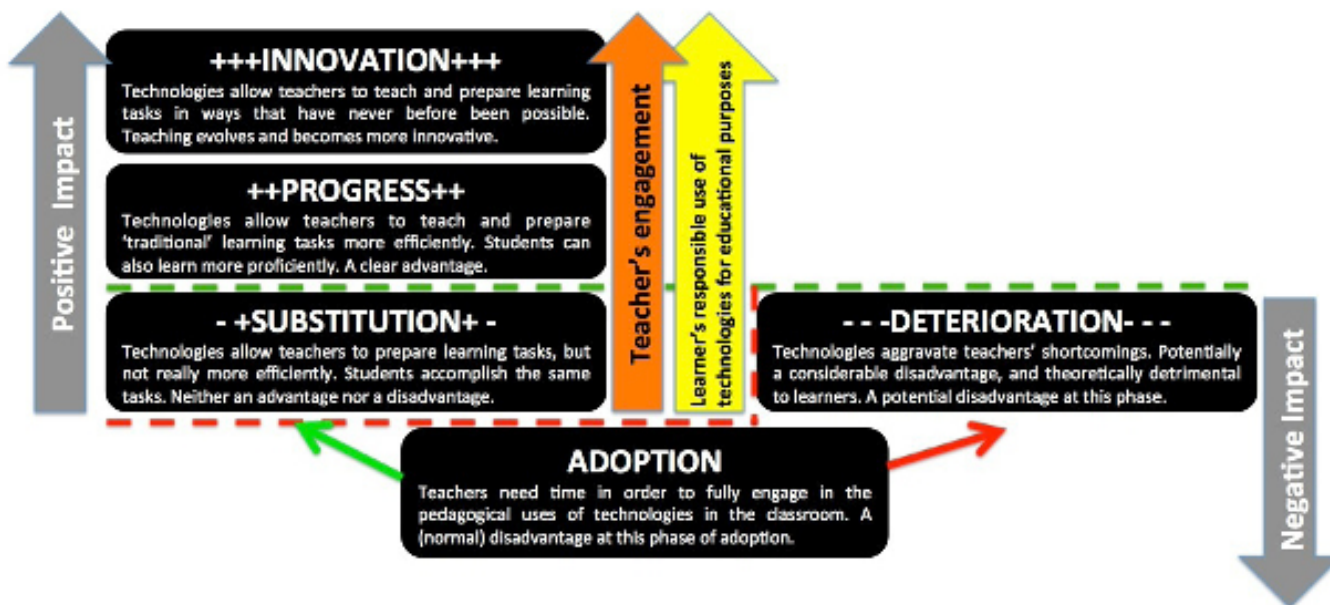# ASPID model: two potential pathways for adopting technologies and integrating them into education

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**ASPID Model** (Karsenti, 2014, Version 0.92)

The **ASPID** model (adoption, substitution, progress, innovation, or deterioration) describes two potential pathways for adopting technologies and integrating them into education. **ASPID** was inspired by a ten years of research with of over 50,000 students and teachers, accompanied by 1,500 hours of classroom observations of technology use, including laptops, iPads, touchpads, interactive white boards, and smart phones. In addition, a variety of teaching situations around the world

were observed, at levels from kindergarten to university. The model posits a sequence of phases in the technology adoption and integration process. The first is **ADOPTION**, in which teachers usually need more time, at least in the beginning, to familiarize themselves with the technologies so they can integrate them properly into their teaching practice. At this point, teachers may embark on two very different pathways. One leads to a **DETERIORATION** of their teaching practice, because poor use of technologies only aggravates the teachers' own shortcomings. The alternate pathway is the **SUBSTITUTION** phase, where technologies act as a direct tool substitute to the teachers usual teaching methods, but with no functional change and with about similar efficiency. This is followed by the **PROGRESS** phase, where teachers begin to apply the technologies in truly efficient ways. In this phase, teachers show marked improvement in their teaching methods, with positive repercussions for their students. Finally, they reach the **INNOVATION** phase, in which their teaching practices evolve in the Darwinian sense. At this point, teachers can use technologies to prepare learning tasks in ways that were never before open to them. All the phases in the model are related to the teacher's **collaborative engagement in technopedagogy**. However, it is important to understand that higher commitment does not necessarily bring teachers to the next phase. For a truly evolved teaching practice, teachers need to commit to the process in a reflective manner and in collaboration with their peers (i.e., train and be trained), while listening to their students and keeping abreast of new developments in educational technologies. Finally, the model of the adoption and pedagogical integration of educational technologies cannot be complete without considering the **learners' degree of responsible technology use for learning purposes**. In other words, according to the **ASPID** model, and therefore from my perspective on the adoption and pedagogical integration of technologies for teaching and learning, it is imperative to do both of the following:

**a)** Seek to continuously progress in one's teaching practice up to the **INNOVATION** phase;

**b)** Aim to get all learners to **increase their responsible use of technologies for learning purposes.**

This is a preliminary version of the model. Colleagues, fellow practitioners, and researchers are welcome to offer their comments so that the model can be refined and improved. @ThierryUdM

## Pour citer cet article

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