Blended learning - how global education system is merging best learning practices?

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Abstract

Formal education programs are transforming from pen, paper and memorizing facts to hybrid learning through technology. These assisted teaching methods and blended forms of learning allows flexibility to teacher and student community customizing the learning experiences of the latter. Exceptionally effective, the education sector has greatly benefited with innovative teaching methodologies using dynamic digital tools alongside more traditional classroom practices to create blended learning models. The study material is blended into the core academic program and is fully comparable to traditional courses, only the delivery medium is different.

Out of several key blended learning practices, outside-in blended educational model has added new dimensions to learning. In this model, academic learning begins outside the class in a non-academic environment using digital devices. Instead of traditional classroom sessions, the class begins online daily and by the time students reach the classroom, they are well-prepared to share, collaborate, create and review feedback. Such a hybrid form of teaching cohesively blends the essence of traditional learning and remote learning opportunities for effective outcomes. Teachers manage their in-class time more effectively by engaging in discussions and review that enable students to work on their own pace and utilise resource content available.

Although blended learning represents opportunities to personalize learning and reclaim instructional time in a hybrid schedule, the present challenges of a different kind. There are mixed views on the efficacy of a learning system that does not believe in assessments or an instructional approach for teachers to follow. It questions the premise of entrusting students with the responsibility of taking over their own journey of education. Adequate technology support and guidance to teachers builds up challenges in effective implementation. Its potential is questionable in remote locations and impoverished areas. As innovative technology transform, new markets open up, educational forms will transition into fascinating yet evolved learning forms with the highest blend of classroom lessons and digital classes. Access to world-class study material will not be a distant reality as universities aggressively embrace modern forms of learning. That is where the future of blended learning lies.

Keywords: blended learning, formal education system, hybrid learning model, blended teaching methods, traditional learning, online learning, modern forms of teaching, assisted education programs

Introduction

As school leaders, one of our fundamental focus areas is to create a future-ready generation of learners. A generation that is adaptive, innovative, resilient, creative, collaborative and ever curious. Beyond a positive and inclusive learning experience that is committed to the highest standard of education for all, educators are responsible for creating evolving minds prepared to take on the world. Global education systems have witnessed transformational learning experiences not just through decades but even in the past few months due to COVID-19. UNESCO1 had earlier announced that nearly 22 countries have closed schools during the pandemic. This has affected over 290 million students worldwide. But did it affect their learning opportunities? No, it did not. In fact, it was during this time of crisis that the massive shift from physical classrooms to digital devices took place. The power of technology redefined new paradigms in education. Where schools could not reach, technology did. Access to effective remote learning in the form of online classes was made possible by harnessing the potential of technology. Learning modes drastically shifted to lesson sharing on either Skype, Microsoft Teams or other knowledge sharing platforms in the form of live or pre-recorded videos, podcasts or webinars. Soon, virtual learning saw an increased demand for a blended core academic program. Modern Public School, Shalimar Bagh, Delhi, one of the front runners to adopt blended learning, saw smart use of technology allowing educators and learners the flexibility to customize learning for students. Shawn Rubin, director of blended learning for the non-profit Highlander Institute, while sharing his
views on its benefits says, “Blended learning can provide teachers with crucial feedback that enables them to intervene with greater precision and effectiveness and customize learning for their students.” Futuristic it may seem, but it is time to embrace blended learning as the new normal in education.

Project based learning (PBL) effectiveness in blended learning context

Solving highly complex problems require students to move beyond traditional model of passive rote learning and stating them out of context. The lack of ability to apply knowledge in real-life environment propelled the need for more futuristic skills. The U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills \(^2\) published a report in 1990 about the changing skills young people need to succeed in the workplace. Time management, information synthesizing, research and problem solving are some of these skills that combined with math, science and reading can yield remarkable output. In the global education system today, technology and real-life context is integrated in the academic core through PBL that encourages students to become critical thinkers and problem solvers. Based on our experiences with students and other stakeholders in PBL, the combination of both forms of learning has created a third model that can form the genesis of modern technical education.

Worldwide, the instructional approach of PBL forms part of most modern education systems today. The PBL activities are designed such that students are engaged in a complex real life setting with deep and sustained attention. As educators we recognize the importance of introducing PBL activities right from elementary school.

At Modern Public School, Shalimar Bagh, Delhi, annual trips to the botanical gardens, learning about plant life, its structures, needs of plants, nutrients required and culmination activity from seed to saplings is part of a science-based project for junior school. It involves teams of leaders and members to collaborate for a research-based study on growing a garden in the school to be presented to an identified group of student botanists. Well-designed PBL activities across grades have produced tangible outcomes in terms of application and analysis. Our students have demonstrated remarkably enhanced collaboration, problem solving and critical thinking skills.

Research studies \(^3\) suggest that PBL connect students to the real world. It not just improves student attitudes towards education but also build their intrinsic curiosity quotient such that they are lifelong learners. A collaborative study\(^4\) conducted by the Michigan State University correlated positive student achievement with Project-based learning. The benefits of Project-based learning systems create confident learners ready to face and accept the challenges of the world. As the global education system transforms digitally, it is critical that a hybrid learning model is constructed further that combines the instructional classroom techniques and online delivery methods. The Blended learning form of education uses the mix of traditional teaching techniques powered by technology.

What is blended learning

Blended learning combines face to face instructions (brick-and-mortar learning) and digital activities (online learning) powered by technology to create hybrid learning experiences. When digital tools, techniques and study material integrates in a classroom setting, blended learning takes place. Blended learning is not new. It finds its traces back in to the medieval period when books were considered disruptive as they altered the learning paradigm and teachers only read from the existing manuscripts to students. With the passage of time, books were introduced and the theory of blended learning evolved. Given the digital technology explosion today, its understanding has far reaching impact for the learning community. The role of the teacher has significantly evolved under this pedagogy. Depending on the content, subject and student capabilities, flexible delivery options are adopted. It successfully breaks the “one size fits all” model by customizing learning experiences.

Exceptionally effective, such formal education programs create opportunities to study a wide range of subjects optimising the impact of education for students. They view lectures, participate in discussions, ask questions, access academic content and also complete assignments in virtual learning environment. Course material in blended core academic program is fully comparable to traditional courses, only the delivery medium is different. By taking education beyond the classrooms allow students the flexibility to learn anytime, anywhere.

Types of blended learning

The beauty of blended learning approach refers to the ability to use multiple learning environments like face-to-face teaching, lectures, remote learning, supervised online classes, and discussion groups to engage and interact with students. What it also does successfully is to break barriers of accessibility to resources, content, instructions and feedback in the minds of educators and learners.

Teachers use several types of blended learning techniques with its own set of distinct benefits. These include:

- **Mastery-Based blended learning**

An effective form of learning, it allows students to learn without the pressures of time, at an individual pace. Mastery-based blended learning follows an instructional approach where students demonstrate enhanced understanding in select subjects with the help of personalised support of teachers. It embraces the idea that different student takes different routes to understand a topic in less or more time depending on their capability. The model allows students to learn at their pace independent of the pace of other students in class.

A case in example is the ability to solve taxation problems. Under this approach, the student gets a step ahead and clarifies the logic behind calculations, demonstrating an in-depth understanding of taxation.

**Benefits**

- Conceptual understanding is stronger since learning takes place at an individual pace.
- Mastering knowledge on a topic is higher since it is devoid of time pressures.
- Students become subject knowledge experts.
- Personalised learning experiences ignite curiosity in students and takes learning to a deeper level.

- **Station rotation blended learning**

A common approach in secondary schools, students under this model follow a pre-fixed calendar that rotates them through different learning environments on a specific academic subject such as physics or economics. These include group face-to-face mentoring or online learning (through quizzes, group class discussions, written home tasks etc.).

**Benefits**

- Since educators work with small groups, the learning impact is higher.
• Breaking students in smaller groups helps to collectively work with large batch sizes easily.
• It allows many project-based lessons under the subject course with various topics to be effectively addressed.
• Online learning facilitates automated grade generation saving educators time and focus.

• Supplemental blended learning
This approach optimises learning by supplementing in-class lessons with online content. There is no added or reduced class time. However, it enriches in-class activities and encourage learning outside the classroom. The model is useful since it deepens in-class interactions and online collaboration serving long-term learning goals.

Benefits
• It provides learning flexibility to students as the model combines online and in-class resources.
• Collaborating online to learn topics encourages better time management in class.
• Complex subjects can be reviewed online for better understanding before in-class sessions. Access to online content simplifies learning.

• Flipped classroom blended learning
Blending educator guided practice and face to face classroom interaction forms the key to this model. An innovative learning medium, it creates online content in the form of interactive lessons pre-recorded by the teacher as home assignments in addition to classroom lectures. Majority of the content is uploaded online to be covered remotely as part of the class, considered as home task.

Benefits
• Students can watch the lessons for better understanding in repeat mode without interfering with the pace of the class.
• Flexibility to learn remotely and in class.
• Saves time since majority of the course content is online that helps manage class time more effectively.

• Outside-in blended learning
In this model, academic learning begins outside the class in a non-academic environment using digital devices. Instead of traditional classroom lessons, every day the class begins online and by the time students reach the classroom, they are well-prepared to share, collaborate, create and review feedback.

Benefits
• Blends the essence of traditional learning and remote learning opportunities for effective outcomes.
• Enable students to work on their own pace and utilise resource content available.
• Teachers manage their in-class time more effectively by engaging in discussions and review.

• Self-Directed blended learning
Centred around students, self-directed learning combines face-to-face learning and online content for teaching. It is a form of customized education journey that encourages students to take responsibility of their achievement levels, progression monitoring, mentorship requirement and defining their learning outcomes. Teachers guide the students in a positive learning environment that focuses on achieving their academic goals in physical and digital space.

Benefits
• It allows students to learn at their own space and in their preferred medium of learning – physical or digital
• With self-directed learning, there are no assessments. Here, learning is a fun medium to ignite young minds to a subject or a topic and gain guided knowledge on it.
• Teachers benefit in this model as they can prioritise their time for each student depending on student’s capability.

The modern purpose of education is to impart knowledge and develop futuristic skills that enable learners to create a place in the world. Surrounded by technology that is globally transforming the social and economic fabric, there’s no denying the fact that the next generation will evolve into adaptive, innovative, curious and technology-oriented minds creating life changing experiences. And educators around the world recognise the importance of achieving positive academic goals by embracing diverse educational approaches. Blended learning strategy is one of many approaches that has distinct advantages for teachers and students.

Benefits of blended learning – Educators
• Student engagement levels are higher than in traditional classes due to an interesting mix of learning activities designed in this program.
• Teachers save their time on preparing for lessons in a technologically enabled environment and also moderate the content to suit other classes.
• Depending on student’s individual capability, educators can customise learning module for each student.
• Educators focus on facilitating and guiding learning experiences for students leading to more effective outcomes.
• Reviewing and grading is mostly automated that helps teachers to better manage their time.
• Lesser carbon print since printed content and paper usage is minimised in this approach ensuring considerable extent of sustainability in education.
• Teachers are updated with latest ed-tech tools

Benefits of blended learning – Students
• It provides a learning environment that encourage students to demonstrate self-learning skill, regulation and review.
• Builds their confidence to navigate efficiently between online resources and in-class learning.
• Institutes that promote blended learning concepts also reduce their infrastructure and administrative costs. It also saves printing expenses by shifting to online course material that can be accessed by electronic devices.
• Adequate flexibility ensures that students develop complete understanding over complex topics since it encourages them to learn at their own pace.
• Technology know-how also improves the level of communication and interaction between teachers and students improving learner outcomes.
• Online assessment tests provide automated score and instant feedback.
• Interactive learning techniques improve student attitudes towards education.

Challenges of blended learning model
Although blended learning creates a wide spectrum of learning possibilities ensuring instructional richness, social interaction, personal guidance, flexibility, access to vast content resources and improved learner achievement levels, implementing blended learning techniques in traditional education set-up has its own challenges. With each type of blended learning model comes challenges of a different
kind. There are mixed views on the efficacy of a learning system that does not believe in assessments or an instructional approach for teachers to follow. Let us detail other arguments against blended learning model:

1. Certain blended learning models entrust students with a big responsibility of taking over their own journey of education. It is questionable since students need supervision and mentoring to identify their academic goals from parent teacher community.

2. Teachers need to undergo deeper training to effectively run blended learning classes. How to upload lectures, how to review students, how to prioritise time between students and how much to engage physically and digitally are certain concerns that builds up challenges in effective implementation.

3. Students who require added support to catch up with the class may struggle if flexibility levels are encouraged for students to learn at their individual pace.

4. Teachers must be well prepared with course content and online resources especially for complex topics to plan ahead such that different students with varying capabilities can access without others getting affected.

5. Transitioning from traditional classes to blended learning may hinder skill and confidence of teachers and students.

6. There is debate on the parameters of review mechanism adopted by educators against each type of blended learning system and its effectiveness.

7. Technology decisions on how to integrate digital and physical education formats so that learning experience is not hindered is another challenge.

8. Students and teachers will require adequately high-speed internet bandwidth for enhanced learning experiences.

9. Certain models like Flipped Classroom Blended Learning model require advanced technology installation that is cost intensive.

10. Teachers must interpret their reviews after combining online data and face-to-face interaction. This is a high effort activity that also needs deeper understanding and application of technology.

Case Studies

Read these case studies and examples from the global world of education that are using blended learning in higher education.

a. Coventry University – Blended Learning Approach
b. Blended Learning at University of Derby

Blended Learning Approach in ISB

Future of blended learning approach

The pandemic situation has prompted thinkers and education experts to develop a robust learning platform that provides new opportunities to students and teachers ensuring greater participation and effective outcomes. Blended Learning model of teaching is the solution that addresses the global concerns of future education. Contrary to popular beliefs, schools and universities have seamlessly transitioned from in-class experience to online learning experiences as effective supplements. Traditional mind-sets find themselves break away from status-quo. Worldwide, systems and institutions recognize the fact that while concepts and information can be learned virtually, students can productively engage in application when in campus. Conventional 4-semester concept can give way to focused group assessments under guided supervision. Digitalization of education has led passionate educators reimagine learning models that will utilise more technological advances like Artificial Intelligence and Virtual Reality.

However, its potential is questionable in remote areas and impoverished locations. Logistical barriers, poor Wi-Fi connections, lack of basic digital knowledge and comprehension barriers are some of the critical challenges in implementing blended learning techniques. Lack of confidence, inertia, self-directedness and time are serious interventions in their motivations to upgrade to more modern forms of education. Studies also reveal that instructors need professional assistance to help address these concerns. Experts believe that blended learning is not a bodied solution to learning. They also make clear that its potential is diminished in rural belt. Realistically, it will take substantial time to educate and transform rural minds to adopt educational activities outside of class. Adults lives play a significant role in blended learning model decisions. As learning communities grow, innovative technology transform, new markets open up and fascinating subjects of academic interest take over the globe, porous boundaries will develop in real-world economics. Access to world-class study material will not be a distant reality as universities aggressively embrace modern forms of learning. True to the purpose of education, these innovative forms of learning bring structural changes to the tenets of education. Hybrid learning forms allow creativity in designing courses, delivery methods and the way we learn. Rapidly changing times and transforming education technologies demand resilient and adaptive minds capable of thinking critically. Forward looking educational set-ups have discovered different layouts, more effective in enabling new learning possibilities for teachers and students.

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