EdTech Evaluation Tool

The tool that I created to evaluate an educational technology tool for potential adoption into a school system features seven factors to consider along a sliding scale:

1. Transformative teaching and learning
2. Accessibility and ease of use
3. Cost, procurement, and maintenance
4. Digital citizenship considerations
5. Efficiency and streamlining
6. Professional development needs
7. Data security and interoperability

These criteria are loosely based on Greg Schwanbeck's (2015) "Factors to Consider When Selecting Educational Technologies" in that both instructional and logistical factors must be taken into account. The potential strengths and weaknesses of various technology tools are multifaceted and they could combine in an almost infinite number of ways. To allow the user of this tool to adequately reflect the wide variability of different technologies, I felt that a sliding scale ranging from "not ideal" to "ideal" would be prudent.

The "ideal" terminology was selected to keep the user focused on the desired outcome for a given criterion in the contexts of both their implementation environment and the technology itself. For example, "digital citizenship considerations" might be many or few for a specific technology tool or device, but the question of whether "many" or "few" is the most ideal scenario will depend on the context. Similarly, most factors encompass more than one related topic, so rating the factor in overall "ideal" terms mitigates some potential internal conflicts (albeit at the expense of more precise data collection). In short, the rating terminology allows the user to define for themselves the positive and negative characteristics of each factor.

To use the tool, a user should familiarize themselves with the piece of educational technology they will evaluate, then score the technology according to each factor before totaling the number of points. The seven factors are not all weighted equally. A tool that sufficiently transforms teaching and learning but has less than ideal interoperability or professional development needs may still be a desirable fit for a classroom or school. The weighting of the factors is as follows:

1. Transformative teaching and learning: 30%
2. Accessibility and ease of use: 15%
3. Cost, procurement, and maintenance: 15%
4. Digital citizenship considerations: 10%
5. Efficiency and streamlining: 10%
6. Professional development needs: 10%
7. Data security and interoperability: 10%

Rather than require the user to calculate the weighting, the scales themselves have been adjusted so that a user must simply calculate the total sum of points (80 possible) and compare to the guide at the top of the page.

With teaching and learning being the core functions of a school, the transformative power of educational technology should be prioritized. The word “transformative” was specifically selected to evoke the Modification and Redefinition aspects of the Puentedura (2010) SAMR Model of technology integration. A 30% weight on this factor ensures that its variability will affect the total score greater than all other factors.

A technology tool will not be adopted if it is difficult for teachers and students to use, and it would be unethical to adopt it if it was not accessible to all students with accommodations. Likewise, a tool that demands too much time or financial resources or is too difficult to obtain or

install will put stress on the business and IT support capacities of the school. While both of these factors can be offset by other positive aspects of the tool, low scores in these areas represent an uphill battle, and the factors are each weighted at 15%. Tools with low scores in these areas but high scores in all others may best be adopted/deployed on a small scale first to assess the impact.

Digital citizenship considerations may include the collaborative nature of a technology tool, the exposure of students to the Internet and web-based communities, screen time and appropriate media balance, supervision and content filtering, and acceptable use. Education in digital citizenship is essential for all students regardless of the technology that they use, and this factor was included primarily to remind school leaders to take it into account as they evaluate the addition of a new educational technology tool to the learning environment. It is weighted at 10% because inherent weaknesses in this area can often be mitigated by other means (e.g., device management, family education, student education).

The factors of efficiency/streamlining and professional development allow the user to turn their focus toward the teachers and staff who will be using the proposed technology. A tool that scores high in these areas might, for example, provide a convenience to the teacher (e.g., automatic grading, data reporting, communication), reduce wasted instructional time, or require little additional teacher training (or perhaps the training that is required is highly transferable).

The final factor - data security and interoperability - refer to the technology's impact on the total technology infrastructure of the school. If the technology adequately protects student data, does not meaningfully expand the organization's "attack surface," and is compatible with other platforms and information systems already in use by the school, it would score high in this area. However, these factors are all weighted at 10% because, like digital citizenship, weaknesses can be mitigated and do not always reflect on the educational value of the tool itself. If used thoughtfully, this tool should help leaders align new technologies to their strategic visions.