Original Research Article

A Qualitative Exploration of Student Perceptions and Challenges in Blended Learning: Insights from Preschool Psychology Courses

Abstract

This study explores the implementation and perception of blended learning (BL) within preschool psychology courses, addressing a critical gap in educational research. Despite the recognized benefits of BL, such as flexibility and autonomy, there is limited empirical research focusing on its application in preschool psychology—a field identified as underexplored by previous studies. This research aims to deepen the understanding of BL's effectiveness and challenges in this specific context. Utilizing a purposive sampling method, the study gathered qualitative data from students who completed a 16-week blended course. The findings reveal that while students appreciate the flexibility and diverse resources offered by BL, they face challenges related to structured scheduling, immediate feedback, and technological integration. These challenges often lead to feelings of overwhelm and isolation, underscoring the need for improved support systems. The study discusses the importance of fostering community and social interaction within BL settings, proposing solutions such as virtual collaboration tools and online social events. By aligning with existing literature and addressing identified gaps, this research provides actionable insights for enhancing BL models. The study concludes that refining BL environments to include structured interactions and technological support can significantly improve student engagement and learning outcomes. These findings have important implications for educators and policymakers aiming to optimize BL strategies, particularly in the evolving post-COVID educational landscape.

Introduction

Blended learning (BL) has emerged as a transformative force in education, combining traditional face-to-face instructional methods with online components to create a more flexible and effective learning environment (Garrison & Kanuka, 2004; Vo et al., 2017). Initially celebrated for its ability to cater to diverse learners by bridging the divide between traditional classroom settings and digital education, BL became particularly relevant with the onset of the COVID-19 pandemic in 2020. This global crisis necessitated a rapid shift from traditional to more digital-oriented teaching methodologies, highlighting both the promise and the inherent challenges of BL (Pokhrel & Chhetri, 2021; Oliveira et al., 2021). The pandemic-induced acceleration towards BL often resulted in practices that more closely resembled remote learning (RL) than the intended seamless integration of in-person and virtual experiences, thereby underscoring the need for a deeper understanding of BL's potential and limitations.

The adoption and implementation of BL globally were uneven, with significant variations in how it was perceived and utilized across different educational contexts (Holley & Oliver, 2010). In Western educational settings, research extensively examined BL's influence on factors such as student engagement, critical thinking, and sustainability (Bliuc et al., 2011; Dziuban et al., 2018). Studies showed that BL could enhance learning outcomes by providing students with greater flexibility and access to a wider range of resources (Moskal et al., 2013; Ashraf et al., 2021). However, the transition to BL was not without challenges, particularly in maintaining student engagement and a sense of

belonging. Meanwhile, in Asia, and particularly China, BL exploration was still in its nascent stages, presenting unique challenges and opportunities due to diverse educational landscapes and rapid technological advancements (Lomer& Palmer, 2021). Recent studies in these regions began to focus on integrating immersive technologies and tailoring pedagogic strategies to enhance student engagement and learning outcomes.

Despite significant and growing interest in BL, considerable gaps remained in understanding how students experienced and perceived this learning model, especially within specific disciplines and at different educational levels (Torrisi-Steele & Drew, 2013; Lust et al., 2011). To date, research predominantly focused on higher education and STEM fields, leaving areas such as preschool education underexplored (Garrison & Vaughan, 2008; Mitchell & Forer, 2010). While the efficacy of BL in improving academic performance and reducing achievement gaps was well documented, there was a pressing need to delve into qualitative student experiences—particularly in non-traditional settings like preschool psychology courses.

Preschool education is foundational, focusing on understanding the developmental and psychological needs of young children. This field traditionally relied heavily on face-to-face interaction and the hands-on experiences vital for developing essential skills in child psychology, development, and pedagogy (Waha& Davis, 2014). Thus, integrating BL into preschool psychology courses posed unique challenges and opportunities. Students in this field needed to develop practical skills that might be hindered by a predominantly online approach. Consequently, exploring student perceptions in this niche area became crucial to identify where BL might fall short and address them through innovative educational strategies.

A significant aspect of BL was its potential to combine with deep learning concepts to create powerful educational experiences (Hrastinski, 2019). Deep learning in education refers to engaging students with content at a profound level, facilitating critical thinking and problem-solving skills beyond surface-level memorization. This approach involves understanding and applying knowledge in various contexts, promoting long-term retention and comprehension—goals well aligned with BL's flexible, resource-rich environment that supports such engagement. The intersection of BL and deep learning was particularly beneficial in preschool psychology education, allowing students to engage with theoretical content digitally and apply it practically, thus preparing them for real-world challenges in educational settings.

Understanding student perceptions of BL in preschool education drove more effective curriculum design, teaching strategies, and student support systems, thereby enhancing engagement and improving learning outcomes (Graham & Moir, 2022). Insights from such research informed the development of teaching strategies that capitalized on BL’s strengths while mitigating its challenges through the use of interactive online tools, virtual simulations, and collaborative projects. Furthermore, the sense of belonging was critical for student success in any educational context. BL had the potential to impact students' community connections with peers and instructors, highlighting the need for strategies that foster this sense of belonging, which underpins motivation and academic success (Elshami et al., 2022). By exploring and understanding these student experiences, educators developed methods that not only enhanced educational outcomes but also ensured that students felt included and connected.

Blended learning thus represented a significant shift in educational paradigms, challenging traditional learning models that relied primarily on in-person instruction (Garrison & Vaughan, 2008). Traditional models emphasized direct teacher-student interaction, structured environments, and fixed schedules, favoring lecture-based instruction which, while efficient in conveying information, may not cater to diverse learning styles. In contrast, BL offered increased flexibility, allowing students to access learning material at their convenience and promoting engagement through interactive methods like flipped classrooms and rotation models. BL's advantages over traditional education were evident in its ability to accommodate diverse learning paces and styles, personalize instruction, and grant access to a wealth of resources like multimedia content and digital libraries. However, it also presented challenges, such as the need for digital literacy and reliable technology, and it risked further isolating students without adequate face-to-face interaction.

In conclusion, exploring student perceptions and experiences of BL in preschool psychology courses was essential to fully understand this field's unique challenges and opportunities. Such exploration led to more effective curricula, innovative teaching strategies, and enhanced student support that were tailored to the specific needs of students in BL environments. This study contributed valuable insights into optimizing BL models, ultimately preparing students for their roles as educators and advocates in preschool settings. As BL matured, it remained crucial to address the unique requirements of students and educators to ensure educational success and transformation.

LiteratureReview

Blended Learning (BL) has evolved into a major educational strategy, integrating online and face-to-face learning experiences to enhance educational engagement and outcomes. As educational environments worldwide adapt to new technological and pedagogical realities, understanding the effectiveness and student perception of BL becomes critical. This literature review synthesizes key studies from the past two decades to highlight the development, implementation, and challenge areas within BL. The studies span various educational levels and contexts, providing insights into trends, challenges, and gaps that need further exploration. In particular, this review underscores the need for empirical research focusing on student experiences and satisfaction, which remain underexplored areas in certain disciplines, such as psychology and early education.

Table 1: Summary of Literature Review on Blended Learning (BL)

Year	Author(s)	Participants	Research Methods	Main Findings	Research Gaps
2004	Garrison & Kanuka	N/A	Literature Review	BL enhances educational experiences by integrating online and face-to-face elements.	Need for empirical research on student experiences.

Year	Author(s)	Participants	Research Methods	Main Findings	Research Gaps
2008	Garrison & Vaughan	N/A	Framework Development	Provided a framework and guidelines for BL implementation in higher education.	Lack of focus on student satisfaction and diverse disciplines.
2010	Holley & Oliver	University students	Qualitative case studies	Digital competence affects student engagement in BL environments.	Need to explore specific academic domains like psychology.
2010	Mitchell & Forer	First-year geography students	Surveys and interviews	Students valued the flexibility but faced tech challenges.	Exploration needed in other fields like preschool psychology.
2011	Bliuc et al.	University students	Quantitative study	Identified relationships between social identity, learning approaches, and performance.	Deeper insights needed into social dynamics in BL.
2011	Lust et al.	Undergraduate students	Mixed methods	Students require metacognitive skills for satisfaction in BL.	Exploration needed in early education and diverse students.
2013	Moskal et al.	N/A	Literature Review	Assessed BL's risks and opportunities; dubbed it a "dangerous	Need for refined understanding of student perceptions.

Year	Author(s)	Participants	Research Methods	Main Findings	Research Gaps
				idea."	
2013	Torrisi-Steele & Drew	N/A	Literature Review	Emphasized implementation over student satisfaction in BL.	Highlighted a gap in understanding student experiences.
2014	Waha& Davis	University students	Surveys	Perspectives on BL vary widely; influenced by tutor skills.	Need for focused studies on preschool or non-traditional disciplines.
2017	Vo et al.	Higher education students	Meta-analysis	BL positively affects course-level student performance.	Limited understanding of psychological aspects in BL.
2018	Dziuban et al.	University stakeholders	Surveys and interviews	BL seen as the "new normal" and linked to academic gains.	Insufficient insights into the impact on belonging and community.
2020	McKenzie et al.	University students	Experimental study	Team-teaching improves BL experiences; enhanced engagement noted.	Need for exploring other teaching models in BL.
2021	Lomer& Palmer	University students	Qualitative interviews	Student resistance observed due to misconceptions about BL.	Deep dive into specific fields and varied educational stages.
2021	Ashraf et al.	Systematic	Systematic	Identified	Called for

Year	Author(s)	Participants	Research Methods	Main Findings	Research Gaps
		Review Population	Review	research trends; stressed on the update of BL practices.	more research on student-centric models.
2021	Oliveira et al.	High school Students and teachers	Exploratory study	Explored ERT during COVID-19; highlighted tech and adaptation challenges.	Insights needed for post-COVID BL environments.

Blended Learning (BL) has emerged as a transformative educational strategy, combining online and face-to-face learning to enhance student engagement and outcomes. As institutions adapt to technological advancements and evolving pedagogical needs, understanding the effectiveness and perceptions of BL is crucial. Table 1 provides a comprehensive overview of key studies from the past two decades, highlighting the development, implementation, and challenges of BL, while identifying research gaps that warrant further exploration.

The foundational work by Garrison and Kanuka (2004) highlighted BL's potential by integrating online and face-to-face elements to enrich educational experiences. Their literature review advocated for broader adoption in higher education but identified a significant gap: the need for empirical research on student experiences within these environments. This call for empirical studies underscores the importance of understanding how students perceive and interact with BL, a critical area for further investigation. Building on this, Garrison and Vaughan (2008) developed a comprehensive framework for implementing BL, emphasizing thoughtful integration of components. Despite this, they noted a lack of focus on student satisfaction and the need to explore BL's application across diverse disciplines, suggesting that while frameworks exist, their effectiveness in meeting student needs across fields remains underexplored.

Holley and Oliver (2010) examined the role of digital competence in student engagement through qualitative case studies, finding that digital competence significantly influences engagement in BL environments. This highlights the need to explore digital competence in specific domains, such as psychology, where technological integration may present unique challenges. Understanding digital competence's role can inform targeted interventions to enhance engagement and success. Mitchell and Forer (2010) focused on first-year geography students, revealing that while students valued BL's flexibility, they faced technological challenges. This underscores the importance of addressing technological barriers to ensure students fully benefit from BL's flexibility and highlights the need for exploration in fields like preschool psychology, where technology integration may present distinct

challenges.

Bliuc et al. (2011) investigated the relationships between social identity, learning approaches, and academic performance in BL settings, finding that social identity and learning approaches significantly impact performance. This suggests that BL environments must consider social dynamics to optimize outcomes, calling for deeper insights into how social identity and community influence experiences and success. Lust et al. (2011) examined the role of metacognitive skills in student satisfaction, demonstrating that students require these skills to navigate and succeed in BL environments. This highlights the need for further exploration in early education and diverse populations, where metacognitive skill development is crucial for fostering positive experiences.

Moskal et al. (2013) critically assessed BL, exploring its risks and opportunities, and labeled it a "dangerous idea," emphasizing the need for a refined understanding of student perceptions. This underscores the importance of addressing student concerns and misconceptions to ensure successful implementation and acceptance. Torrisi-Steele and Drew (2013) highlighted a gap in understanding student experiences, pointing to the need for research prioritizing student perspectives and outcomes, suggesting that successful BL implementation must consider satisfaction as a key metric.

Waha and Davis (2014) explored university students' perspectives on BL, finding that these varied widely and were influenced by tutor skills. This highlights the importance of instructor competence in shaping experiences and suggests a need for focused studies on BL in preschool or non-traditional disciplines, where instructor roles may differ. Vo et al. (2017) conducted a meta-analysis on BL's impact on course-level performance, finding positive effects but noting limited understanding of psychological aspects. This suggests that while BL can enhance outcomes, its psychological impact requires further exploration to optimize environments.

Dziuban et al. (2018) examined BL's role as the "new normal," linking it to academic gains but identifying insufficient insights into its impact on belonging and community. This highlights the need to explore how BL environments can foster belonging and community, critical for engagement and success. McKenzie et al. (2020) investigated team-teaching's effects on BL experiences, demonstrating enhanced engagement and suggesting a need to explore other teaching models to optimize experiences.

Lomer and Palmer (2021) uncovered student resistance to BL due to misconceptions, calling for deeper exploration across stages and fields, emphasizing addressing misconceptions to enhance acceptance and effectiveness. Ashraf et al. (2021) identified trends and gaps in BL research, stressing the need for updates and calling for more research on student-centric models, highlighting the importance of tailoring approaches to meet diverse needs. Oliveira et al. (2021) examined challenges of emergency remote teaching during COVID-19, highlighting technological and adaptation challenges and suggesting the need for insights into post-COVID BL environments to ensure resilience and adaptability.

In summary, Table 1 indicates the evolving landscape of BL research, highlighting significant progress and persistent challenges. While BL has demonstrated potential in enhancing outcomes, further exploration of student experiences, satisfaction, and psychological impacts is crucial. Addressing these

gaps will optimize BL models to meet diverse learner needs and enhance outcomes across disciplines and levels. This study aims to fill these gaps by focusing on student experiences, diverse disciplines, technological barriers, social dynamics, satisfaction, and post-COVID adaptations, contributing to the ongoing development of BL as a transformative strategy.

Methodology

This study utilizes a qualitative research approach to explore the perceptions and experiences of university students who have completed a preschool psychology course through a blended learning model. This method is chosen for its capacity to provide rich, detailed insights into students' subjective experiences, effectively capturing the complexities and nuances of blended learning environments.

Sample Selection

A purposive sampling strategy was employed to ensure participants have direct and relevant experience with the blended learning format in preschool psychology courses. This approach ensures the collection of meaningful data from individuals who have fully engaged with the course's instructional design.

The sample consists of 10 university students aged 19-20, majoring in Preschool Education, with a gender distribution of 7 females and 3 males. These participants completed the entire 16-week preschool psychology course using a blended learning model, providing valuable insights into their experiences.

Table 2: Participant Demographics

Age Range	Major	Gender Distribution	Total Participants
19-20	Preschool Education	7 females, 3 males	10

To maintain data relevance, we included only those students who completed the entire 16-week course. Students who did not finish the course or missed substantial portions were excluded, as their partial participation would not yield comprehensive insights into the blended learning experience (as detailed in Table 2). This selection criterion ensures that the data accurately represents the effectiveness and perception of the blended learning model in preschool psychology education.

Intervention: Blended Learning Course Plan for Preschool Psychology

This study employs a structured intervention in the form of a detailed 16-week blended learning course plan for preschool psychology. Table 3 outlines the intervention, providing key insights into the structured design and implementation that shape students' learning experiences and perceptions. The course plan specifies teaching aims, activities, key points, challenges, methods, and materials, illustrating the multifaceted approach used to enhance educational outcomes through blended learning. By examining this course plan, the study correlates specific teaching strategies and content delivery methods with the observed outcomes and student feedback, offering valuable insights into the efficacy of blended learning models. The intervention not only guides instruction but also supports the continuous improvement of course delivery to meet the educational needs of students.

Table 3：Blended Learning Course Plan for Preschool Psychology

Week	Sessions	Teaching Aim	Teaching Activities	Teaching Content	Challenges	Teaching Methods	Teaching Materials
1	1 & 2	Introduce course foundations and digital tools	Course introduction, overview of BL format, workshop on digital tools, Q&A	Understanding course structure and tools, effective use of digital platforms	Familiarizing with technology, acclimatizing to new tools	Interactive lecture, practical workshop	Syllabus, digital tool guides, tool tutorials
2	1 & 2	Explore child development theories	Lecture on key theories (Piaget, Vygotsky), group activity applying theories	Understanding developmental stages, practical application of theories	Applying theoretical concepts, bridging theory and practice	Interactive lecture, group discussion, collaborative work	Texts on child development, case study examples
3	1 & 2	Develop observation and assessment skills	Workshop on observational techniques, peer collaboration to design studies	Mastering observation methods, designing effective assessment tools	Practicing skills in a virtual environment, collaboration in a blended setup	Hands-on workshop, collaborative projects	Observational study guides, online tutorials
4	1 & 2	Examine social and emotional	Class discussion on emotional	Understanding emotional develop	Encouraging participation and empathy,	Interactive discussion, role-play	Case study handouts, expert intervie

Week	Sessions	Teaching Aim	Teaching Activities	Teaching Content	Challenges	Teaching Methods	Teaching Materials
		development	challenges, role-playing exercises	ment, applying emotional development theories	fostering empathetic understanding	ing	ws
5	1 & 2	Understand language development	Lecture on language acquisition and disorders, workshop on intervention strategies	Stages of language development, practical intervention design	Designing interventions for language issues, implementing strategies in blended learning	Lecture, design workshop	Audio-visual materials, intervention drafts
6	1 & 2	Integrate play and creativity into learning	Workshop on play-based learning, creative project work	Role of play in learning, designing creative learning experiences	Encouraging creativity within virtual settings, balancing creativity and educational objectives	Hands-on workshop, project-based learning	Play-based intervention examples, creative tools
7	1 & 2	Investigate	Student presenta	Understanding	Deep explorati	Student-led	Articles on

Week	Sessions	Teaching Aim	Teaching Activities	Teaching Content	Challenges	Teaching Methods	Teaching Materials
		special topics in preschool psychology	tions on current trends, guest lecture and discussion	current issues in preschool psychology, applying technology effectively in education	on of specialized topics, integrating technology with traditional learning	presentations, guest lecture, interactive discussion	technology in learning, webinar platforms
8	1 & 2	Prepare for mid-term assessments and review	Mid-term review sessions, assessment preparation	Consolidating knowledge, preparing for assessments	Ensuring comprehensive understanding, managing assessment stress	Review sessions, practice assessments	Review materials, practice tests
9	1 & 2	Explore cognitive development in preschoolers	Lecture on cognitive development stages, group analysis of cognitive tasks	Cognitive development stages, practical cognitive tasks	Applying cognitive theories to real-world scenarios	Lecture, group analysis	Cognitive development texts, task examples
10	1 & 2	Address behavioral challeng	Discussion on behavioral	Identifying and managing	Developing effective managem	Discussion, strategy worksho	Behavioral management

Week	Sessions	Teaching Aim	Teaching Activities	Teaching Content	Challenges	Teaching Methods	Teaching Materials
		es in preschool settings	issues, strategies workshop	behavioral challenges	ent strategies	p	guides, strategy templates
11	1 & 2	Examine cultural influences on preschool education	Lecture on cultural impacts, case studies on diverse settings	Cultural influences on education, adapting to diversity	Understanding and adapting to diverse cultural contexts	Lecture, case study analysis	Cultural studies texts, case study materials
12	1 & 2	Investigate the role of family in preschool education	Discussion on family dynamics, role-playing family scenarios	Family involvement in education, dynamics and impacts	Engaging families effectively, understanding diverse family structures	Discussion, role-playing	Family dynamics articles, scenario scripts
13	1 & 2	Explore technology integration in preschool settings	Workshop on educational technology tools, project design	Effective use of technology in education, project integration	Balancing technology use with traditional methods	Workshop, project-based learning	Technology toolkits, project guidelines
14	1 & 2	Prepare for final projects and	Final project development,	Developing comprehensive	Managing project timelines, refining	Workshop, project develop	Project templates, presentat

Week	Sessions	Teaching Aim	Teaching Activities	Teaching Content	Challenges	Teaching Methods	Teaching Materials
		presentations	presentation skills workshop	projects, enhancing presentation skills	presentation techniques	ment	ion guides
15	1 & 2	Conduct final project presentations and peer reviews	Project presentations, peer feedback sessions	Presenting projects effectively, implementing feedback	Delivering clear and concise presentations, constructive feedback	Presentations, peer review	Final project materials, feedback forms
16	1 & 2	Reflect on course learning and future applications	Course reflection discussions, future planning workshops	Reflecting on learning, planning future applications	Synthesizing course content, planning for future educational contexts	Reflection discussions, planning workshops	Reflection journals, planning templates

Data Collection and Analysis

Data collection is conducted through semi-structured interviews, which provide a flexible yet focused avenue for gathering rich, qualitative data. This format allows participants to express their thoughts and experiences in their own words, enabling a holistic understanding of their perceptions and fostering open dialogue for sharing insights about blended learning experiences.

Thematic analysis is utilized to explore various dimensions of the blended learning experience, focusing on overall perceptions, beneficial aspects, and encountered challenges. The analysis process involves open coding to identify initial themes and patterns (Braun & Clarke, 2006), followed by grouping similar codes into broader themes that reflect key aspects of the learning environment (Creswell, 2013). The themes are continuously refined to ensure clarity and coherence, grounded in participants' perspectives (Miles, Huberman, & Saldaña, 2014). NVivo, a qualitative analysis software, is used to streamline data organization and facilitate effective coding and theme development

(Bazeley& Jackson, 2013). This rigorous process ensures a comprehensive understanding of influential factors on student perceptions and experiences, ultimately guiding the enhancement of blended learning models to improve educational outcomes.

Ethical Considerations

The study rigorously adheres to ethical standards, obtaining informed consent from all participants to ensure their awareness of the study's purpose and their rights. Confidentiality is maintained through anonymization and secure storage of participant data. Limitations such as the small sample size may impact the generalizability of findings, and potential researcher bias is addressed through practiced reflexivity and systematic analysis. By integrating these elements, the study provides insightful contributions to understanding and improving blended learning models for preschool psychology courses, enhancing the reliability and validity of its findings.

Results

This study explored student perceptions of the blended learning format within preschool psychology courses. The insights gathered focus on key aspects: the perceived benefits, challenges faced, and suggestions for improvement. Table 4 presents detailed responses from participants, reflecting the diversity of experiences in this learning approach. By analyzing these responses, the study highlights the practical advantages of flexibility and resource accessibility, while also identifying common challenges and potential enhancements to the blended learning model.

Table 4: Participant Perceptions and Suggestions for Improving Blended Learning

Participant	Overall Perception	Benefits Highlighted	Challenges Encountered	Suggestions for Improvement
Female 1	Positive	"The flexibility allowed me to manage my time better, especially with my part-time job."	"I sometimes struggled to stay disciplined without a fixed schedule."	"More scheduled live sessions would help maintain a routine."
Female 2	Positive	"I loved being able to revisit lectures whenever I needed clarity."	"It was challenging to gauge my progress without regular assessments."	"Regular quizzes could help track progress."
Female 3	Mixed	"Setting my own pace was great, allowing me to	"Balancing online and offline components was	"Clearer guidelines on integrating both

Participant	Overall Perception	Benefits Highlighted	Challenges Encountered	Suggestions for Improvement
		focus on difficult topics longer."	sometimes confusing."	components would be beneficial."
Female 4	Positive	"Access to a wide range of resources helped deepen my understanding."	"Without immediate feedback, I was unsure if I was on the right track."	"More real-time feedback sessions would enhance learning."
Female 5	Positive	"The autonomy to choose when to study was empowering and reduced stress."	"I found it difficult to engage with the material without in-person enthusiasm."	"Incorporating more engaging multimedia content could help."
Female 6	Mixed	"I appreciated the diverse materials, which catered to different learning styles."	"Managing group projects remotely was challenging due to coordination issues."	"Structured virtual collaboration tools could improve group work."
Female 7	Positive	"Being able to learn at my own pace was a major advantage, especially for complex subjects."	"Frequent tech issues and slow feedback were problematic."	"Gamified elements could inject some healthy competition."
Male 1	Mixed	"Flexibility was a plus, allowing me to balance studies with personal commitments."	"The variety of platforms used was overwhelming at times."	"Consolidating resources onto a single platform would simplify access."
Male 2	Negative	"While the availability of online resources made it easier to access information at any time, I struggled	"It was difficult to form connections with classmates online."	"Facilitated online social events could help build community."

Participant	Overall Perception	Benefits Highlighted	Challenges Encountered	Suggestions for Improvement
		with the lack of structured guidance and direct interaction."		
Male 3	Mixed	"Managing my own study pace was beneficial, giving me control over my learning process."	"Understanding complex topics without face-to-face explanations was tough."	"More interactive tutorials or webinars could aid comprehension."

Table 4 presents a comprehensive overview of student responses to the blended learning format in a preschool psychology course, revealing a spectrum of perceptions, benefits, challenges, and suggestions for improvement. Overall, most participants expressed positive or mixed feelings about the course structure. A significant advantage highlighted was the flexibility it offered, allowing students to manage their schedules and learn at their own pace, which was particularly beneficial for those balancing academic commitments with part-time jobs or personal responsibilities.

Students frequently praised the ability to access a wide range of resources and revisit lectures for clarity. This autonomy in choosing when and how to engage with the material was empowering, reducing stress and enabling a personalized learning experience. The diversity of materials was also appreciated for catering to different learning styles, showcasing the course's strength in accommodating individual preferences.

However, several challenges were noted. Some students struggled with the lack of a fixed schedule, which made it difficult to maintain discipline. The absence of frequent assessments and immediate feedback left students uncertain about their progress and understanding. Additionally, balancing online and offline components and managing diverse digital platforms presented difficulties. Students also reported challenges in forming connections in an online setting, which affected engagement and collaborative learning. Technical issues and a lack of engaging multimedia content further hindered full participation and enthusiasm.

To address these challenges, participants suggested several improvements. Increasing structured interactions through more scheduled live sessions and regular quizzes could help maintain routine and track progress. Enhancing engagement with content by introducing more engaging multimedia elements and gamified features could make learning more dynamic. More interactive tutorials or webinars were recommended to aid comprehension of complex topics. To improve collaboration and community, facilitated online social events and structured virtual collaboration tools were suggested to enhance peer connections and group work experiences. Finally, consolidating digital resources onto a single platform could simplify access and reduce the overwhelm caused by navigating multiple tools.

In summary, these insights highlight the strengths of the blended learning environment, particularly its flexibility and resource richness, while also identifying areas for strategic enhancements to improve student discipline, connection, and engagement. These findings are crucial for refining blended learning models to better meet students' educational needs and preferences.

Discussion

The exploration of blended learning (BL) within preschool psychology courses, as presented in this study, contributes significantly to the understanding of BL formats and their perception among students. This study not only reaffirms key findings from existing literature but also addresses previously identified gaps, enriching the ongoing pedagogical dialogue regarding the role of BL in contemporary education. By concentrating specifically on student perceptions and experiences, it highlights both the advantages and persistent challenges of BL, offering valuable insights into optimizing these learning environments for greater effectiveness.

One of the study's primary contributions is the reaffirmation of BL's significant advantages, particularly its flexibility and autonomy. This echoes the work of Garrison and Kanuka (2004) and Mitchell and Forer (2010), who emphasized how students can tailor their learning experiences to accommodate personal schedules and responsibilities. These capabilities are crucial for students who often juggle academic commitments with part-time work or family duties. Participants in the study expressed appreciation for the ability to access recorded lectures, which allows them to engage deeply with complex topics at their convenience, thereby reducing stress and improving learner satisfaction through personalized learning pathways. Additionally, the study supports the efficacy of diverse educational resources, aligning with findings by Garrison and Vaughan (2008) and Vo et al. (2017). Access to a broad array of materials caters to different learning styles and expands students' educational opportunities, fostering a richer, more inclusive learning experience.

Despite these benefits, persistent challenges within BL environments were also identified, echoing issues noted in the broader educational literature. One significant challenge is the lack of structured scheduling, similar to the findings of Moskal et al. (2013) and Waha and Davis (2014). Without a fixed schedule, students struggled with maintaining discipline and balancing online and offline learning components, leading to feelings of overwhelm and potential isolation. Participants highlighted the need for scheduled live sessions and frequent feedback to provide ongoing guidance and support, which are critical for keeping student engagement high.

Technological challenges also surfaced as considerable barriers, resonating with Holley and Oliver's (2010) observations regarding digital competence and its impact on student engagement. Navigating multiple platforms and technical tools can present significant difficulties, underscoring the need for enhanced technological support and strategic integration efforts. Addressing these hurdles is essential for optimizing BL experiences, reducing student frustrations, and ensuring smoother learning processes.

Beyond technological concerns, the study delves into the psychological and social dynamics of BL environments, reinforcing the importance of community and social interaction as articulated by Bliuc et

al. (2011) and Dziuban et al. (2018). Participants noted a lack of immediate face-to-face interaction, which led to feelings of isolation, thereby underscoring the necessity for supportive communities within BL settings. The study proposes practical solutions, such as the inclusion of virtual collaboration tools and online social events, to enhance social interactions and foster a sense of belonging—an essential component in fields like psychology, where discussion and community are critical to effective learning.

This study is particularly significant because it addresses key research gaps by focusing on BL within preschool psychology. This field, previously identified as underexplored by researchers such as Lust et al. (2011) and Oliveira et al. (2021), offers a fertile ground for examining how BL can be effectively integrated into specialized educational contexts. By concentrating on this specific academic area, the study responds to calls made by Garrison and Kanuka (2004) and Torrisi-Steele and Drew (2013) for more empirical research into student satisfaction with BL environments. The insights gained not only deepen the understanding of BL in preschool psychology but also provide empirical support for broader educational practices and policy formulations.

A significant relationship between the results and the methodological approach was also observed. The study utilized a purposive sampling of students who completed a 16-week blended course, capturing a wide range of experiences related to both the benefits and challenges of BL. This approach was crucial for identifying essential structures, such as live sessions and regular assessments, thus underscoring the lesson plan's goal of establishing a comprehensive, adaptable framework. The findings align with those of Moskal et al. (2013) and Waha and Davis (2014), reinforcing the imperative for educational frameworks that incorporate both flexibility and structure.

Furthermore, the study aligns with Ashraf et al.'s (2021) recommendations for more student-centric BL models, highlighting the need for adaptive instructional strategies that cater to diverse student needs and enhance educational outcomes. By suggesting improvements such as increased live sessions, regular assessments, enhanced multimedia content, and improved virtual collaboration tools, the study points toward valuable directions for future BL developments.

In conclusion, this study makes a substantial contribution to the discourse on BL by highlighting its potential benefits while identifying existing challenges within preschool psychology courses. The findings provide comprehensive answers to research questions regarding student perceptions and the advantages and difficulties of BL. By addressing identified challenges and implementing suggested improvements, educational institutions can optimize BL formats to create more engaging and supportive learning environments. Continued research is necessary to further enhance BL models, particularly as educational landscapes evolve in the post-COVID era. This study lays the groundwork for future exploration across other educational contexts and disciplines, thus extending the applicability and effectiveness of BL as a transformative educational strategy. By aligning with and expanding upon current educational and methodological understandings, this research enhances the discourse on BL as a dynamic, effective strategy in contemporary education, with significant implications for future pedagogical practices.

Conclusion

This study offers valuable insights into the blended learning (BL) format within preschool psychology courses, highlighting its strengths and areas for improvement. While the flexibility and autonomy provided by BL are significant advantages, challenges such as the need for structured scheduling, immediate feedback, and enhanced technological support were also identified. These findings emphasize the importance of refining BL models to better accommodate the diverse needs of students.

However, the study has several limitations. The relatively small sample size and focus on a specific academic context may affect the generalizability of the findings. Additionally, the reliance on self-reported data introduces potential biases related to personal perceptions and experiences. The concentration on a single discipline—preschool psychology—further limits the applicability of the results to other fields.

To address these limitations, future research should expand the sample size and include a broader range of academic disciplines to enhance the generalizability of the findings. Longitudinal studies could provide deeper insights into the long-term impacts of BL on student learning and engagement. Incorporating quantitative measures alongside qualitative feedback would offer a more comprehensive understanding of student experiences.

The implications of this study are significant for educators and policymakers aiming to optimize BL environments. By implementing structured interactions, regular assessments, and improved technological integration, educational institutions can enhance student engagement and learning outcomes. The study also underscores the need to foster community and social interaction within BL settings, which is crucial for maintaining student motivation and success. As educational landscapes continue to evolve, particularly in the post-COVID era, these insights can guide the development of more resilient and adaptive BL models that cater to the evolving needs of students.

In summary, this study lays the groundwork for further exploration of BL dynamics across various educational contexts, offering actionable insights that can inform the ongoing refinement of BL as a transformative educational strategy. By addressing the identified challenges and implementing suggested improvements, educational institutions can create more engaging and supportive learning environments that effectively meet the needs of their students.

Declarations

Ethics Approval and Consent to Participate

The study received ethics approval, and all participants provided informed consent to participate.

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