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# Design Based Research Applications for Distance Education

Michael Simonson

*Nova Southeastern University*, [simsmich@nova.edu](mailto:simsmich@nova.edu)

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## ***DESIGN-BASED RESEARCH*** ***Applications for Distance Education***

**Michael Simonson**

*Co-editor*

Our companion journal, *Educational Technology Research and Development*, recently published an excellent paper by Feng Wang and Michael Hannafin dealing with design-based research (2005). It presents interesting, well written, and widely applicable information about a topic many of us are not familiar with: design-based research, which is defined as:

a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories. (p. 7)

Distance education needs designs for effective research that build on the traditional approaches to research. While the *Quarterly Review* is always eager to publish well-designed experimental research, there is interest in other methodologies as well. Wang and Hannafin discuss an approach that seems clearly appropriate to distance education.

Design-based research is *pragmatic*. As Wang and Hannafin say, “Researchers address

practical issues to promote fundamental understanding about design, learning and teaching” (p. 8). It is *grounded*, meaning “researchers select a theory about learning and instruction ... they seek to revise and refine that theory—an anchor that determines which interventions should (or should not) be introduced and which should be eliminated” (p. 8).

Design-based research is *interactive, iterative, and flexible*. It “stresses collaboration among participants and researchers through the process ... it is also characterized by an iterative cycle of design, enactment or implementation, analysis, and redesign” (p. 9).

It is *integrative*. It draws from “a variety of widely used approaches, such as survey, expert review, evaluation, case study, interview, inquiry methods, and comparative analysis” (p. 10). Finally, design-based research is *contextual*. It advocates that “research results need to be connected with both the design process through which results are generated and the setting where research is conducted” (p. 11).

Wang and Hannafin go on to present nine principles of design-based research. The principles emphasize ideas such as practicality, real-world settings, collaboration, purposeful

implementation, and refining and validating. The feeling one comes away with after reading this excellent paper is the applicability of this approach to researchers and designers in distance education. The statement of purpose for the *Quarterly Review of Distance Education* is “research that guides practice.” Design-based research is an approach that supports this theme. Our accolades go to *Educational Technology Research and Development* for pub-

lishing this important paper by Feng Wang and Michael Hannafin.

### **REFERENCE**

- Wang, F. & Hannafin, M. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development*, 53(4), 5-23.