Blended Learning

Blended learning has become very popular in tertiary education. It is widely acknowledged that the term was first used in about 1999/2000. One of the first handbooks appeared in 2006 by Bonk and Graham - *The Handbook of Blended Learning: Global Perspectives, Local Designs* - and thereafter, there has been a plethora of guides and articles.

The following outlines some of the benefits and challenges supported by a range of research and further guidance is available in Bernard et al's 2014 meta-analysis of blended learning.[1]

Benefits of blended learning

Blended learning has been found to improve, modestly, learner outcomes in some subjects.[2] [3]

- In the USA, a study of community college students in 2015, found that students enrolled in blended courses perform 'similarly, if not better' compared to students in a face-to-face setting.[4]

- A review of literature found several studies that supported the view that students in blended learning programmes achieve slightly better than students in purely face-to-face programmes.[5]

- An undergraduate study in the USA found that the end of term grades were 'significantly higher' for students who had undertaken blended learning on an introductory business course compared to peers who had followed purely face-to-face experiences.

- An Australian study explored blended learning within the creative arts; this work argues that blended learning has the benefits of both face-to-face and online environments. For example, it found that face-to-face learning was better for developing social interactions, relationships, collaboration and engagement. However, online learning made it easier to share digital files and work. The authors felt that a blended model optimises the benefits of the synchronous and asynchronous environments. It was also noted that the face-to-face studio interaction facilitates the formation of an on-campus learning community, counteracting the lack of human interaction in the online environment.

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[1] Bernard, R M, Borokhovski, E, Schmid, R F *et al* A meta-analysis of blended learning and technology use in higher education: from the general to the applied. *Journal of Computing in Higher Education* **26**, 87–122 (2014)
[2] Means, B, et al (2010) Evaluation of Evidence-Based Practices in Online Learning
[3] Monk, E F, Guidry, K R, Pusecker, K L, & Ilvento, T W (2020). Blended learning in computing education: It's here but does it work? *Education and Information Technologies* 25(1), 83-104
[4] Ryan, S, Kaufman, J, Greenhouse, J, She, R and Shi, J (2015) The effectiveness of blended online learning courses at the community college level, *Community College Journal of Research and Practice*
[5] Nortvig, A, Petersen, A K and Balle, S H (2018) A Literature Review of the Factors Influencing E-Learning and Blended Learning in Relation to Learning Outcome, Student Satisfaction and Engagement, *The Electronic Journal of e-Learning*, vol 16, no 1, pp 46-55

- Learners reported higher satisfaction in blended courses in a study investigating learner satisfaction in a radiographic technique class addressing radiation, health and physics. It found that learner satisfaction increased in the blended approach and had a perceived positive impact on learning with students enjoying the flexibility, being able to balance their schedules and allowing them to learn at their own pace.[6]

Additional benefits include:

- **Increased flexibility**
  Blended learning allows learners to access course materials anytime and anywhere, making education more accessible for diverse schedules, including fulfilling familial responsibilities. Online components offer students the ability to learn at their own pace, while in-person sessions ensure direct engagement with educators and peers.[7]

- **Enhanced student engagement**
  The blend of multimedia resources and activities (videos, quizzes, simulations) augmented with more traditional sources, such as lectures, can foster greater engagement and retention. This variety in content delivery caters to different learning preferences, keeping students more involved in the learning process.[8]

- **Cost-effectiveness**
  Blended learning can reduce costs for students, saving time and money on travel, making education more accessible to a wider audience.[9]

- **Opportunities for the development of learner digital skills**
  By participating in the online learning components of blended learning, students may develop digital literacy skills. This hands-on experience with digital tools may improve their technology proficiency and confidence while preparing them for future challenges in their professional roles.

- **Personalised learning**
  Personalised learning tailors learning to the needs and pace of individual students; this approach can be more effective in fostering learning outcomes, especially when blended learning is included in the mix.[10]

[6] Taliaferro S L, Harger B L Comparison of student satisfaction, perceived learning, and outcome performance *The Journal of Chiropractic Education* 2022 Mar 1;36(1):22-29
[7] Hrastinski, S (2019) *What Do We Mean by Blended Learning?*
[8] Bonk, C J & Graham, C R (Eds) (2006) *The handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer
[9] Allen, I E & Seaman, J (2010) Class Differences: Online Education in the United States
[10] Prasad, R (2020) *Where Does Your Blended Learning Approach Stand Compared to Personalized Learning?*

Challenges of blended learning

There are issues for learners and educators with blended learning - for instance, some studies found student performance was lower than peers who had taken a face-to-face course.

Other challenges include:

- **Technological challenges**
  One significant downside of blended learning is the reliance on technology, which can create barriers for students without access to reliable internet or adequate devices (as discussed in section 4 of this Resource Hub). This digital divide can exacerbate inequalities, particularly among low-income students.[11]

- **Negative impact of reduced opportunities for face-to-face interactions**
  Blended learning can sometimes reduce meaningful face-to-face interactions between students and educators. Although online components provide flexibility, students may feel isolated or disengaged if there is a lack of strong interpersonal connection or real-time feedback from educators.[12]

- **Time management issues and the importance of self-regulation**
  Blended learning generally requires students to manage their time effectively, which can be challenging for those who struggle with organising their own studies. Without structured in-person schedules, some learners may procrastinate or fail to keep up with online elements of their blended learning experiences. Studies indicate that students' ability to use self-regulation is positively associated with higher grades and may cause less delay in course completion. Self-regulation is critical for blended learning.[13]

- **Increased educator workload**
  For educators, the preparation and management of both online and in-person components can increase workload and demand more time for planning, creating materials and providing student support across different technological platforms. Some educators feel that the flexibility that online learning affords to learners, comes at the cost of greater workload for themselves.[14]

- **Lower learner motivation**
  A British study found motivational and attendance issues related to face-to-face elements of blended learning programmes. Learners were concerned by lack of attendance of their peers at face-to-face sessions and noted that face-to-face sessions need to add value to motivate attendance. Learners' concerns of peers' poor attendance were heightened for sessions that involved group work.[15]

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[11] Means, B, et al (2010) Evaluation of Evidence-Based Practices in Online Learning
[12] Bonk, C J, & Graham, C R (Eds) (2006) *The handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer
[13] Eggers, J H, Oostdam , R, & Voogt, J (2021) Self-regulation strategies in blended learning environments in higher education: A systematic review. *Australasian Journal of Educational Technology*, *37*(6), 175–192
[14] Almahasees, Z, Mohsen, K and Amin, M O (2021) Faculty's and Students' Perceptions of Online Learning During COVID-19, *Frontiers in Education* 6:638470
[15] Armellini, A, Teixeira Antunes, V and Howe, R (2021) Student Perspectives on Learning Experiences in a Higher Education Active Blended Learning Context. *TechTrends,* vol 65, pp 433–443

- **Potential for superficial learning**
  Some critics have argued that blended learning may prioritise content delivery over deeper learning experiences. The focus on technology and online elements might reduce opportunities for hands-on, experiential learning or in-depth discussions that might be better facilitated in a traditional classroom environment.[16]

In summary, while blended learning offers many benefits for learners and educators, including flexibility and customisation, challenges related to technology access, decreased opportunities for face-to-face interaction, the need for self-regulation, and increased demands on both students and educators can limit its effectiveness without careful planning, design and preparation for learners.

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[16] Garrison, D R and Vaughan, N (2008) *Blended Learning in Higher Education: Framework, Principles, and Guidelines,* 1st Edition