

EFFECTIVE PEDAGOGIES FOR STEM LEARNING ENVIRONMENTS: FLIPPED AND BLENDED LEARNING

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THEME:

Innovative STEM pedagogy and curriculum

BACKGROUND AND OBJECTIVES

The teaching of STEM requires the effective delivery of curriculum-aligned content alongside the use of solid pedagogical approaches. Since the introduction of technology into education, teachers have been looking for ways to effectively integrate it into their teaching practices. The effective integration of technology can be a powerful strategy to ensure highly engaging and interactive face-to-face STEM learning environments occur.

Blended learning and flipped learning are two pedagogical approaches that employ quite similar features—including their adaptability to online learning contexts. Often teachers use the two approaches interchangeably, depending on their students and the concepts being taught. Although the two approaches are slightly different in their implementation, the benefits for students are quite similar. Some of the greatest benefits include:

- Classrooms become more active spaces.
- The adaptability to diverse learning needs in the classroom.
- Increased flexibility in time, location and access to content.
- Reducing costs for schools to allow for the purchase of more engaging classroom resources.

As STEM teaching and learning requires the cohesive blend of subject matter from multiple disciplines alongside engaging and active classroom experiences, the exploration of both pedagogical approaches can be extremely useful for STEM teachers.

STRUCTURE OF THE SESSION

This session will explore the differences between blended and flipped learning and how teachers can maximize the benefits of each in their STEM classrooms. The workshop is designed for Year 5–12 teachers of STEM and its associated disciplines.

Through the use of the Education Perfect (EP) platform, the workshop will showcase the tools that EP provides to support both pedagogical approaches. Participants will have an opportunity to explore EP through the eyes of a student and become familiar with the different tools that it has to offer including those for differentiation and real-time reporting.

Participants will be able to register for a free EP account to explore the tools with their students.