenges in e-learning across different programs. Statistical tools, including mean scores and a t-test, were utilized for data analysis. Ethical considerations encompassed privacy protection, cultural sensitivity, and addressing technology access disparities, emphasizing informed consent and voluntary participation.

To ensure ethical practices, the researcher obtained approval from relevant offices, informed participants through in-person and online sessions, and addressed language barriers when needed. The study prioritized privacy, consent, and academic integrity, allowing participants to withdraw voluntarily. The findings aim to contribute to academic discourse and enhance understanding of e-learning engagement among international graduate students, potentially benefiting both participants and the wider academic community.

RESULTS AND DISCUSSION

This section reveals key findings from a survey assessing the degree of academic engagement among graduate school international students, focusing on three pillars of engagement. Understanding their learning engagement is vital for institutions and educators to devise effective strategies and support systems, promoting academic success and fostering a positive learning environment for this diverse student population.

Table 1 presents the degree of engagement of Master of Arts in Education international students in e-learning.

Table 1

Degree of Engagement of Master of Arts in Education (M.A.Ed.) International Students in E-learning (N=53)

INDICATORS OF E-LEARNING ENGAGEMENT	Mean	SD	Interpretation
Academic Engagement			
1. I prepare quality tasks or assignments.	3.40	0.74	Highly engaged
2. I participate in class discussions by raising questions.	3.32	0.78	Moderately engaged
3. I conduct independent research to enrich my knowledge.	3.49	0.78	Highly engaged
4. I share my ideas from my readings and experiences.	3.11	0.93	Moderately engaged
5. I balance academic commitment by preparing for assessments such as examinations and quizzes.	3.23	1.09	Moderately engaged
Average	3.31	0.86	Highly engaged
Intellectual Engagement			

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1. I make in-depth reflections on my academic outputs such as essays, reflections, etc.	3.11	0.99	Moderately engaged
2. I seek additional learning resources beyond the provided materials.	3.13	0.81	Moderately engaged
3. I apply learned concepts/theories to real-life situations.	3.28	0.84	Moderately engaged
4. I actively engage with multimedia resources/content for a better understanding of lessons.	3.38	0.97	Highly engaged
5. I present well-reasoned arguments that demonstrate critical thinking skills.	3.09	1.06	Moderately engaged
Average	3.20	0.93	Moderately engaged
Socio-emotional Engagement			
1. I build connections with classmates through online communication channels.	3.08	1.00	Moderately engaged
2. I build connections with teachers through online communication channels.	3.30	0.95	Highly engaged
3. I engage in collaborative work with my classmates to discuss tasks or assignments.	3.19	1.00	Moderately engaged
4. I seek guidance from my classmates regarding school tasks.	2.77	1.14	Moderately engaged
5. I seek assistance from my teachers when it comes to understanding lessons.	2.81	1.29	Moderately engaged
Average	3.03	1.08	Moderately engaged
Overall	3.18	1.13	Moderately engaged

International Master of Arts in Education (M.A.Ed.) students at the University of Baguio exhibit a moderate level of engagement (mean: 3.18) in the e-learning academic environment, indicating active participation in academic pursuits, intellectual exploration, and socio-emotional interactions online. While there's room for improvement in enhancing socio-emotional engagement, the overall engagement level is deemed satisfactory. These findings align with Wang et al.'s (2022) study, emphasizing the crucial role of learning engagement in evaluating online course quality and student performance. Wang et al.'s research delve into learner, instructor, and content interactions, exploring how self-efficacy and academic emotions mediate and enhance engagement. Their study, based on 474 Chinese college students in online courses, demonstrates that learner-content and learner-learner interactions predict engagement by influencing self-efficacy and academic emotions.

Academic Engagement

The data indicates a high degree of academic engagement among international Master of Arts in Education (M.A.Ed.) students at the University of Baguio, with an average mean score of 3.31 across five indicators. Notably, students excel in tasks such as preparing assignments, engaging in discussions, conducting independent research, and managing commitments. However, there is a notable degree of polarization, particularly in the indicator related to balancing academic commitments ($SD=1.09$), suggesting diverse perspectives among participants. This polarization could stem from various factors, including individual learning styles and personal circumstances. Al-Nofli's (2021) research on the research-teaching quality connection aligns with the emphasis on skill development and knowledge gain, urging for more

hands-on research and instructor support, resonating with the findings related to independent research engagement. Further exploration through qualitative research could unveil deeper insights into the varied perspectives and practices related to academic commitment among participants.

Intellectual Engagement

In terms of intellectual engagement, international Master of Arts in Education (M.A.Ed.) students at the University of Baguio exhibit a moderately engaged degree, with an average mean score of 3.20. The students reported actively engaging with multimedia resources, seeking additional learning resources, making in-depth reflections on academic outputs, applying learned concepts to real-life situations, and presenting well-reasoned arguments. The high mean score for engaging with multimedia resources (3.38) aligns with the proactive approach of students in enhancing their understanding through various multimedia tools, supported by studies emphasizing the positive impact of technology in education (Samat & Aziz, 2020). However, the lower mean score for presenting well-reasoned arguments (3.09) indicates varying levels of engagement in exhibiting critical thinking skills, highlighting the diversity of perspectives among participants.

The variation in intellectual engagement suggests a need for fostering advanced critical thinking abilities and motivating students to articulate their ideas effectively within academic contexts. Campo et al. (2023) identified effective methods, including debates, project-based learning, real-world applications, research, cooperative learning, and case studies, to nurture critical thinking skills among university students. These strategies consistently bolster diverse facets of critical thinking, offering valuable insights to educators aiming to advance critical thinking within higher education, which aligns with the findings of varying engagement levels in presenting well-reasoned arguments.

Overall, these insights into intellectual engagement provide a foundation for enhancing teaching methodologies that stimulate critical thinking skills and empower students to effectively express their ideas within the academic sphere.

Socio-emotional engagement

In terms of socio-emotional engagement, international Master of Arts in Education (M.A.Ed.) students at the University of Baguio exhibit a moderately engaged level, with an average mean score of 3.03. The students actively build connections with classmates and teachers through online communication channels, engage in collaborative work with peers, seek guidance from classmates, and seek assistance from teachers. Notably, the highest mean score (3.30) for building connections with teachers through online communication channels suggests a positive and strong teacher-student relationship in the e-learning environment, emphasizing the crucial role of effective teacher-student interaction (Ong & Quek, 2023). However, the lower mean score (2.77) for seeking guidance from classmates regarding school tasks indicates a need for improvement in fostering peer collaboration and support in the socio-emotional dimension.

These findings underscore the significance of creating a supportive and collaborative environment among students to enhance their socio-emotional engagement in online learning settings. Social learning theories, such as Vygotsky's, emphasize the pivotal role of student-student interaction in the learning process within social contexts, highlighting the multifaceted influence of peers in knowledge acquisition and cognitive development. While the M.A.Ed. international students demonstrate the highest level of engagement in their academic pursuits, there is an opportunity for further enhancement in the socio-emotional dimension by strengthening connections and encouraging peer support in the online learning environment.

The degree of engagement of Doctor of Education (Ed.D.) international students in e-learning is presented in Table 2.

Table 2

Degree of Engagement of Doctor of Education (Ed.D.) International Students in E-learning (N=29)

INDICATORS OF E-LEARNING ENGAGEMENT	Mean	SD	Interpretation
Academic Engagement			
1. I prepare quality tasks or assignments.	3.45	0.74	Highly engaged
2. I participate in class discussions by raising questions.	3.17	0.81	Moderately engaged
3. I conduct independent research to enrich my knowledge.	3.59	0.73	Highly engaged
4. I share my ideas from my readings and experiences.	3.41	0.78	Highly engaged
5. I balance academic commitment by preparing for assessments such as examinations and quizzes.	3.59	0.68	Highly engaged
Average	3.44	0.75	Highly engaged
Intellectual Engagement			
1. I make in-depth reflections on my academic outputs such as essays, reflections, etc.	3.41	0.83	Highly engaged
2. I seek additional learning resources beyond the provided materials.	3.21	0.73	Moderately engaged
3. I apply learned concepts/theories to real-life situations.	3.28	0.70	Highly engaged
4. I actively engage with multimedia resources/content for a better understanding of lessons.	3.24	0.99	Moderately engaged
5. I present well-reasoned arguments that demonstrate critical thinking skills.	3.35	0.77	Highly engaged
Average	3.30	0.80	Highly engaged
Socio-emotional Engagement			
1. I build connections with classmates through online communication channels.	3.24	0.79	Moderately engaged
2. I build connections with teachers through online communication channels.	3.34	0.77	Highly engaged
3. I engage in collaborative work with my classmates to discuss tasks or assignments.	3.17	0.81	Moderately engaged
4. I seek guidance from my classmates regarding school tasks.	3.03	0.79	Moderately engaged
5. I seek assistance from my teachers when it comes to understanding lessons.	3.10	0.89	Moderately engaged
Average	3.22	0.81	Moderately engaged
Overall	3.32	0.96	Highly engaged

The results from Table 2 show that Doctor of Education (Ed.D.) international students are very engaged in their online learning experience as reflected with a mean of 3.32. This implies that they actively take part in their academic work, use what they learn in practical situations, and communicate with their classmates and teachers through online channels. This high level of engagement means that these students are fully committed to their education and are eager to connect with their peers and instructors. It is a positive sign that they are getting the most out of their online learning experience and are actively involved in their studies. Further, online learning provides learners with ubiquitous learning opportunities and makes the learning processes more learners-centered (Dwivedi et al., 2019), and thus adopted by higher education institutions globally.

Academic Engagement

The presented data reveals a robust level of academic engagement among participants, with an overall average mean score of 3.44. Key indicators such as conducting independent research (3.59) and balancing academic commitments (3.59) exhibit the highest mean scores, indicating a noteworthy dedication to independent research and conscientious preparation for assessments. Conversely, participating in class discussions by raising questions (3.17) records a moderately engaged level, showcasing a slightly lower but still acceptable level of involvement in this aspect. Despite minor variations in mean scores, the participants consistently demonstrated high academic engagement. Zhao and Brostrom's (2018) study on academic engagement in Chinese universities aligns with these findings, emphasizing the impact of organizational factors on academic engagement. The study discerns that scientists perceiving their university as entrepreneurial or supportive are more academically engaged, with the effect moderated by individual factors, especially for junior scientists and those with industry networks. Notably, the study highlights universal drivers of academic engagement that transcend cultural contexts.

Intellectual Engagement

The data underscores the participants' high level of intellectual engagement, reflected in an overall average mean score of 3.30. Notably, the highest mean scores are attributed to making in-depth reflections on academic outputs and presenting well-reasoned arguments, signaling robust engagement in critical thinking and analytical activities. Although seeking additional learning resources receives a slightly lower mean score, indicating a moderately engaged level, the overall intellectual engagement remains consistently elevated. This suggests active participation in activities such as reflection, real-life application of learned concepts, and the demonstration of critical thinking skills. Li and Xue's (2023) research aligns with these findings, identifying factors that influence student engagement, emphasizing the role of positive emotions and teacher-student relationships as promoters, and acknowledging hindrances like a lack of support and negative behaviors. This study's insights underscore the importance of cultivating positive emotional connections and supportive teacher-student relationships to bolster intellectual engagement, emphasizing the need for targeted educational strategies to optimize overall student engagement.

Socio-emotional engagement

The participants in the study exhibit a moderately high level of socio-emotional engagement in the e-learning environment, as indicated by an average mean score of 3.22. This suggests active efforts in building connections with both classmates and teachers through online channels, fostering collaboration in the virtual setting. Notably, the highest mean score is observed in building connections with teachers through online communication channels, underscoring a positive and engaged interaction between students and instructors. This emphasizes the importance of cultivating strong teacher-student relationships in the online context, fostering a supportive and inclusive learning environment.

Conversely, seeking guidance from classmates and assistance from teachers received lower mean scores, indicating a moderately engaged degree. The challenges associated with geographical distance may contribute to these findings, highlighting the difficulty of readily accessing peer and instructor support for international students scattered across various locations. This suggests a need for targeted interventions or strategies to enhance peer collaboration and encourage students to seek assistance actively, ultimately improving their engagement in the e-learning process.

Finally, the study reveals a harmonious intersection among high levels of academic engagement, intellectual engagement, and socio-emotional engagement among participants in the online learning experience. Students not only actively participate in academic tasks but also demonstrate critical thinking skills, seek additional resources, and establish meaningful connections with peers and instructors. This comprehensive engagement approach contributes to a well-rounded and immersive online learning experience, ultimately enhancing overall success and satisfaction in the virtual educational setting.

Table 3 presents the degree of engagement of international students in e-learning along the three pillars.

Table 3

The degree of engagement of international students in e-learning along the three pillars

INDICATORS	PROGRAM				TOTAL		INT
	M.A.Ed. (N=53)		Ed.D. (N=29)		Mean	SD	
	Mean	SD	Mean	SD			
Academic Engagement							
1. I prepare quality tasks or assignment	3.40	0.74	3.45	0.74	3.42	0.74	HE
2. I participate in class discussions by raising questions	3.32	0.78	3.17	0.81	3.27	0.79	HE
3. I conduct independent research to enrich my knowledge	3.49	0.78	3.59	0.73	3.52	0.76	HE
4. I share my ideas from my readings and experiences	3.11	0.93	3.41	0.78	3.22	0.89	ME
5. I balance academic commitment by preparing for assessments such as examinations and quizzes	3.23	1.09	3.59	0.68	3.35	0.97	HE
Average	3.31	0.86	3.44	0.75	3.36	0.83	HE
Intellectual Engagement							
1. I make in-depth reflections on my academic outputs such as essays,	3.11	0.99	3.41	0.83	3.22	0.94	ME

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reflections, etc.								
2. I seek additional learning resources beyond the provided materials.	3.13	0.81	3.21	0.73	3.16	0.78	ME	
3. I apply learned concepts/theories to real-life situations.	3.28	0.84	3.28	0.70	3.28	0.79	HE	
4. I actively engage with multimedia resources/content for a better understanding of lessons	3.38	0.97	3.24	0.99	3.33	0.97	HE	
5. I present well-reasoned arguments that demonstrate critical thinking skills	3.09	0.93	3.30	0.80	3.23	0.89	ME	
Average	3.20	0.93	3.30	0.80	3.23	0.89	ME	
Socio-emotional engagement								
1. I build connections with classmates through online communication channels	3.08	1.00	3.24	0.79	3.13	0.93	ME	
2. I build connections with teachers through online communication channels	3.30	0.95	3.35	0.77	3.32	0.89	HE	
3. I engage in collaborative work with my classmates to discuss tasks or assignments.	3.19	1.00	3.17	0.81	3.18	0.93	ME	
4. I seek guidance from my classmates regarding school tasks.	2.77	1.14	3.03	0.78	2.87	1.03	ME	
5. I seek assistance from my teachers when it comes to understanding lessons.	2.81	1.29	3.31	0.89	2.99	1.18	ME	
Average	3.03	1.08	3.22	0.81	3.10	0.99	ME	
Overall	3.18	1.13	3.32	0.96	3.23	1.07	ME	

The results from Table 3 reveal that international master's and doctoral students exhibit a moderate level of engagement (mean: 3.23) across academic, intellectual, and socio-emotional dimensions in the e-learning environment. Their involvement in academic pursuits, critical thinking, and social interactions is satisfactory. This suggests an avenue for improvement in fostering more active participation, enhancing critical thinking skills, and strengthening emotional connections to support the holistic engagement and performance of international students in e-learning. These findings align with the study by Asher et al. (2022), emphasizing the correlation between student involvement and meaningful learning experiences. The research underscores the significance of cultivating active engagement and enhancing the overall quality of online learning to facilitate a more successful academic journey for international students.

The analysis of e-learning engagement between master's and doctoral students reveals a higher level of engagement among the latter, with a mean score of 3.32, indicating a high degree of involvement. This suggests that the structure of the doctoral program or the intrinsic motivation and commitment of doctoral students contribute to a more active and engaged learning experience. The findings underscore the potential benefits of designing educational

programs that encourage high levels of student engagement, potentially leading to improved academic performance and overall satisfaction.

Conversely, master's students demonstrate a moderately engaged level with a mean score of 3.18, indicating a lower but still considerable level of engagement. The higher engagement among doctoral students may be attributed to their advanced level of study and deeper commitment to research and academic pursuits. The academic engagement scores for both master's and doctoral students are notably high, with mean scores of 3.31 and 3.44, respectively. This aligns with the Self-Determination Theory (Deci & Ryan, 2000), emphasizing intrinsic motivation driven by autonomy, competence, and relatedness. Both groups exhibit strong commitment to academic tasks, reflecting a deep sense of intrinsic motivation. The slightly higher engagement scores for doctoral students suggest a greater sense of autonomy and competence, emphasizing the theory's principles and the importance of fostering an environment that enhances students' intrinsic motivation in e-learning settings.

Intellectual Engagement of Master and Doctoral Students

In terms of intellectual engagement, both master's and doctoral students demonstrate notable commitment. Master's students exhibit a moderate level with a mean score of 3.20, while doctoral students display a higher level with a mean score of 3.30. This indicates that both groups actively engage in reflective practices, seek additional learning resources, apply concepts to real-life situations, utilize multimedia resources, and present well-supported arguments. Doctoral students, however, exhibit a significantly greater commitment to intellectual pursuits compared to master's students. Overall, both groups showcase a noteworthy level of intellectual engagement within the online learning environment.

Socio-emotional Engagement of Master and Doctoral Students

When considering socio-emotional engagement in e-learning, both master's and doctoral students exhibit a moderately engaged level. Master's students display an average mean score of 3.03, signifying their involvement in connecting with classmates and seeking guidance. Doctoral students show a slightly higher mean score of 3.22, indicating stronger engagement in building connections and collaborating. Despite the similar level of engagement in this dimension, doctoral students demonstrate a slightly greater involvement. However, polarization in responses to seeking guidance from peers and teachers is evident, reflecting variability within each group. This diversity suggests that while some students actively seek support, others may not, contributing to an overall interpretation of moderate engagement.

These polarized responses align with the Social Learning Theory, emphasizing individuals' learning through observation, imitation, and interaction. Both master's and doctoral students actively participate in building connections and seeking guidance, with doctoral students showing slightly higher engagement. The theory underscores the role of social interactions in the learning process, emphasizing the need for collaborative and supportive e-learning environments.

In summary, both master's and doctoral students demonstrate satisfactory levels of engagement across academic, intellectual, and socio-emotional pillars in e-learning. Their active participation, commitment, and adaptability to the online environment highlight their dedication to studies. The higher intellectual engagement among doctoral students may be attributed to their advanced academic level, while the challenges of building strong emotional connections online contribute to moderate socio-emotional engagement. These findings underscore the resilience and commitment of both student groups to their online education.

Differences in the respondents' level of online learning Engagement based on the programs

In this study, the research delves into the nuances of online engagement among graduate students, specifically comparing the experiences of Master of Arts in Education (MAEd) and Doctor of Education (EdD) students. The differences in their engagement levels shed light on the varying demands and perceptions within these two academic groups, potentially offering insights for tailored support. Statistical analysis was employed to examine these distinctions, with a particular focus on academic engagement, intellectual engagement, and socio-emotional engagement.

A statistical analysis was performed to compare the degree of online engagement between two groups: Master of Arts in Education and Doctor of Education. The results showed that the variances for academic engagement factors were significantly different between these groups ($F = 7.823$, $p = .006$). Therefore, a t-test assuming unequal variances was used. The significant difference in variances ($F = 7.823$, $p = .006$) between the Master of Arts (MA) and Doctor of Education (Ed.D.) groups regarding academic engagement factors suggests that these two groups may have significantly different levels of variability in their responses related to academic engagement.

In general, when looking at the perceived factors related to these aspects, there was a slightly higher level of agreement among the 29 Ed.D. participants ($M = 3.319$, $SD = 0.533$) compared to the 53 MA participants ($M = 3.179$, $SD = 0.415$), $t(80) = -1.014$, $p = .317$. Similarly, for intellectual engagement, $t(80) = -0.752$, $p = .454$, and socio-emotional engagement, $t(80) = -1.356$, $p = .179$, there were no significant differences between the two groups. This indicates that both MA and Ed.D. participants had a similar level of agreement regarding the factors related to engagement.

The lack of significant differences between the MAEd and EdD groups in terms of intellectual engagement and socio-emotional engagement indicates that, despite the differences in academic programs, these two groups of participants had a similar level of agreement regarding the factors related to intellectual and socio-emotional engagement.

The agreement in intellectual and socio-emotional engagement between Master of Arts in Education (MAEd) and Doctor of Education (EdD) students suggests that the academic program may not significantly impact these factors. Consequently, interventions and support strategies for both groups should focus on areas of shared engagement. The implications emphasize the importance of recognizing commonalities when comparing groups in academic engagement, indicating that despite program differences, there are similarities between MAEd and EdD respondents. Possible factors contributing to these findings include the shared online learning environment, the graduate-level status of both groups and curriculum designs fostering similar engagement levels. In designing interventions, educators should consider these shared engagement factors, tailoring support based on the student body's collective experiences.

The challenges experienced by international students in online learning along the three pillars of engagement

The challenges among international graduate students impact their engagement in the online learning environment across multiple dimensions. These challenges, such as seeking guidance, adapting to new teaching methods, and coping with socio-emotional aspects, influence their engagement by creating barriers to active participation and connection.

Table 5 presents the degree of agreement of MAED students on the challenges in online learning along the three pillars of engagement.

Table 5

Degree of Agreement of MAED students on the challenges in online learning along the three pillars of engagement

INDICATORS	M.A.Ed. Students			
	Agree	%	Disagree	%
Academic Engagement				
1. I have difficulty preparing quality tasks or assignments due to less guidance from teachers.	43	7	10	4
2. I find it difficult to raise questions or express my ideas openly out of fear of being judged or embarrassed.	3	1	50	22
3. Conducting research requires extensive knowledge, time, and effort.	42	7	11	5
4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others.	3	1	50	22
5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes.	47	8	6	3
Intellectual Engagement				
1. Due to a lack of terminology, I find it challenging to focus deeply on my academic products, including essays, reflections, etc.	47	8	6	3
2. I struggle to navigate the large volumes of information accessible and find trustworthy, pertinent sources.	46	8	7	3
3. I struggle to translate the theories and concepts I have learned into practical applications.	41	7	12	5
4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others.	48	8	5	2
5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes.	3	1	50	22
Socio-emotional engagement				
1. The absence of physical presence hampers my capacity to engage spontaneously with classmates	52	9	1	0
2. The absence of non-verbal cues online hinders a strong teacher-student connection.	48	8	5	2
3. The difficulty of finding a suitable communication platform hinders collaboration with classmates.	53	9	6	3
4. The limited availability and accessibility of classmates impede effective communication for seeking assistance.	48	8	5	2

5. It is difficult to ask professors for help to improve understanding of classes because of hesitancy and a lack of contact chances. 51 9 2 1

Academic Engagement

The data provides insights into challenges and engagement levels among Master of Arts in Education (MAED) students in online learning. The highest agreement percentage (75%) indicates that students recognize the demanding nature of conducting research in the virtual space, emphasizing the need for comprehensive support and resources for effective research. Conversely, low agreement percentages (1%) in statements about expressing ideas without fear of judgment highlight a positive aspect of engagement, indicating students' comfort in open discussions. However, challenges include 7% facing difficulty in preparing quality tasks due to less teacher guidance and 8% struggling to manage tasks while preparing for assessments. These findings signal areas for improvement, suggesting institutions provide targeted support to enhance students' academic tasks and time management skills. Overall, the data offers a nuanced understanding of challenges and positive aspects, guiding educators and institutions toward creating an inclusive and supportive online learning environment for MAED students.

Intellectual Engagement

The data from 53 international Master of Arts in Education (MAED) students reveals challenges in intellectual engagement during online learning. Balancing academic responsibilities with other tasks is a significant challenge, with 22% agreement, emphasizing the need for support in time management. Conversely, a positive aspect is a low agreement (2%) on difficulty expressing opinions, suggesting an open and inclusive learning environment. Challenges include difficulty focusing on academic tasks (8%), navigating large volumes of information (8%), and translating theoretical knowledge into practical applications (7%). These findings align with Constructivist theory, emphasizing the need for practical applications to bridge theoretical knowledge. Additionally, the positive engagement aligns with Social Learning Theory, emphasizing the role of peer interaction and collaboration. The data highlights the importance of addressing time management issues and providing tailored support to ensure a conducive online learning environment fostering intellectual growth and academic success for international MAED students.

Socio-emotional Engagement

The data from 53 international Master of Arts in Education (MAED) students sheds light on socio-emotional challenges in online learning. The highest agreement (9%) highlights the struggle to engage spontaneously with classmates due to the absence of physical presence, emphasizing the need for strategies fostering virtual social interactions to enhance a sense of belonging. Conversely, the lowest agreement (0%) indicates that students recognize the importance of strong teacher-student connections despite the lack of non-verbal cues online, emphasizing the value placed on effective communication and engagement with instructors. Moreover, challenges include finding a suitable communication platform (9%), limited availability and accessibility of classmates (8%), and hesitancy in asking professors for help (9%). Addressing these communication challenges is crucial for fostering peer-to-peer and student-instructor interactions, ultimately supporting emotional well-being and academic success. The findings underscore the need for targeted interventions to enhance socio-emotional

engagement, create a sense of community, and establish an inclusive virtual learning space for international MAED students.

Furthermore, Table 6 presents the degree of agreement among Ed.D. students concerning the challenges they encounter in online learning across three pillars of engagement.

Table 6

Degree of Agreement of Ed.D. students on the challenges in online learning along the three pillars of engagement

INDICATORS	Ed.D. Students			
Academic Engagement	Agree	%	Disagree	%
1. I have difficulty preparing quality tasks or assignments due to less guidance from teachers.	11	4	18	10
2. I find it difficult to raise questions or express my ideas openly out of fear of being judged or embarrassed.	10	4	19	11
3. Conducting research requires extensive knowledge, time, and effort.	29	10	0	0
4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others.	7	3	22	12
5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes.	28	10	1	1
Intellectual Engagement				
1. Due to a lack of terminology, I find it challenging to focus deeply on my academic products, including essays, reflections, etc.	20	7	9	5
2. I struggle to navigate the large volumes of information accessible and find trustworthy, pertinent sources.	13	5	16	9
3. I struggle to translate the theories and concepts I have learned into practical applications.	25	9	14	2
4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others.	18	6	11	6
5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes.	9	3	20	11
Socio-emotional engagement				
1. The absence of physical presence hampers my capacity to engage spontaneously with classmates	18	6	11	6
2. The absence of non-verbal cues online hinders a strong teacher-student connection.	18	6	11	6
3. The difficulty of finding a suitable communication platform hinders collaboration with classmates.	48	17	5	3

4. The limited availability and accessibility of classmates impede effective communication for seeking assistance.	12	4	17	9
5. It is difficult to ask professors for help to improve understanding of classes because of hesitancy and a lack of contact chances.	14	5	15	8

Academic Engagement

All Ed.D. respondents unanimously agree on the demanding nature of research, emphasizing the pivotal role of research skills in their academic engagement. A majority (76%) express comfort in expressing opinions, fostering a positive learning environment. However, challenges arise in managing tasks alongside academic commitments, with 97% finding it challenging. This highlights the crucial need for interventions addressing time management to optimize academic engagement. In conclusion, while research is universally recognized, facilitating self-expression and addressing time management challenges is vital. Educators can employ targeted interventions to enhance academic engagement and support international Ed.D. students in their online learning journey.

Intellectual Engagement

The data from 29 international Ed.D. students provides insights into intellectual engagement challenges during online learning. A notable challenge is translating theoretical knowledge into practical applications, with 9% agreement, emphasizing the importance of experiential learning opportunities. Conversely, managing other tasks while dedicating time to assessments has the lowest agreement at 3%, indicating effective task balancing among Ed.D. students. However, challenges in focusing on tasks due to a lack of terminology (7%), navigating information (5%), and expressing opinions (6%) indicate areas for improvement. Institutions should provide resources for language proficiency, enhance information literacy, and foster an open and supportive learning environment. Collectively, addressing these challenges and leveraging identified strengths can enhance intellectual engagement for international Ed.D. students in the online learning setting.

Socio-emotional Engagement

The data from 29 international Ed.D. students provides crucial insights into challenges in socio-emotional engagement during online learning. A significant finding is that 17% of respondents face difficulties in collaboration due to communication platform issues, emphasizing the need for accessible and user-friendly tools for effective peer interactions. Additionally, 6% of students find it challenging to engage spontaneously and build teacher-student connections due to the absence of physical presence and non-verbal cues. This underscores the importance of fostering virtual social interactions and meaningful relationships. Challenges in seeking assistance due to limited availability and accessibility of classmates (4%) highlight the need for a supportive and collaborative learning environment. The data suggests that institutions should actively incorporate strategies to facilitate social engagement and interpersonal connections, fostering a more inclusive virtual learning space. Furthermore, 5% of respondents find it difficult to approach professors for help, indicating the need for improved communication channels to address academic needs. Addressing these findings can lead to a more inclusive and supportive

online learning environment, enhancing socio-emotional engagement for international Ed.D. students.

Table 8 displays the level of agreement among M.A.Ed. and Ed.D. students regarding the challenges they encounter in online learning across three pillars of engagement.

Table 8

Degree of Agreement of M.A.Ed. and Ed.D. students on the challenges in online learning along the three pillars of engagement

INDICATORS	M.A.Ed.				Ed.D.				Total			
	A	%	D	%	A	%	D	%	A	%	D	%
Academic Engagement												
1. I have difficulty preparing quality tasks or assignments due to less guidance from teachers.	43	7	10	4	11	4	18	10	54	6	28	5
2. I find it difficult to raise questions or express my ideas openly out of fear of being judged or embarrassed.	3	1	50	22	10	4	19	11	13	2	69	13
3. Conducting research requires extensive knowledge, time, and effort.	42	7	11	5	29	10	0	0	71	8	11	8
4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others.	3	1	50	22	7	3	22	12	10	1	72	11
5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes.	47	8	6	3	28	10	1	1	75	9	7	7
Intellectual Engagement												
1. Due to a lack of terminology, I find it challenging to focus deeply on my academic products, including essays, reflections, etc.	47	8	6	3	20	7	9	5	67	8	15	5
2. I struggle to navigate the large volumes of information accessible and find trustworthy, pertinent sources.	46	8	7	3	13	5	16	9	59	7	23	4
3. I struggle to translate the	41	7	12	5	25	9	4	2	66	8	16	7

theories and concepts I have learned into practical applications.

4. I find it difficult to convey my opinions because I worry about being rejected or devalued by others. 48 8 5 2 18 6 11 6 66 8 16 4

5. I find it challenging to manage other tasks while dedicating time and effort to prepare for assessments like exams and quizzes. 3 1 50 22 9 3 20 11 23 1 59 11

Socio-emotional engagement

1. The absence of physical presence hampers my capacity to engage spontaneously with classmates 52 9 1 0 18 6 11 6 70 8 12 4

2. The absence of non-verbal cues online hinders a strong teacher-student connection. 48 8 5 2 18 6 11 6 66 8 16 4

3. The difficulty of finding a suitable communication platform hinders collaboration with classmates. 53 9 6 3 48 17 5 3 101 12 54 10

4. The limited availability and accessibility of classmates impede effective communication for seeking assistance. 48 8 5 2 12 4 17 9 60 7 17 3

5. It is difficult to ask professors for help to improve understanding of classes because of hesitancy and a lack of contact chances. 51 9 2 1 14 5 15 8 65 8 16 3

The Degree of Agreement of M.A.Ed. and Ed.D. students on the challenges in online learning along with academic engagement

Among Master of Arts in Education (M.A.Ed.) Chinese students, the data indicates a significant challenge in balancing tasks with exam and quiz preparation, with 47 out of 53 students agreeing. This highlights potential struggles in managing academic commitments alongside other responsibilities, which could lead to stress and compromised performance.

Conversely, only 3 out of 53 students find it difficult to express their thoughts openly due to fear of judgment, suggesting a positive and inclusive learning environment where students feel confident in sharing ideas and asking questions. This aligns with Social Constructivism, emphasizing collaborative learning through social interactions.

For Doctor of Education (Ed.D.) Chinese students, unanimous agreement (29 out of 29) on the demanding nature of research underscores their recognition of the effort required. Additionally, 28 out of 29 students find multitasking during assessments challenging, revealing an interconnection between research and assessment challenges. The majority of students feel comfortable with open expression, indicating a positive communication environment. However, varying responses on task quality related to teacher guidance suggest opportunities for improving support and addressing differing expectations.

In summary, M.A.Ed. students face challenges in task management but benefit from an inclusive learning environment. Ed.D. students recognize the demands of research, indicating the need for tailored support. Positive expressions among both groups align with Social Constructivism. These insights have broader implications for transnational education, emphasizing the importance of understanding cultural nuances for effective online learning program design and implementation.

CONCLUSION AND RECOMMENDATION

In light of the comprehensive analysis of the data and its implications, the following section will present the conclusions drawn from this study, followed by recommendations aimed at enhancing the online learning experience for international EDD and MAED students.

Conclusions

The international graduate students at both the master's and doctoral levels, hailing from diverse cultural backgrounds, exhibit a moderate level of engagement in e-learning, encompassing academic, intellectual, and socio-emotional aspects. This cross-border perspective reveals a shared commitment to their online learning experiences. Notably, doctoral students, in particular, demonstrate a slightly deeper level of engagement, reflecting their transnational dedication to scholarly pursuits in the digital learning landscape.

Significant variances in academic engagement between Master of Arts (MA) and Doctor of Education (Ed.D.) groups reveal diverse response patterns, yet the resemblance in intellectual and socio-emotional engagement implies limited program-induced disparities, offering valuable guidance for customized support strategies.

This study illuminates the challenges and strengths of Chinese international graduate students in e-learning. M.A.Ed. students grapple with academic balance but benefit from an inclusive environment. Conversely, Ed.D. students recognize research's demands, calling for tailored support. Varied perceptions of teacher guidance indicate room for improvement. These findings underscore the importance of understanding the unique experiences of international students in cross-border e-learning, prompting universities to foster inclusive and supportive environments for diverse cultural backgrounds, thereby enhancing the e-learning experience and facilitating successful transnational education initiatives.

Recommendations

1) Future research should focus on cultural influences on e-learning engagement, tailored support for master's students, optimizing teacher guidance, creating inclusive learning

environments, cross-country comparisons, longitudinal studies, and support strategy development.

2) Future studies should investigate specific factors influencing academic engagement disparities between MA and Ed.D. students and explore program-agnostic interventions to enhance online learning experiences.

3) Future research should delve into cultural nuances in e-learning challenges, and provide targeted support for M.A.Ed. students, optimize teacher guidance, enhance inclusivity, conduct cross-country comparisons, engage in longitudinal studies, and develop comprehensive support strategies to ensure a successful transnational education experience for international graduate students.

4) Establish customized support systems at the University of Baguio to assist M.A.Ed. students in efficiently managing academic tasks while prioritizing their well-being. Implement concrete strategies and resources tailored to address the unique challenges faced by these students, ensuring a balanced and conducive learning environment.

5) Provide specialized assistance and resources for Ed.D. students at the University of Baguio to meet the rigorous demands of research. This can include targeted workshops, mentorship programs, and access to comprehensive research resources, fostering an environment conducive to successful completion of their doctoral studies.

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