

WEB SUMMARY

Collaborating Towards Scale: A Framework for Examining Innovations and Their Contexts of Use

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Executive Summary

Many promising research-based learning technology innovations fail to “scale up” to be used in general educational practice. One reason for this is that research on these innovations does not explore or uncover the knowledge needed to make innovations truly scalable, sustainable, and most importantly, *usable* as part of everyday school practice. This chapter presents a framework for assessing the usability of innovations, with the goal of developing innovations that are more sensitive to the capacity of adopting schools (see Figure 1). Capacity is considered in terms of organizational culture, policy & management, and technical capabilities.

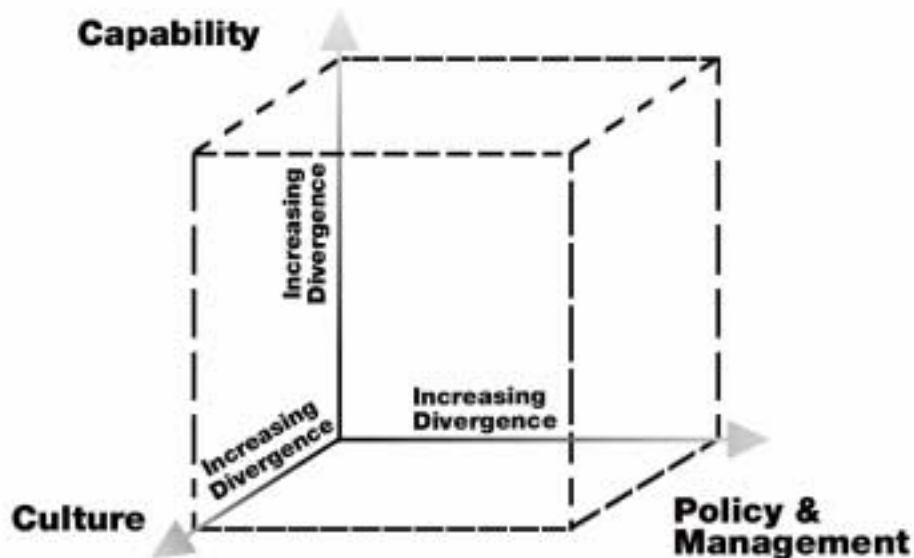


Figure 1. Framework to evaluate the usability of innovations.

The cube in Figure 1 represents the overall capacity of a school organization for implementing an innovation. An innovation can be placed in the space created by the three axes, where the distance between the innovation and the origin represents a “gap” between the capacity required to successfully use the innovation and the current capacity of the district. The creation of usable innovations is a process of working to close the gaps that exist between the innovation’s demands and the system’s capacity. Changes in both the innovation and the school system are likely to be required in the creation of usable innovations. Collaboration is presented

as the means to resolve discrepancies between school capacity and the demands of an innovation, and challenges to establishing and sustaining collaborative partnerships are considered in the chapter.

Two examples of the framework in action are described from the collaboration of the Detroit Public Schools and The University of Michigan in the Center for Learning Technologies in Urban Schools (LeTUS). In the first example, the adoption of a tool called Artemis, designed to scaffold student Internet search as part of inquiry-oriented curricula, is described. Artemis placed many demands upon school culture, the network infrastructure of the district, and teacher capabilities. Through collaboration, changes were made to district policies, to teachers' ability to integrate Artemis into their teaching, and to Artemis itself. The result of these changes was a more usable version of both Artemis and the innovation context in which it was used, leading to adoption of Artemis on a larger scale. The second example examines the introduction of Palm handheld computers as part of the LeTUS innovation. Examined in light of the usability framework shown above, Palms are shown to be less challenging on all dimensions of district capacity. Accordingly, Palms were adopted by LeTUS teachers at a much faster rate than Artemis.

The chapter also re-examines the nature of "scale," suggesting that it be viewed not as the total number of adopters an innovation has nationally, but rather in terms of the percentage of potential adopters within individual schools or districts. The reason for this shift in focus is that it is conceivable that an innovation be used by tens of thousands of teachers nationwide, yet still only reach a small and widely dispersed percentage of the total number of teachers in the United States. Thus sales of an innovation might be brisk, but real-world impact on educational practice remains small. It is therefore more productive to view adoption in terms of impact on local practice, perhaps as part of systemic reform initiatives.