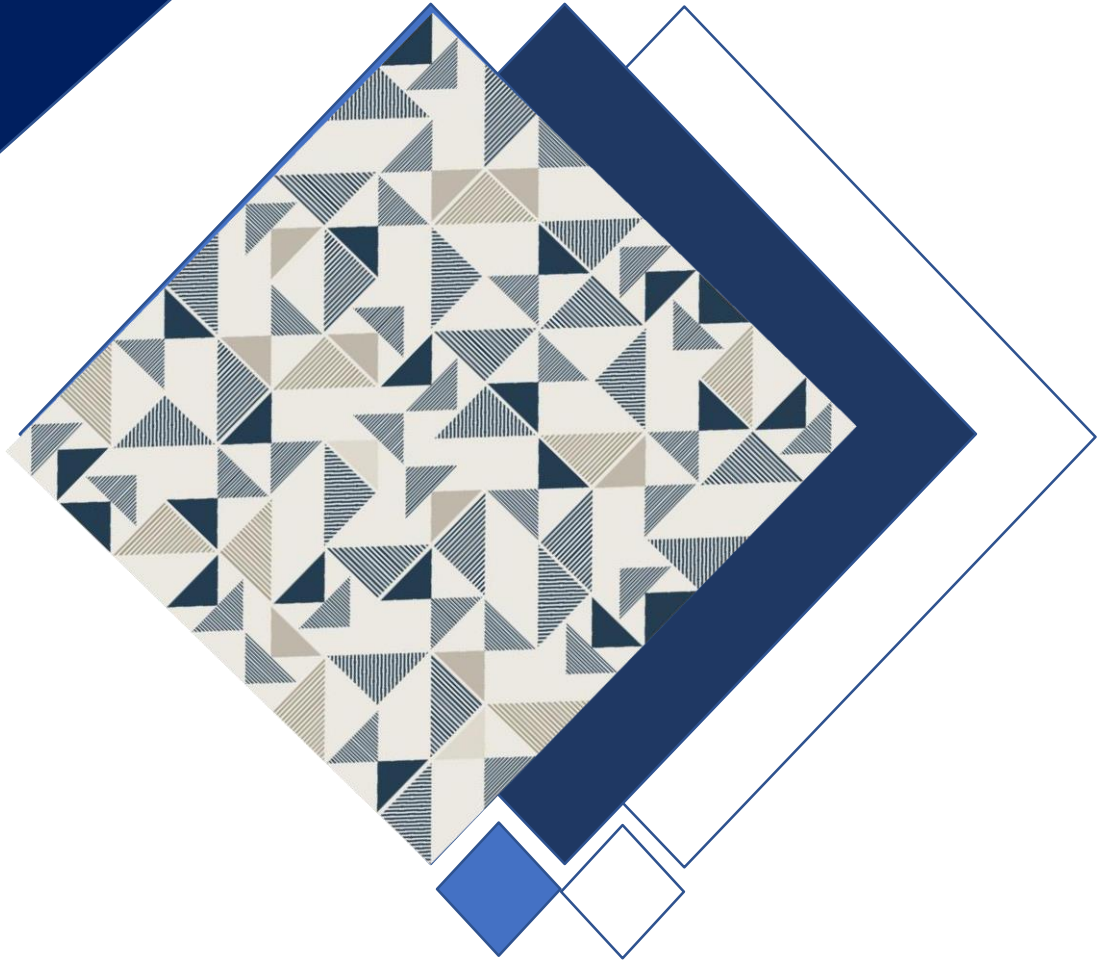




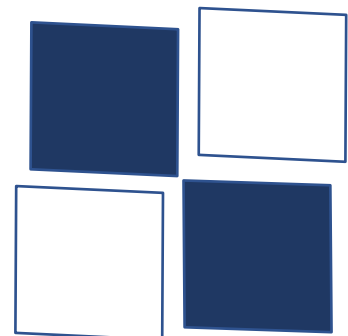
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**Educational Technology and
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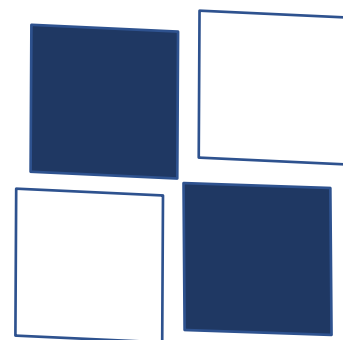
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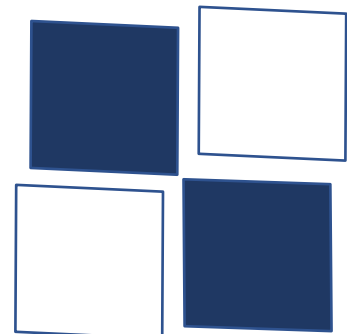
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Case Study

How technology-assisted learning leads to Professional empowerment?

Purnima Baruah and Jagriti Gautam**

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Abstract

Different instructions will influence future generation learning in an altered learning environment with new roles for educators. It requires a new mindset and different skills for educators. However, the formal groundwork for next-generation teaching and learning is embryonic. Educators are entering next-generation schools with erstwhile experiences in restructured learning environments. Moreover, traditional professional development is undersized in catering to the challenges of Professional Learning. The technology works best when it supports the true essence of education and aids educators in helping learners to assimilate skills.

As educators, when the responsibility of a project was shouldered on us, we used technology extensively and empowered our asynchronous learning. As a part of the project, from attending a webinar for briefing (on Zoom) to the initial discussion (on Microsoft Teams) to the formation of groups (on WhatsApp) and Wakelet to accumulate different research papers for desktop research till the final presentation (on Zoom), we all the teachers of the group used and learned many new applications/software. We prepared a survey using search engines (google forms) for our primary research to collect data, reached out to respondents through e-mails/messengers, analysed their responses, and presented the project using technology (Microsoft). Technology can enable professional learning and surely lead to better outcomes in learner empowerment.

Introduction

"Learners today need access to the digital tools and media-rich resources that will assist them in exploring, understanding, and expressing

themselves in the world, they will inherit tomorrow." (Partnership for 21st Century Skills)¹

Why is Technology Enabled Learning Important for teaching?

Technology-Enabled Learning (TEL) refers to the expansion and use of tools (including software, hardware, and processes) envisioned promoting education. TEL has been supporting education, particularly higher education, for a long. However, technology persisted just as a supporting tool in customary teaching space despite these advances.

World Bank data notes that only 20% of individuals in South Asia use the internet, with 33% in Pacific small island states and 19% in Sub-Saharan Africa (World Bank, 2018)

The present education system requires education that applies, assesses, creates, and reinforces knowledge. In rural India, under three-fourths of learners in grade III could not solve a two-digit deduction such as 46 – 17, and by grade 5, half could still not do so. In-service training for educators in emerging nations has proved to be unproductive majorly. Refining teacher proficiency and inspiration levels are critical for realising better student learning. Educators are being trained using tangible methods instead of speculative constructs, and the exercise is classroom-based.

Subject related teacher training programs are most effective when teaching pedagogy specific to a subject area (such as teaching science/English in class proficiently?). Whereas continuity means teachers receive significant continual support—not one-off workshops, to cater to the needs of ever-evolving education systems and pedagogies. (World Bank, 2018, p. 132)

¹<https://www.col.org/cross-cutting-initiatives/technology-enabled-learning/>

Successful Technology Integration into the Classroom

Computer use in the classroom correlates to improved achievement on the part of the student but technology alone is not a cure for poor scores. Means (2010).

Gorder (2008) stated that successful technology amalgamation makes a variance in reforming the teaching-learning space. Assimilating technology is not easy; it is a multi-step procedure involving the teacher learning the technology and using it to enrich student learning.

Effective technology incorporation can be affected by certain aspects. Hew (2007) identified six aspects that affect successful technology integration. They lack resources, specific knowledge and skills, institutional structures, teacher attitudes and beliefs toward technology, assessment types, and subject culture. Over the last decade, the transition in computer-based technologies has been implausible, and it is challenging for schools and universities to stay abreast with the preset industry norms.

Deplorably, teachers are finding a declining amount of time permitted for preparation while responsibilities increase. This occurs although technology integration asks for more time, including searching for relevant websites, organising PowerPoint presentations, copying videos, and more. Hence, teachers need more time to prepare. (Hew, 2007).

Factors Contributing to Teachers' Use of Technology

The introduction of technology in the design and syllabus of courses is noteworthy, predominantly, by considering the effect of computers and the internet on the new cohort of learners who enter the educational system.

The use of technology to progress learning at a higher level can only be achieved when the teachers who teach in classrooms are trained to comprise new technologies and blend them judiciously with their curricula (Brown & Warschauer, 2006). Brown and Warschauer (2006) sponsor the blending of learning about technology with teaching approaches and allocating advisors proficient in technology for

teachers to improve teachers' technology abilities during their teaching practicum.

Some studies have verified that the teachers who have participated in the pre-service training programs and educational technology courses emphasise using technology skills as part of their lesson plan. Can improve their efficacy and self-value in their pre-service technology skills (Koh & Frick, 2009). There is an affirmative relationship between a teacher's self-efficacy and technology integration in the classroom (Koh & Frick, 2009).

The teachers' growth mindset and a positive perspective are more important for training and learning.

Learning with Technology: Constructive Perspective

Jonassen and Reeves (1996) discern between learning from and learning with computers. Many recent studies and expansion on technologies took the amplified learning into account that was conceivable to be obtained. At the same time, computers had a substantial position in delivering content and making learning chances to support learners make meaning and promote thought, not only for students but also for teachers.

Judson (2006) reported the relationship between technology application and the constructivist approach. Teaching events seem to generate the best usages of technology tools to simplify the lesson design and delivery of that design. Instead of being restricted as a part of the prevailing traditional approach, by using constructivist theory, technology seems to alter every dimension of teaching or instruction, from course planning to the ways of delivery and even evaluation (Rakes, Fields & Cox, 2006). The teacher's predispositions to apply the constructivist teaching methods augment the probability that teachers integrate technology in the class settings.

Technology-enabled professional development

As an active part of the school functioning, we, the teachers, blend technology extensively in teaching. We have conducted research during pandemic on the topic "Growth vs Fixed mindset: for different career choices", where technology was used extensively

and has trained and equipped the team with many aspects of teaching self.

A webinar was scheduled for the school teachers to introduce 'Growth mindset' using Zoom (An online meeting platform). Following this, groups comprised 5-6 teachers, and teachers were intimated over e-mail (Online communication method). Each group formed their respective Teams on the Microsoft Team platform and had scheduled meetings during the entire course of this project. The enquiry and research method was planned as an online survey to collect the perspectives of different stakeholders. To survey with the three stakeholders of the school ecosystem, i.e., students, parents and teachers, three respective questionnaires (Google Form) were prepared using Google search engine referring to various relevant resources while performing desktop research shared the form via e-mail with all of them. The responses of these surveys were automatically recorded in Google Sheet.

The data was collated and analysed using Microsoft excel into various graphical presentations, e.g., pie chart, bar diagram, frequency polygon etc.

For the literature review for the project, a Wakelet (an Online app to collate different resources) was created to which each member contributed and later referred and discussed. Finally, a PowerPoint presentation was prepared to incorporate a brief overview of the paper written by our group and a graphical presentation to discuss the project with other teachers. The PowerPoint was presented to the resource person and colleagues in a webinar through Zoom.

Conclusion

Making the paper allowed the teachers to be trained in a self-paced manner. During the process, all involved learnt not only the technology integration and usage but also the 21st Century skills such as Communication, Collaboration, Critical thinking, Creativity, Information literacy, Media literacy, Technology literacy and flexibility. The team was involved and assisted by technology in self-learning and learning for life. Technology-enabled professional learning will prove a boon to

the learning community as it provides the freedom encompassed with discipline and empathy (As meetings were rescheduled, keeping in the availability of team members and their commitments towards school and family). The future of professional development may be explored with technology integration and a growth mindset towards learning.

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