Chapter 12

Is Complexity Thinking a Useful Frame for Change-Oriented Educational Research?

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ABSTRACT

This chapter explores the extent to which complexity thinking is useful for framing change-oriented educational research - particularly research with a focus on education's future. Its starting point is that the advent of the Anthropocene challenges some of education's foundational concepts, so much so that, if we want to continue to have an education system, substantial re-thinking is required. The chapter reviews the literature on future-focused education. It then looks at complexity thinking in general, and at how it is being used in educational contexts. Using this, it explores the issues this raises for how we think about research in general, and education in particular, and suggests some strategies for framing the kind of research that will be needed to support education's re-development for the age of the Anthropocene.

INTRODUCTION

The challenge is not that we must find ways to "know" the future; rather, we need to find ways to live and act with not knowing the future (Miller, 2011, p. 1).

Education seems to always be "in crisis" and in need of reform. While change seems constant, it largely takes place on the surface of things, leaving the deeper

conceptual categories that structure our thinking undisturbed. The starting point of this chapter is that the advent of the Anthropocene could be the "crisis to end all crises", a catalyst for deeper change. The end of carbonised modernity—and all that goes with it—requires us to re-think current understandings of education: what it is, what it is for, and whether or not we still want public education. If the public education system is to continue, it will need to prepare people for possibilities other than the "continued growth" scenario that is assumed in today's system.[1] This is obviously extremely challenging, at many levels. If we are to make sense of what is ahead, it seems likely that we will need to look beyond education to help us think in new ways. This chapter's purpose is to explore the usefulness of complexity thinking in this space. There is a particular focus on how complexity thinking might be used to support new approaches to change-oriented educational research.

My interest in this area stems from a long period of working on questions to do with education's future as we transition into an era characterised by social, political, technological, and economic conditions that are very different from those in which our current education system developed. I have participated in many research projects (in many paradigms), contributed to policy developments, and worked in teacher professional learning in a variety of contexts in this area. Out of all this, my main sense is one of frustration at our lack of "progress" in developing new frames for thinking about education's future/s, especially as (it seems to me) these issues are becoming increasingly urgent. I am primarily interested in exploring complexity thinking in terms of the possibilities it offers for seeing education "through new eyes", for thinking differently about education, engaging differently, and acting differently in it (Berger & Fitzgerald, 2015).

This chapter begins with a brief outline of the literature on "future-focused" education as a way of framing the magnitude of the issues we face. This is followed by a discussion of complexity thinking—what it is, where it came from, and how it is being used in different contexts—and an exploration of some of the issues it raises for thinking about research. I then look at how complexity thinking has been taken up in education, and the issues raised in doing this. The chapter concludes with a discussion of strategies for working through these issues in ways that could be productive for education's future.

FUTURE-FOCUSED EDUCATION

The last twenty years or so have seen a proliferation of research and commentary on education's future. References to "future-focused" education, "21st century learners" "digital natives" and so on are now routine, particularly in policy contexts. This literature, broadly speaking, argues that today's schools are not adequately preparing

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