Principles for meaningful technology integration

Vicky Saumell considers ways of helping you decide how and when to use technology.

Introduction

This article aims at analysing the complex issue of technology integration for language learning and developing a set of principles that can aid teachers in the decision-making process of integrating new technologies in different contexts, with a strong focus on pedagogical implications. It will include a brief description of existing models and seven principles outlined and analysed.

Existing models and perceptions

Some popular beliefs about technology integration that I have come across in my experience as a teacher and teacher trainer are:

- the need to have high-tech equipment
- the need to have extensive technological knowledge
- the need for constant updating
- the need for extensive contact hours with the students to be able to obtain productive results.

These beliefs will be addressed by the article and I will come back to them in the conclusions.

Some existing models of standards for technology integration are the TPACK model by Mishra & Koehler (2006) and the SAMR model by Puentedura (2006), which look at technology integration from different perspectives.

The TPACK model developed by Mishra & Koehler looks at technology integration from a teacher’s perspective. What are the different areas of knowledge a teacher must command in order to be able to integrate technology more effectively? The triple Venn diagram in Figure 1 shows that the ‘hot spot’ happens at the intersection of the technological knowledge, pedagogical knowledge and content knowledge. So for English language teachers, the ideal person to integrate technology into English language learning should be someone who knows English, who knows how to teach it and who knows about technology. This, in my opinion, has deep implications for English language teacher training programmes, which should include technology integration from the very beginning.
A second model is SAMR by Ruben Puentedura (2006). It looks at technology integration from the perspective of the tools used by both teachers and students. It analyses the way in which tech tools can be simple replacements of traditional procedures or whether they can enhance or transform the educational tasks.

Puentedura sees this model as a ladder, in which the first step is S for substitution, the second is A for augmentation, the third is M for modification and the last is R for redefinition. In Substitution, tech acts as a direct tool substitute, with no functional change. In Augmentation, tech acts as a direct tool substitute but with some functional improvement. In Modification, tech allows for significant task redesign. And in Redefinition, tech allows for the creation of new tasks, previously inconceivable. He further describes the first two steps as an Enhancement phase and the last two steps as a Transformation phase. There are multiple diagrams showing different tools and apps mapped out according to the SAMR model. A Google search will yield multiple results.

The understanding of these models has led me to the development of a set of principles and guidelines to aid teachers in the decision-making process of technology integration. This analysis focuses heavily on the pedagogical implications and knowledge needed for the process to be successful.

The principles

Meaningful technology integration focuses on the learning task and not the technology

It sounds obvious, but educational aims should always come first. What do you want to achieve? What are your aims and objectives, either in terms of language or skills? Is there a tool that will allow you to do it better, faster or more creatively than doing it in a traditional way? Other issues that I take into account are increased collaboration and meaningful use of language.

Meaningful technology integration involves the students in actively using the technology

It is common to see teachers using presentation software, such as PowerPoint, to present language. This is no different than presenting by writing on the board, maybe more visual. This is a valid use at substitution or augmentation level, according to Puentedura (2006). But we should not stop there. The use of content creation tools should be placed in the hands of the students as well as the teachers. This will empower them to create and share their language productions in a more meaningful way.

Meaningful technology integration is essential not peripheral to the activity

Choosing a tech tool to dress up an activity is fine, but we should strive for the use of that which are essential to the activity. Why are we using this tool? Just because you can? Or because you can obtain more benefits doing it this way?

Meaningful technology integration works well for your specific context

Knowing your specific context is key to making appropriate decisions. Some context-related issues are:

- Are they working at school or from home?
- What connectivity quality do you have in your institution and the students at home?
- Are you/your students using PCs or mobile devices?
- Are the mobile devices provided by the institution or do students bring and use their own mobile devices?
- If they will be using their own devices, what platform are they running on: iOS, Android or Windows?

All these questions will help to identify key information that you need in order to decide which tools to use and how, such as setting up the tasks to be done in class or as homework, deciding to have all students connected at the same time, choosing the most appropriate tools, choosing a multi-platform tool or alternative tools for different platforms to carry out a specific task.

Meaningful technology integration addresses 21st-century skills’ issues and digital literacies training

Many teachers worry about the dangers of social media and online collaboration. There are indeed issues that need to be addressed if you are going to ‘send’ your students online. This decision opens up the possibility of learning about being responsible and cautious digital citizens. It is a necessary challenge that we need to take up.

Some aspects that fall under the umbrella of digital literacies are:

- e-safety and privacy issues
- the ability to find and select information
You can achieve amazing results no matter how many contact hours you have with your students. I can attest to that!

I hope you now have a clearer picture of how this technology integration process can happen effectively in different contexts and you can put it in practice little by little.

References


Vicky Saumell holds a Diploma in the Theory and Methodology of TESOL. She is a teacher and teacher trainer. She has written and tutors New Learning Environments for the Master’s in ELT at Universidad de La Sabana, Colombia. She has written for Pearson and CUP.