

Research Briefs: Complex Systems Research in Educational Psychology: Aligning Theory and Method

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Research Briefs

Complex Systems Research in Educational Psychology: Aligning Theory and Method

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Video will open in new window via YouTube.

Research Briefs -- Video Introduction

"...And what that means is that we try to conceptualize things like learning something new or learning to regulate your behavior, as a result of a lot of moving parts. But the problem is that a lot of traditional research methods in education cannot account for all those moving parts. So what Gwen and I tried to do is write a paper that would provide researchers with a new set of methods that could account for the complex, dynamic, and emergent behavior of educational phenomena," said Jonathan Hilpert, Ph.D.

Watch the above video for an introduction to the article, [Complex Systems Research in Educational Psychology: Aligning Theory and Method](#).

Abstract

The purpose of this work is to provide an overview of complex systems research for educational psychologists. We outline a philosophically and theoretically sourced definition of complex systems research organized around complex, dynamic, and emergent ontological characteristics that is useful and appropriate for educational psychology. A complex systems approach is positioned as a means to align under-explored elements of existing theory with appropriate interaction dominant theoretical models, research methods, and equation-based analytic techniques. We conclude with a brief discussion of several foundational topics for complex systems research in educational psychology.

What practical tips will you gain from this article?

1.

A definition of complex systems research that is useful to educational researchers

2. A clear set of intensive methods that can be used to study complex educational phenomena
3. An overview of three under-explored analytic techniques in educational research: time series analysis, network analysis, and dynamic modeling

Citation

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