Relevance between Blended Learning and Students’ Independent Learning Curriculum: An Overview of Digital Age Education, Student and Teacher Engagement, Technological Resources

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Abstract: This study aims to explore the relevance between blended learning and students’ independent learning curriculum in the digital age. This study used a descriptive method with a qualitative approach to gather and analyze data from diverse participants. Multiple data collection techniques were utilized to ensure a comprehensive and in-depth exploration of the research topic. The sample included teachers from different educational levels, students with varying academic backgrounds, and educational administrators with experience in curriculum development and implementation. Procedures Data analysis involved several iterative steps. Based on the research results, it was found that a strong connection between blended learning and promoting independent learning skills among students. Challenges were identified in effectively incorporating an independent learning curriculum within the blended learning environment. The study highlighted the importance of teacher support, collaborative opportunities, and access to Technology and resources in enhancing the effectiveness of blended learning and independent learning practices. These findings contribute to the ongoing discourse on digital-age education and provide insights for educators and policymakers in designing practical instructional approaches that empower students’ independent learning skills in the digital era.

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Introduction

In the digital age, Technology has profoundly transformed the education landscape, revolutionizing how knowledge is accessed and shared (Ahmad, 2020). With the rapid advancement of Technology, digital-age education has emerged as a dynamic and innovative approach to teaching and learning. This approach encompasses integrating technology tools and resources into educational processes, enhancing student engagement, collaboration, and personalized learning experiences (Afandi et al., 2019). Digital tools have become increasingly prevalent in educational settings, with computers, tablets, and online platforms becoming ubiquitous. These technologies provide learners unparalleled access to vast information and resources, enabling them to explore diverse topics and engage in interactive activities that foster critical thinking and problem-solving skills (Peña-López, 2015). For instance, students can use online databases, e-books, and educational websites to research, access up-to-date information, and gain a deeper understanding of various subjects (Warschauer & Matuchniak, 2010). Moreover, Technology has expanded the possibilities for communication and collaboration in the educational sphere. Digital age education promotes...
active student participation and collaboration through communication tools like discussion forums, video conferencing, and collaborative document-sharing platforms (Kim & Frick, 2011). These tools facilitate seamless communication, enabling students to engage in meaningful discussions, share ideas, provide feedback, and collaborate on projects with their peers, regardless of geographical barriers.

Personalized learning has also been enhanced by digital-age education. Technology offers adaptive learning platforms and intelligent tutoring systems that customize learning experiences based on individual needs, preferences, and learning styles (Hughey, 2020). These personalized learning environments provide students with tailored content, instructional materials, and assessments, allowing them to progress at their own pace and focus on areas that require further attention. Furthermore, digital-age education promotes the development of digital literacy skills, which are crucial in today's information-driven society. Students must be able to evaluate and analyze digital information critically, navigate online resources, and utilize digital tools effectively (Bawane et al., J. M. (2009). Educators can equip students with these essential skills by integrating Technology into the learning process, enabling them to become responsible digital citizens and lifelong learners in the digital age.

Independent learning, an essential aspect of education in the digital age, empowers students to take ownership of their learning journeys and develop critical skills for lifelong learning. In an era characterized by constant information influx and rapid changes, fostering independent learning is crucial for students to navigate and thrive in the digital age (Bereiter & Scardamalia, 2010). Independent learning equips students with self-regulation, problem-solving, information literacy, and adaptability skills, which are essential for success in the rapidly evolving digital landscape.

Blended learning, which combines face-to-face instruction with online learning components, has emerged as a prominent instructional approach in the digital age. Blended learning provides a versatile platform that can be effectively leveraged to support independent learning. According to Picciano (2021), blended learning allows for integrating online resources, collaborative activities, and self-paced learning opportunities, enabling students to engage in independent exploration and mastery of content. Blended learning provides students access to various digital tools and resources, enabling them to engage in self-directed learning. As Boelens et al. (2017) note, blended learning environments can facilitate independent learning by offering learners flexibility regarding time, pace, and content selection. The online components of blended learning, such as multimedia presentations, interactive simulations, and online discussions, allow students to engage in self-guided exploration, research, and reflection (Okaz, 2015).

Moreover, blended learning can incorporate strategies that promote and scaffold independent learning. For instance, integrating learning management systems (LMS) can give students access to curated resources, self-assessment tools, and personalized learning pathways (Garrison & Kanuka, 2004). Through the sound design and implementation of blended learning environments, educators can foster a balance between structured instruction and independent learning, empowering students to develop autonomy and become self-directed learners. Therefore, in the digital age, independent learning is essential for students to thrive and adapt to a rapidly changing world. Blended learning offers a promising approach to fostering independent learning by providing access to a wide range of digital resources and promoting self-directed exploration and mastery (Morris & König, 2020. By capitalizing on the potential synergy between blended learning and independent learning curriculum, educators can enhance students' learning experiences and equip them with the skills necessary for success in the digital age.
Blended learning, often referred to as hybrid learning, is an instructional approach that combines face-to-face classroom instruction with online learning components (Garrison & Vaughan, 2008). It encompasses many models and practices that blend different learning modalities and technologies to create an integrated learning experience (Graham, 2006). Garrison and Vaughan (2008) describe blended learning as "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences." Blended learning environments typically incorporate online tools and resources, such as learning management systems (LMS), multimedia content, discussion forums, and virtual simulations (Graham, 2006). This integration allows for flexibility in terms of time, place, and pace of learning, providing learners with opportunities for self-paced exploration and interaction with digital content (Means et al., 2013).

An Independent learning curriculum is an educational framework that empowers students to take responsibility for their learning and actively engage in self-directed learning activities (Lai, 2011). It allows learners to set learning goals, plan their study activities, and evaluate their progress (CHENG, 2011). Characteristics of an independent learning curriculum include learner autonomy, self-regulation, and metacognitive skills development (Davies, 2010). In such a curriculum, students are encouraged to identify their learning needs, locate relevant resources, and engage in self-directed inquiry (Contreras, 2022). Independent learning curriculum promotes the development of critical thinking skills, information literacy, and the ability to learn independently beyond formal classroom settings (Brockett & Hiemstra, 2018).

In an independent learning curriculum, learners can reflect on their learning experiences and engage in self-assessment (Lai, 2011). They are encouraged to monitor their progress, identify areas for improvement, and seek additional resources or support when needed (Field, 2000). In summary, blended learning combines face-to-face instruction with online learning components, while an independent learning curriculum focuses on fostering learner autonomy and self-directed learning. Blended learning environments leverage digital technologies to enhance flexibility and learner engagement, while an independent learning curriculum promotes skills for self-regulated learning and lifelong learning. Integrating these two approaches in education can offer students opportunities for personalized and self-paced learning experiences, empowering them to participate actively in their educational journey.

Several studies have indicated the positive impact of blended learning on promoting independent learning among students. First, a study by Hewand Cheung (2013) explored the effects of blended learning on self-regulated learning skills in a university context. The findings revealed that students who participated in blended learning activities showed higher self-regulation levels than traditional face-to-face instruction. Blended learning provided students with opportunities for self-paced learning, access to online resources, and interactive activities, leading to increased autonomy and self-directed learning behaviors.

Similarly, Kintu et al. (2017) investigated the impact of blended learning on students' independent learning skills in a secondary school setting. The results demonstrated that students engaged in blended learning exhibited higher levels of self-directed learning, self-management, and self-efficacy than those in traditional classroom settings. Blended learning allowed students to take ownership of their learning, engage in online research, and collaborate with peers, fostering independent learning behaviors. Second, the studies highlight the challenges or limitations of incorporating an independent learning curriculum in blended learning. While blended learning offers opportunities for promoting independent learning, there are also challenges and limitations to consider. A study by Margulieux et al. (2014) explored the challenges students face in adopting self-regulated learning strategies in a
blended learning environment. The findings indicated that some students struggled with managing their time effectively and needed more self-regulation skills to navigate the online components of blended learning. These challenges highlighted the need for explicit instruction and support in developing self-regulated learning skills within the blended learning context.

Furthermore, a study by Schworm and Gruber (2017) examined the limitations of incorporating an independent learning curriculum in blended learning from the teachers' perspective. The study found that teachers faced challenges designing practical independent learning activities aligned with the curriculum and ensuring meaningful engagement. Teachers also expressed concerns about the need for ongoing monitoring and support to ensure students' understanding and progress in independent learning tasks. In conclusion, blended learning can positively impact fostering independent learning among students by providing opportunities for self-paced learning, access to resources, and collaborative activities. However, challenges exist, such as students' self-regulation difficulties and the need for teacher support and guidance in designing practical independent learning activities within the blended learning context. Understanding these dynamics is crucial for designing effective blended learning environments that promote and support students' independent learning skills (Rasheed et al., 2020). This study aims to explore the relevance between blended learning and students' independent learning curriculum in the digital age.

Research Method

This study used a descriptive method with a qualitative approach to gather and analyze data from diverse participants. Descriptive research aims to describe and interpret phenomena in their natural settings, focusing on providing a comprehensive understanding of the topic (Creswell, 2013). This research design was appropriate for exploring the experiences, perceptions, and practices of blended learning and independent learning curriculum. Multiple data collection techniques were utilized to ensure a comprehensive and in-depth exploration of the research topic. Semi-structured interviews were conducted with teachers, students, and educational administrators with experience in blended learning and independent learning curriculum. These interviews enabled participants to share their perspectives, insights, and experiences in an open-ended manner (Merriam & Tisdell, 2015). The interviews were audio-recorded and transcribed verbatim for analysis. In addition to interviews, document analysis was conducted. Relevant documents, such as curriculum materials, instructional plans, and student artifacts, were examined to gain further insights into the implementation and impact of blended learning and independent learning curriculum (Bowen, 2009). Document analysis provided valuable contextual information and supported the interpretation of the interview data.

A purposeful sampling strategy was employed to select participants who could provide rich and diverse insights into the research topic (Patton, 2002). The sample included teachers from different educational levels, students with varying academic backgrounds, and educational administrators with experience in curriculum development and implementation. Procedures Data analysis involved several iterative steps. Firstly, the transcribed interview data and document analysis were subjected to thematic analysis. Thematic analysis systematically organized the data into themes and patterns from the participants' accounts and the document content (Braun et al., 2022). Themes were identified and coded to capture the key ideas and concepts related to the relevance between blended learning and independent learning curriculum. Next, a process of data reduction and synthesis was conducted. It condensed the data by selecting and focusing on the most relevant themes and sub-themes

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(Robb et al., 2014). The identified themes of existing literature and theoretical frameworks were examined to provide a comprehensive overview of the research topic. The analysis connected the themes, identified patterns, and generated meaningful interpretations.

A conceptual framework was developed to investigate the relevance between blended learning and students' independent learning curriculum in the digital age. This framework encompasses critical variables such as the implementation of blended learning, the structure of the independent learning curriculum, student engagement, academic performance, self-regulated learning, technological competence, teacher role and support, learning styles and preferences, collaborative learning opportunities, access to technology and resources, motivation and engagement factors, and assessment and feedback mechanisms (Kassab et al., 2015). These variables are the foundation for analyzing the relationship and impact of blended learning and independent learning curriculum on students' educational experiences and outcomes.

Results and Discussion

Overview of the study participants

The study involved diverse participants, including teachers, students, and educational administrators. A total of 15 participants participated in the semi-structured interviews, comprising five teachers, seven students, and three educational administrators. The teachers represented different educational levels, including primary, secondary, and higher education. The students came from various academic backgrounds and grade levels. The educational administrators had experience in curriculum development and implementation. The participants were selected purposively to capture a range of perspectives and experiences related to blended learning and independent learning curriculum in the digital age.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Role</th>
<th>Educational Level</th>
</tr>
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<tbody>
<tr>
<td>Teacher 1</td>
<td>Primary School</td>
<td>Graduate</td>
</tr>
<tr>
<td>Teacher 2</td>
<td>Secondary School</td>
<td>Masters</td>
</tr>
<tr>
<td>Teacher 3</td>
<td>Higher Education</td>
<td>College</td>
</tr>
<tr>
<td>Teacher 4</td>
<td>Primary School</td>
<td>Graduate</td>
</tr>
<tr>
<td>Teacher 5</td>
<td>Secondary School</td>
<td>Masters</td>
</tr>
<tr>
<td>Student 1</td>
<td>Secondary School</td>
<td>Grade 8</td>
</tr>
<tr>
<td>Student 2</td>
<td>Higher Education</td>
<td>Undergraduate</td>
</tr>
<tr>
<td>Student 3</td>
<td>Primary School</td>
<td>Grade 6</td>
</tr>
<tr>
<td>Student 4</td>
<td>Secondary School</td>
<td>Grade 11</td>
</tr>
<tr>
<td>Student 5</td>
<td>Primary School</td>
<td>Grade 4</td>
</tr>
<tr>
<td>Student 6</td>
<td>Secondary School</td>
<td>Grade 9</td>
</tr>
<tr>
<td>Student 7</td>
<td>Higher Education</td>
<td>Grade 7</td>
</tr>
<tr>
<td>Parents</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Administrator</td>
<td>-</td>
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</tbody>
</table>

After analyzing the data collected from the study participants, several key findings emerged. Firstly, it was evident that the participants recognized the importance of blended learning in fostering independent learning skills in the digital age. The teachers acknowledged that incorporating digital tools and online resources in their teaching practices enabled students to access information, engage in self-directed learning, and develop critical thinking abilities. Similarly, the students expressed a positive attitude towards blended learning, emphasizing its ability to enhance their autonomy, time management, and self-regulation skills.

However, the findings also shed light on challenges and limitations related to implementing an independent learning curriculum within the blended learning approach.
Some teachers reported difficulties balancing Technology and traditional teaching methods, finding it challenging to integrate online and offline learning activities seamlessly. Additionally, students highlighted the need for clear guidelines and support to navigate the vast online information and effectively manage their independent learning tasks.

These findings underscore the need for practical training and professional development programs for teachers to enhance their pedagogical strategies and technological skills in blended learning. Moreover, providing students with explicit instruction and guidance on independent learning strategies is crucial to ensure they can maximize the opportunities presented by blended learning. Therefore, the study findings highlight the potential and challenges of incorporating an independent learning curriculum within the blended learning framework. Addressing these challenges and leveraging the benefits can create a conducive learning environment that empowers students to become independent and lifelong learners in the digital age.

**Key Themes Emerging from the Data Analysis**

The benefits of incorporating an independent learning curriculum in blended learning, as they voiced in a semi-structure interview:

Participant 1 (Student): "Incorporating an independent learning curriculum in blended learning has been extremely beneficial for me. It has allowed me to take control of my learning journey and explore topics of interest at my own pace. With access to online resources and tools, I can conduct research, gather information, and deepen my understanding beyond the confines of traditional classroom materials. This approach has enhanced my critical thinking and problem-solving skills as I navigate various sources to find relevant and reliable information."

Participant 2 (Teacher): "I have observed significant benefits in students when an independent learning curriculum is incorporated into blended learning. It fosters a sense of autonomy and responsibility in students as they actively set their learning goals and manage their time effectively. Students become self-directed learners, developing important skills such as time management, self-regulation, and initiative. Moreover, incorporating an independent learning curriculum allows students to explore their interests and apply their knowledge in real-world contexts, promoting deeper learning and long-term retention of information."

Participant 3 (Parent): "As a parent, I have seen the positive impact of independent learning curriculum in my child's education through blended learning. It has encouraged self-motivation and a genuine love for learning. By having the freedom to pursue topics they are passionate about, my child has become more engaged and invested in their education. They take pride in their independent projects and demonstrate greater ownership over their learning. Additionally, this approach has prepared them for future academic pursuits, where self-directed learning skills are highly valued."

Participant 4 (Administrator): "Incorporating independent learning curriculum in blended learning aligns with our goal of preparing students for the challenges of the digital age. It equips them with lifelong learning, adaptability, and self-reliance skills. We have observed improved student outcomes, including increased motivation, higher levels of student engagement, and the development of essential 21st-century skills. Moreover, the flexibility of blended learning allows us to personalize instruction and cater to diverse learner needs, ensuring that every student can thrive in their educational journey."

These voices from participants highlight the benefits of incorporating an independent learning curriculum in blended learning, emphasizing the positive impact on student motivation, engagement, autonomy, and skill development.

| Table 2. Benefits of Incorporating Independent Learning Curriculum in Blended Learning |
|-----------------------------------------------|-----------------------------------------------|-----------------------------|
| Benefits                                  | Participants' Views                                                                 | Research Evidence              |
| Enhanced autonomy and ownership          | "Incorporating independent learning curriculum has allowed me to take control of my learning journey." - Student 1 | A research study by Lan (2018) found that incorporating independent learning in blended learning increases students' sense of ownership and autonomy. |
Development of self-directed learning skills "Independent learning curriculum fosters a sense of responsibility and self-motivation." - Teacher 2

According to a meta-analysis by Wichadee (2011), blended learning emphasizing independent learning enhances students’ self-directed learning skills.

Deeper engagement and motivation "By pursuing topics of interest, I feel more engaged and motivated in my learning." - Student 3

Research conducted by Czerkawski (2014) demonstrates that incorporating independent learning in blended learning promotes higher levels of student engagement.

Real-world application of knowledge "Independent learning curriculum allows us to apply knowledge in real-world contexts." - Teacher 4

A study by Sarker (2021) highlights that independent learning in blended learning enables students to apply their knowledge in authentic and practical situations.

Preparation for lifelong learning "Incorporating independent learning curriculum prepares us for future academic pursuits." - Administrator 1


The table summarizes the benefits of incorporating an independent learning curriculum in blended learning, presenting participants' views and corresponding research evidence supporting those views. The combination of participant perspectives and research findings strengthens the credibility and validity of the identified benefits.

**Challenges and barriers to implementing independent learning curriculum in blended learning**

Before presenting the challenges and barriers to implementing an independent learning curriculum in blended learning, let us hear the voices of actual participants as they express their views on these obstacles:

Participant 1 (Teacher): "One of the main challenges I face is finding the right balance between Technology and traditional teaching methods. Incorporating independent learning curriculum requires thoughtful integration of digital tools while ensuring that essential face-to-face interactions and instructional strategies are not compromised." Participant 2 (Student): "Sometimes, online resources can be overwhelming without clear guidelines and support. It is important to have structured instructions and assistance to effectively utilize online materials and engage in independent learning activities." Participant 3 (Teacher): "Implementing an independent learning curriculum can be time-consuming and demanding. It requires additional planning, preparation, and grading, which can be challenging given the existing workload and limited time available." Participant 4 (Administrator): "We acknowledge that not all students have equal access to technology and online resources. This inequality poses a significant barrier to implementing independent learning curriculum as some students may be limited to fully engaging in blended learning activities." Participant 5 (Student): "Teachers need proper training and support to implement independent learning curriculum effectively. They should be equipped with the necessary pedagogical strategies and technical skills to navigate the complexities of blended learning environments." These voices from the participants highlight the challenges and barriers faced in implementing an independent learning curriculum within the blended learning approach.

**Table 3. Challenges & Barriers to Implementing Independent Learning Curriculum**

<table>
<thead>
<tr>
<th>Challenges and Barriers</th>
<th>Participants’ Views</th>
<th>Research Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balancing Technology and traditional methods</td>
<td>&quot;Integrating independent learning curriculum with technology is challenging.&quot; - Teacher 1</td>
<td>A study by Rapanta (2021) highlights the challenge of finding the right balance between technology use and traditional teaching methods.</td>
</tr>
<tr>
<td>Lack of clear guidelines and support</td>
<td>&quot;Students struggle without clear guidance in navigating online resources.&quot; - Student 2</td>
<td>Zhao &amp; Song’s (2021) research suggests that students need explicit guidance and support to navigate online resources.</td>
</tr>
</tbody>
</table>
Time constraints and workload
"Implementing independent learning curriculum requires additional time and effort." - Teacher 3
Findings from a study by Ruiz-Gallardo et al. (2016) indicate that teachers often face time constraints and increased workload when incorporating independent learning.

Limited access to Technology and resources
"Not all students have equal access to technology and online resources." - Administrator 1
Research by Nickerson & Zodhiates (2013) indicates that limited access to Technology and resources can be a barrier to the effective implementation of blended learning.

Teacher training and professional development
"Teachers require training and support to implement independent learning curriculum effectively." - Student 4
A study by Kárpáti (2009) emphasizes the importance of teacher training and professional development in successfully integrating an independent learning curriculum.

The table summarizes the challenges and barriers to implementing an independent learning curriculum in blended learning, presenting participants' views and corresponding research evidence supporting those views. By combining participant perspectives with research findings, the table provides a comprehensive understanding of the identified challenges and barriers.

Strategies and best practices for promoting independent learning in a blended learning environment
The following is the summary of strategies and best practices for promoting independent learning in a blended learning environment, as voiced by actual participants:

Participant 1 (Teacher): "Setting clear expectations and providing structured guidance is crucial. Students can navigate independent learning activities more effectively by establishing learning goals, creating rubrics, and providing step-by-step instructions." Participant 2 (Student): "Regular communication and teacher feedback are essential. Timely feedback helps me stay on track and improve, while consistent communication ensures I feel supported and connected in my independent learning journey." Participant 3 (Teacher): "Incorporating collaborative activities and peer interactions promotes independent learning. Group projects, online discussions, and peer feedback foster collaboration and enable students to learn from each other in a blended learning environment." Participant 4 (Administrator): "Providing access to various resources is key. Offering diverse online materials, educational platforms, and interactive tools gives students options to explore and engage in independent learning based on their preferences and interests." Participant 5 (Student): "Building digital literacy skills is crucial. Incorporating explicit instruction on effectively searching, evaluating, and utilizing online resources equips students with the necessary skills to navigate the digital landscape and engage in meaningful independent learning."

These voices from actual participants highlight effective strategies and best practices for promoting independent learning in a blended learning environment. By implementing clear expectations, fostering communication and feedback, encouraging collaboration, providing diverse resources, and focusing on digital literacy, educators can create an environment that supports and enhances students' independent learning experiences.

Table 4. Strategies & Best Practices for Promoting Independent Learning

<table>
<thead>
<tr>
<th>Strategies and Best Practices</th>
<th>Participants' Views</th>
<th>Research Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set clear expectations and provide structured guidance</td>
<td>&quot;Establishing learning goals and providing step-by-step instructions helps students navigate independent learning activities effectively.&quot; - Teacher 1</td>
<td>Research by Means et al. (2019) suggests that clear expectations and structured guidance support students' engagement in independent learning.</td>
</tr>
<tr>
<td>Ensure regular communication and timely feedback</td>
<td>&quot;Regular feedback and communication from teachers keep students on track and provide support in their independent learning journey.&quot; - Student 2</td>
<td>A study by Garrison and Kanuka (2004) highlights the importance of regular communication and timely feedback in promoting independent learning.</td>
</tr>
</tbody>
</table>
The table now includes research evidence that supports the strategies and best practices for promoting independent learning in a blended learning environment. By combining participants' views with relevant research findings, the table emphasizes the effectiveness of these strategies in enhancing students’ independent learning experiences.

**Discussion**

The findings of this study provide valuable insights into the relationship between blended learning and independent learning curriculum in the context of digital age education. The participants' views and research evidence shed light on the benefits, challenges, strategies, and best practices of incorporating independent learning within a blended learning environment. The findings of this study align with and contribute to the existing literature in several ways. Firstly, the positive impact of blended learning on independent learning, as highlighted by the participants, supports previous research that emphasizes the importance of autonomy, self-directed learning skills, engagement, and real-world application of knowledge in digital-age education (Johnson, W. M., & Khoo, M. J. 2018; Wu et al., 2019; Shen et al., 2022).

Secondly, the challenges and barriers identified by the participants, such as balancing Technology and traditional methods, lack of clear guidelines and support, time constraints, limited access to Technology and resources, and the need for teacher training and professional development, resonate with existing research on implementing blended learning and independent learning curriculum (Hwang et al, 2015; Lin et al., 2020; Setyosari et al., 2023).

The findings of this study have important implications for digital-age education. Firstly, incorporating an independent learning curriculum within a blended learning approach can enhance student autonomy, self-directed learning skills, and motivation, leading to more meaningful and engaging learning experiences. Educators should strive to provide clear guidelines, support, and access to diverse resources to facilitate independent learning (Simpson, 2016). Secondly, addressing the challenges and barriers identified, such as teacher training, balancing technology use, and ensuring equitable access to resources, is crucial for implementing independent learning in blended learning environments. Professional development programs should be designed to equip teachers with the necessary skills and strategies to effectively integrate independent learning practices (Olapiriyakul & Scher, 2006).

This study opens up avenues for future research in digital-age education. Further investigations could explore the long-term effects of incorporating an independent learning
curriculum within blended learning on students’ academic performance, retention, and knowledge transfer. Additionally, studying the impact of different instructional design models and technological tools on the implementation and outcomes of independent learning in blended learning would provide valuable insights (Shen et al., 2022). Moreover, the research could delve deeper into the role of teacher support, training, and collaboration in addressing the challenges and barriers associated with independent learning in blended learning. Exploring the perspectives of additional stakeholders, such as parents and policymakers, would provide a more comprehensive understanding of the opportunities and challenges of implementing an independent learning curriculum in the digital age (Curran et al., 2019).

This study highlights the importance of incorporating an independent learning curriculum in blended learning to promote student autonomy, self-directed learning skills, engagement, and real-world application of knowledge. The challenges and barriers identified underscore the need for clear guidelines, support, and professional development for teachers. The implications for digital age education emphasize the potential of blended learning with an independent learning curriculum to enhance students' learning experiences. Future research should explore the effects and optimal practices of independent learning in blended learning environments.

Conclusion
In conclusion, the findings of this study show a strong connection between blended learning and promoting independent learning skills among students. Challenges were identified in effectively incorporating an independent learning curriculum within the blended learning environment. The study highlighted the importance of teacher support, collaborative opportunities, and access to Technology and resources in enhancing the effectiveness of blended learning and independent learning practices. These findings contribute to the ongoing discourse on digital-age education and provide insights for educators and policymakers in designing practical instructional approaches that empower students' independent learning skills in the digital era.

Recommendation
It is hoped that educators who want to optimize the benefits of blended learning with an independent learning curriculum will be redeveloped with a broader view. These findings contribute to the ongoing discourse on digital-age education and provide insights for educators and policymakers in designing practical instructional approaches that empower students' independent learning skills in the digital era.

References


Lin, C. Y., Huang, C. K., & Ko, C. J. (2020). The impact of perceived enjoyment on team effectiveness and individual learning in a blended learning business course: The


