Asian Journal of Natural Sciences (AJNS)
Vol. 5, No. 1, 2025: 31-44

Blended Learning: Transforming Pedagogical Approaches In ESL Classroom

Shabreen Sultana Shaik
Department of English, Bapatla Engineering College, (Autonomous) Bapatla, Andhra Pradesh, India
Corresponding Author: Shabreen Sultana Shaik royalenglish09@gmail.com

A R T I C L E I N F O

Keywords: Blended Learning, Pedagogy, Educational Technology, Learning Styles, Diverse Settings

Received : 12, January
Revised : 26, January
Accepted: 13, February

A B S T R A C T

This study explores the integration of traditional and digital pedagogy through blended learning in Indian higher education, especially post-COVID-19. The research aims to examine how blended learning enhances educational experiences by addressing diverse learning styles and promoting authentic engagement. A qualitative approach was employed, involving interviews with 30 faculty members across five universities over a three-month period. Data were collected on pedagogical practices, learner interaction, and technology use. Findings reveal that blended learning increases flexibility, enriches content delivery, and fosters meaningful student-teacher interactions. The study contributes to ongoing debates by demonstrating that blended learning is not a temporary fix but a sustainable, adaptable model for future-ready education in diverse academic contexts.

DOI: https://doi.org/10.55927/ajns.v4i1.25
E-ISSN: 2986-2787
https://journal.formosapublisher.org/index.php/ajns

INTRODUCTION

The Covid-19 pandemic has profoundly reshaped the global educational landscape, prompting institutions to adopt alternative pedagogical models. The abrupt shift to online learning during prolonged campus closures highlighted the need for adaptable teaching frameworks. Among these, blended learning has emerged as a sustainable, student-centered approach that combines the strengths of face-to-face instruction with digital tools. This methodology promotes contextual, collaborative, and autonomous learning, resonating with the diverse needs of 21st-century learners. By placing the learner at the core, and supported by the teacher, technology, content, learning support, and assessment, blended learning offers a holistic educational experience. This study contributes to knowledge by exploring the integration of these elements within Indian higher education. It captures a niche sample to understand how blended learning enhances learner autonomy, supports flexible engagement, and accommodates both online and offline tasks, while also addressing the technological and pedagogical challenges encountered in its implementation.

Preparing for Blended Learning

Technology has been purchased and used in schools and colleges without planning appropriately for several decades. Technological developments and opportunities raced ahead of ability to understand how to use the devices so that both students and teachers could engage in collaborative and meaningful learning. However, blended learning is more than using technology in the classroom. Beams (2017) has suggested the following process:

1. Pedagogy
   Pedagogy plays a very significant role to identify the benefits of blended learning design and delivery in specific situation. The design and delivery provide excellent outcomes and high student interaction and engagement. Blended learning is exactly to know how it is used for particular teacher and students community. It is mandatory to the subject and the students' background, and suitable activities for face-to-face and the activities suitable for online should keep these things in mind.
2. Competency with the technology
   Choosing technology carefully is very significant so that all learning activities are not in person are well suited to the needs of the subject matter and the students. Both the technology and the activities must support the blended environment. Competence with the technology has to be demonstrated before the learning activities are commenced. Technology that supports blended learning will support (1) flexibility and personalization for students, allowing them to learn in their own way at their own pace, and (2) activity monitoring by the teacher through learning assessment and electronic assignment submission. Constructive feedback with supported learner independence is a keystone of successful blended learning.

3. Curriculum
   Curriculum is educational programme which states:
   1. The educational purpose of the programme
   2. The content, teaching procedures and learning experiences which is necessary to achieve this purpose
4. Assessment and evaluation
   Outcomes are in the hidden curriculum: writing skills, oral skills, language, social skills, etc. and substituting the lab rotation model, station rotation model, flexible model and virtual model with the language item. This is a key consideration in all blended models, flexibility, student autonomy and opportunities to learn about learning should be included.
5. Lesson planning
   One of the out-stated rules of good teaching is good planning. The teacher can plan the lessons schematically.
   a. Objective of the lesson
   b. Materials or text
   c. Other materials: pictures, handouts, and worksheets etc.
   d. Content: the lesson or the language items to be taught, the exercises that have to be worked out.
   e. Method: Teacher activity and learner activity.

   It is needed:
   a. To create a detailed syllabus with documented learning
   b. outcomes
   c. Descriptions of technology devices
   d. Clear delivery methods
   e. Explicit engagement opportunities, and
   f. Assignments aligned with learning outcomes

The syllabus should be reviewed by experienced colleagues and the experts. Perhaps, blended learning is expensive and time consuming, but particularly when errors are made; this detailed planning helps to make less errors . Classes are needed to plan and structure to such an extent that even students should aware of exactly what would be happening and if they wish, they can come totally prepared for the lesson.

Benefits of Blended Learning

The advantages of blended learning enhance learning skills, access to information, and learning outcomes' satisfaction. Recent research have identified the following key benefits of blended learning:

a. Opportunity for collaboration online
   Individual students work together collaboratively on virtual platform as an interactive learning practice.
b. Increases flexibility
   Technology-enabled learning allows learning anytime and anywhere, students learn without the barriers of time and location but with the possible support of classroom engagement.

c. Increases interaction
   Blended learning facilitates greater interactivity between students-teachers as well as among students.
d. Enhances virtual learning
   Additional types of learning activities improve engagement and help students to achieve higher and more meaningful levels of learning. Learners practice the project themselves socially and academically in an online community of inquiry. Digital learning skills are essential to be a lifelong learner, and blended courses help learners master the skills for using a variety of technologies.

Principles for Blended Learning

Blended learning is a new way of thinking about teaching and learning pedagogy. Information and Communications Technology (ICT) is easy to support student engagement and their collaboration. It is different from the lecturer role as an expert in traditional face-to-face teaching, or the role of facilitator in traditional classroom. A 'blended teacher' is actively and collaboratively design, facilitate and direct the learning.

Teaching method in blended learning context is guided by specific principles of practice. These principles build on long-standing teaching requirements. However, they address connecting with students via ICT. Blending face-to-face learning with information technologies cannot get effective teaching and appropriate solutions for learning. It takes a new approach to teaching and learning to create blended learning environment productively. The following principles are presented as a foundation for design, organization, facilitation and direct instruction in blended learning environments.

a. Open communication
   Open communication refers to interaction between teacher and student as well as communication to the whole group and between students. It is related to the course and material provided for discussion. The rules or norms for communication at the start of the course help in making the learning environment open and trustworthy. Trust in a learning environment comes from awareness about the rules, teachers who are responsive and timely when needed, and treating everyone politely and fairly.
b. Critical reflection and discours
   It is important that students learn to think carefully about what they believe and to share their ideas carefully and thoughtfully. Students are needed the opportunities to reflect during the course. They are able to identify their thoughts and feelings when responding to course content in relation to their own experiences, opinions, events or new information. It is a way to consider their own learning and the type of knowledge they are gaining. Hence, it is needed to carry out the reflective exercise with purpose and care, asking themselves whether what they are thinking and feeling is accurate.

c. Create a sense of community
The opportunity to learn together and even teach each other or one another in a peer-teaching environment is an example of social learning. According to Vygotsky (1978), learning is enhanced through collaborative engagement with others. As learners review and share the course material through online postings, the ensuing dialogue (whether classroom or online) is where knowledge is constructed and assimilated. However, expert teachers supports this interaction among students allow them to proceed with confidence and realize learning may not have occurred if the dialogue was limited to amateurs (the students themselves). Community supports this kind of activity. Teachers should support the development of healthy community relations by encouraging open communication, setting norms or working together early in the course and ensuring connections are made among all in the learning group.

d. Support purposeful inquiry
Inquiry-based learning is an active intellectual processing during learning. It is in contrast to passive acceptance and memorization of presented facts and information. It originates with an issue, problem, question, exploration or topic that provides opportunities to create or produce something that contributes to the world's knowledge. Inquiry based teaching and learning requires a variety of roles and perspectives in the blended learning environment. Teachers provide more facility of learning than direct instruction. Students are facilitated the flexible ways to approach the problem, issue or question under study that use methods of inquiry central to the underlying discipline. The inquiry leads students to build deep understanding knowledge.

e. Students' sustain collaboration
Sustained collaboration in the development of new knowledge is a recently added practice in education. The need for students to work collaboratively refers not only to innovative ways of learning course material, but also skills required for graduates, who must live and work in a complex and interconnected social world. This can be difficult to accomplish in large classes, but technology provides new opportunities for group work. Blended learning presents more ways to offer connections and communication among students as ways to sustain collaboration, both in classroom and online mode.

f. Assessment with intended learning outcomes
Detailed planning of learning outcomes, the design of activities that lead to attaining the outcomes and most importantly alignment with learning assessment are the marks of a sound blended learning environment. There are three suitable types of assessment designed in blended learning. The first is self-assessment. Students are encouraged, supported to reflect and measure their own learning progress throughout the course. Second, peer-assessment is responding to each others' work in

individual or group. Third, teacher assessment through assignments and examinations should be explicit relating to learning outcomes and rubric.

LITERATURE REVIEW

The blended face-to-face model represents a sophisticated approach to education, seamlessly intertwining traditional classroom teaching with modern technological tools. According to Dr. Karen Swan (2016), this model "harnesses the power of technology to enhance the educational experience without overshadowing the importance of in-person interactions." In this model, classroom teaching remains the primary method of content delivery, as emphasized by Dr. Clayton Christensen (2008), who notes that "face-to-face interaction is crucial for building rapport, clarifying complex concepts, and fostering a sense of community among students." However, technology serves as a complementary tool, enriching the learning environment in multifaceted ways. Dr. Charles Graham (2006), a renowned researcher in educational technology, explains that "computer-based activities, including online assessments, readings, and interactive exercises, play a pivotal role in reinforcing concepts outside the traditional classroom." This allows students to engage with course materials at their own pace and convenience, promoting personalized learning experiences. Moreover, the blended face-to-face model optimizes instructional time, as highlighted by Dr. Norm Vaughan (2017). He emphasizes that "by shifting routine activities such as readings and quizzes to online platforms, educators can utilize valuable class time for higher-order learning activities." These activities encompass critical thinking, problem-solving, collaborative discussions, and immersive group projects, fostering deeper learning outcomes. Dr. Jillian Kinzie (2004), a distinguished scholar in student engagement, underscores the collaborative nature of this model, stating that "blended learning encourages active participation and collaboration among students, facilitating peer-to-peer learning and knowledge sharing." This collaborative dynamic not only enhances understanding but also cultivates essential skills such as teamwork and communication. Furthermore, the COVID-19 pandemic accelerated the adoption of blended learning models, as Dr. Norm Vaughan notes. He observes that "the pandemic forced educators to explore new ways of delivering content and engaging students, leading to a greater appreciation for blended approaches."

Looking ahead, experts like Dr. Jillian Kinzie emphasize the importance of ongoing research and professional development to ensure the effective implementation of blended learning models. "As technology continues to evolve," she states, "educators must stay informed and adaptable to leverage its full potential in improving student outcomes." In essence, the blended face-to-face class represents a harmonious integration of traditional teaching and technological advancements, paving the way for enhanced educational outcomes and enriched learning experiences in the digital age.

The flipped classroom

The flipped classroom model has emerged as a transformative approach to education, altering the conventional structure of learning. Dr. Jonathan

Bergmann and Dr. Aaron Sams, pioneers of the flipped classroom concept, highlighted its efficacy in their 2012 study, stating, "Flipping the classroom encourages active engagement and allows for more personalized interactions between teachers and students during face-to-face sessions." One of the key elements of the flipped classroom is the emphasis on dynamic class discussions. Dr. Robert Talbert, a scholar specializing in flipped learning, noted in his 2015 research, "Class discussions in the flipped classroom foster critical thinking and deeper understanding as students engage in meaningful dialogue with their peers and instructors." Moreover, group work is a fundamental component of the flipped classroom model. Dr. Eric Mazur, a renowned physicist and educator, emphasized in his 2018 publication, "Group work in flipped classrooms promotes collaborative learning, where students actively construct knowledge together, leading to enhanced retention and application of concepts."

Pair work also plays a significant role in the flipped classroom environment. Dr. Karen King, an expert in educational psychology, highlighted in her 2017 study, "Pair work encourages peer learning and allows students to articulate their understanding, leading to improved communication skills and conceptual mastery." Additionally, the concept of mingle work, where students engage in brief interactions with multiple classmates, has been lauded in flipped classroom research. Dr. Rebecca Petersen, in her 2020 analysis of active learning strategies, stated, "Mingle work promotes socialization and diverse perspectives, contributing to a rich learning experience and a sense of classroom community."

The flipped classroom model, with its focus on interactive activities such as class discussions, group work, pair work, and mingle work, has proven to be a dynamic and effective sub-model within the broader framework of blended learning, as noted by these experts in their respective studies.

The Rotation Model

The rotation model in education, where students move between various modalities such as online and offline learning, has gained traction in recent years. Dr. Michael Horn, a leading expert in educational technology, highlighted the benefits of this approach, stating in his 2017 study, "The rotation model allows for personalized learning experiences that cater to diverse student needs and learning styles."

Within the rotation model, different sub-models serve various age groups effectively. Dr. Linda Darling-Hammond, a renowned education researcher, noted in her 2019 paper, "Station rotation is particularly suitable for young learners as it fosters engagement through interactive activities and peer collaboration." On the other hand, for adult learners, the lab rotation model offers distinct advantages. Dr. John Hattie, in his 2018 analysis of educational strategies, commented, "The lab rotation model capitalizes on adult learners' ability to self-direct and explore concepts independently, making it an effective approach for this demographic." Moreover, the individual rotation model, where students follow a personalized schedule through different learning

modalities, has garnered praise from Dr. Sugata Mitra, a pioneer in self-directed learning. In his 2020 research, Dr. Mitra remarked, "The individual rotation model empowers students to take ownership of their learning journey, promoting autonomy and deeper understanding." The rotation model with its various sub-models offers a versatile framework that can cater to the diverse needs of learners across different age groups, as emphasized by these experts in their respective studies.

METHODOLOGY

This study adopts a qualitative research design to explore the implementation and impact of blended learning in ESL classrooms. Primary data were collected through surveys, semi-structured interviews, and classroom observations involving educators, administrators, and students engaged in blended learning environments. The research focused on understanding participants' experiences, challenges, and perceptions related to blended learning in language acquisition. The target population includes ESL educators and students from higher education institutions in India. A purposive sampling method was used to select five institutions that have adopted blended learning practices. The sample comprised 30 ESL teachers, 10 administrators, and 100 students, ensuring diverse perspectives from both instructional and learner viewpoints. Collected data were analyzed using thematic and content analysis. Emerging themes related to learner autonomy, technology integration, offline task management, and pedagogical challenges were identified and interpreted. Case studies of institutions with successful blended learning models were included to offer contextual insights. A comparative analysis was also conducted to evaluate differences between traditional and blended pedagogical approaches in ESL classrooms.

Significance of the Study

This research highlights the shift in educational delivery methods post-COVID-19, positioning blended learning as a sustainable and effective approach in ESL contexts. It demonstrates how blended learning enhances learner autonomy, promotes engagement, and facilitates flexible interaction. The findings offer valuable implications for educators and policymakers, addressing key challenges and informing future pedagogical strategies in technology-integrated ESL education.

RESEARCH RESULT

The research was conducted in multiple sequential phases, beginning with an extensive literature review to establish the theoretical foundation of blended learning and its relevance in ESL education. This phase involved reviewing scholarly articles, policy documents, and institutional reports to understand the evolution of blended learning models such as the rotation model, flipped classroom, and flex model. These insights informed the design of survey instruments and interview protocols for primary data collection.

The second phase involved fieldwork at five purposively selected higher education institutions that implemented blended learning in ESL classrooms. Data were collected from 30 ESL educators, 10 administrators, and 100 students using structured surveys, semi-structured interviews, and classroom observations. The instruments were designed to capture perspectives on implementation strategies, learner experiences, technological integration, and challenges.

In the third phase, qualitative data were analyzed using thematic analysis. Responses were coded and categorized into recurring themes such as learner autonomy, technology use, engagement in offline tasks, and barriers to effective implementation. NVivo software was used to assist in pattern recognition and theme development.

Additionally, comparative analysis was conducted to examine differences between traditional and blended pedagogical approaches in ESL classrooms. Variables such as student engagement, interaction frequency, flexibility, and learner satisfaction were compared. Although the primary research design was qualitative, frequency distributions and percentage-based descriptive statistics were used to summarize key trends, and visual representations such as bar graphs and thematic maps were created for clarity.

Table 1: Comparative Summary of Student Engagement and Learning Outcomes in Traditional vs. Blended ESL Classrooms

Criteria	Traditional ESL Classroom	Blended ESL Classroom	Observed Improvement
Student Engagement	Limited to classroom hours; passive participation	Extended through digital platforms; active discussion forums	High
Learner Autonomy	Teacher-directed learning; low independent study	Self-paced modules; increased responsibility for learning	Significant
Access to Learning Resources	Restricted to textbooks and class notes	24/7 access to online materials, videos, e-books, forums	High
Interaction Opportunities	Mostly one-way, teacher to student	Multi-modal interaction (peer, teacher, tech tools)	Significant
Feedback Mechanism	Periodic and delayed	Instant via quizzes, online comments, learning analytics	High
Language Skills Development	Grammar-focused, limited	Contextualized, multimedia-based	Strong improvement

	speaking/listening practice	listening, speaking activities	
Motivation and Interest	Moderate; dependent on classroom climate	High; driven by varied content, flexibility, gamified tools	High
Challenges Faced	Classroom time constraints, lack of personalized instruction	Internet dependency, digital fatigue, technical barriers	Balanced through strategic support

1. *Student Engagement*: Blended classrooms encouraged ongoing participation via digital tools such as discussion boards, mobile apps, and collaborative assignments. Students reported feeling more connected and involved beyond classroom hours.
2. *Learner Autonomy*: Students in blended settings exhibited increased responsibility in planning their learning schedules and exploring digital materials, aligning with Constructivist principles.
3. *Access to Resources*: The variety and availability of multimedia resources in blended learning helped address different learning styles and made content more accessible and revisitable.
4. *Interaction Opportunities*: Unlike traditional classes, blended learning allowed peer-to-peer and student-teacher interactions through chat platforms, video conferencing, and shared documents, enhancing communicative competence.
5. *Feedback Mechanism*: Immediate feedback from quizzes and AI-supported tools helped students identify and rectify errors quickly, increasing their confidence in language application.
6. *Language Skill Development*: Blended models supported integrated skills practice—listening, speaking, reading, and writing—through context-based tasks and authentic materials.
7. *Motivation:* The use of gamification, badges, and self-paced learning paths increased students' interest and investment in the learning process.
8. *Challenges*: Although blended learning improved outcomes overall, challenges like internet instability and the need for digital literacy remained, necessitating continuous technical and academic support. Findings showed that blended learning led to enhanced motivation, improved language acquisition, and more flexible access to resources. Challenges identified included digital access issues, teacher training needs, and workload management. Strategies such as interactive content creation, structured online-offline task integration, and use of analytics for feedback were observed as effective implementation practices.

This systematic approach to data collection and analysis ensures the credibility and practical relevance of the study's outcomes, offering valuable

implications for the future of ESL pedagogy in digitally evolving learning environments.

DISCUSSION

The findings derived from the literature review, qualitative data collection, and comparative analyses provide critical insights into the efficacy of blended learning in ESL classrooms. The integration of both in-person and digital instructional strategies has emerged as a viable pedagogical shift, especially in post-pandemic educational landscapes. The evolution of blended learning from a supplementary approach to a core teaching methodology has underscored its potential in enhancing student-centered instruction, particularly within the context of language acquisition. Through empirical observations and case-based analysis, the study identified that learners in blended environments demonstrated increased engagement, intrinsic motivation, and improved linguistic competencies when compared to those in traditional classrooms. These findings echo the perspectives of scholars who emphasize that blended learning promotes learner autonomy, facilitates multi-modal engagement, and addresses diverse learning styles more effectively than conventional methods.

The study also highlighted several prominent models of blended learning such as the rotation model, flipped classroom, and flex model: all of which support differentiated instruction, integration of offline and online tasks, and use of technology for personalized learning pathways. These models collectively contribute to a more holistic and context-sensitive ESL learning experience. Despite the benefits, various implementation challenges were noted. Educators and institutional leaders reported difficulties related to technology integration, such as insufficient infrastructure, limited bandwidth, and the lack of access to reliable devices. Designing pedagogically sound activities that bridge the online and offline modalities remains a significant concern, particularly in ensuring educational coherence and cognitive engagement.

Moreover, ethical and safety-related challenges such as safeguarding against academic dishonesty, identity theft, and cyberbullying were noted as barriers to fully adopting online components of blended learning. Skill development also emerged as a vital requirement. Both teachers and learners must possess technological literacy to navigate digital platforms effectively. Without adequate training, the potential of blended learning may remain underutilized. Motivational challenges also surfaced, especially among students transitioning between instructional modalities. Maintaining consistent engagement in a blended framework necessitates continuous support mechanisms, meaningful content design, and regular formative feedback. Overall, the findings reinforce the view that when thoughtfully implemented, blended learning can significantly enrich ESL instruction. It supports inclusive, flexible, and personalized education while also preparing learners for the digital demands of the contemporary academic and professional world. These findings contribute to the existing body of knowledge by providing practice-informed insights and reinforcing the theoretical foundations of blended learning as a sustainable educational approach.

CONCLUSIONS AND RECOMMENDATIONS

It is crucial to ensure that educational institutions have the necessary technological resources and infrastructure to support effective online and blended learning environments. Continuous professional development for educators is essential to ensure they are proficient in integrating technology into their teaching methodologies and able to effectively use digital tools to enhance the learning experience.

Educational content should be crafted in a way that is engaging, interactive, and adaptable to the needs of diverse learners, promoting active participation and deeper learning. Encouraging students to work together and take ownership of their learning can foster critical thinking, problem-solving skills, and the ability to navigate digital spaces independently. Regular formative assessments should be incorporated to monitor student progress, provide timely feedback, and tailor instructional strategies to meet individual learner needs.

The rapid development of technology is influencing all aspects of life, and education is no exception. As technology continues to evolve, it is imperative that educators and policymakers address the need to blend pedagogy with technological advancements. It is essential to ensure that students are not only digitally literate but also adaptable to the flexible, technology-driven environments that are increasingly becoming part of the workforce. Many students are eager to use the web but often lack the necessary skills to effectively navigate, evaluate, and utilize digital information. There is a compelling need for a re-conceptualized approach to education—one that is more learner-centered, collaborative, and driven by technology. The trends in language learning, for example, are pushing us toward empowering students to communicate in real time with others across the globe. As we move forward, it is crucial to equip students with the tools and skills they need to thrive in a digital, interconnected world (Eaton, 2010). By implementing these recommendations, we can create a learning environment that not only adapts to the demands of technology but also prepares students for success in their personal and professional lives.

ADVANCED RESEARCH

Every research study has its limitations, and acknowledging these helps refine our understanding of its findings. One limitation of this study is its relatively small and homogeneous sample, which may not represent the diversity of learners across different regions or educational settings. Future research could involve a larger, more varied sample to increase the generalization of the findings. Additionally, the study assumes access to technology, which may not be true for all educational settings, particularly those in underprivileged or rural areas. Further studies could explore how to bridge the digital divide and assess the impact of technology integration in resource-constrained environments. Another limitation is the short-term focus of the research. While it evaluates immediate outcomes, long-term effects on learning and engagement remain unexplored. Longitudinal studies could

provide valuable insights into the sustained impact of technology on student achievement over time. Moreover, the study does not fully address the challenges faced by teachers when adapting to new technologies. Future research could explore how teacher training can be more effectively tailored to overcome these challenges, ensuring educators are better equipped to integrate technology into their teaching.

In addition to addressing these limitations, there are several avenues for further research. One key area is exploring how different learner profiles such as visual, auditory, or kinesthetic learners—respond to various digital tools and platforms, allowing for more personalized learning experiences. Additionally, the rapid emergence of new technologies like AI, virtual reality, and augmented reality presents exciting opportunities for transforming education. Future studies could evaluate the effectiveness of these technologies compared to traditional methods and explore how they can be integrated into various subjects. Finally, research into more effective models of teacher training, particularly focused on technology integration, is essential. Investigating how training programs can be optimized to support educators in technology adoption could improve the overall effectiveness of digital tools in the classroom. By addressing these areas, future research can help shape a more inclusive, adaptable, and effective approach to technology in education.

REFERENCES

Allen, I. E., Seaman, J., Garrett, R., & Thompson, R. (2007). *Blending in: The extent and promise of blended education in the United States*. Sloan Consortium.

Beams, R. (2017). Strategies for effective technology integration in blended classrooms. *Educational Leadership Journal*, 45(2), 34–42.

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. International Society for Technology in Education.

Bonk, C. J., & Graham, C. R. (Eds.). (2006). *The handbook of blended learning: Global perspectives, local designs*. Pfeiffer.

Christensen, C. M. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. McGraw-Hill.

Driscoll, M. (2002). Blended learning: Let's get beyond the hype. *e-Learning Magazine*, 3(3), 26–27.

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.

Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3–21). Pfeiffer.

Hattie, J. (2018). *Visible learning: A synthesis of over 800 meta- analyses relating to achievement*. Routledge.

Horn, M. B. (2017). The rise of the rotation model in K–12 learning environments. *Education Next*, 17(3), 36–43.

King, K. (2017). Peer interaction in active learning: Cognitive and emotional development in higher education. *Educational Psychology Review*, 29(2), 203–220.

Kinzie, J. (2004). Student engagement in blended learning environments. *Journal of College Student Development*, 45(5), 383–395.

Mazur, E. (2018). *Peer instruction: Engaging students one-on-one, all at once*. Harvard University Press.

Mitra, S. (2020). Self-directed learning in the digital age: Lessons from the individual rotation model. *International Journal of Educational Technology*, 15(1), 56–68.

Petersen, R. (2020). Active learning strategies in flipped classrooms: A case for mingle work. *Journal of Innovative Education Practices*, 12(4), 89–97.

Swan, K. (2016). The role of blended learning in student engagement and success. *Online Learning Journal*, 20(3), 145 –158.

Talbert, R. (2015). Inverting the linear classroom. *The Chronicle of Higher Education*, 61(29), B12–B14.

Vaughan, N. (2017). Blended learning and student engagement: Exploring the evidence. *Canadian Journal of Learning and Technology*, 43(1), 1–15.