

## Foreword

As educators, researchers, scholars, teachers, and students of life, we are complex beings whose lives intertwine, intersect, and impact others. Our work shapes the world; our world shapes our work. In this digital age, we have opportunities and we also face challenges. How do we scrutinize in what ways to embrace ever-changing technologies without sacrificing our educational endeavors or our sense of who we are?

This book, *Academic Knowledge Construction and Multimodal Curriculum Development*, provides a superb amalgam of essays to depict various complexities for how one might experience education in this digital age. Each section highlights different aspects of research and teaching in the digital age while utilizing a systems theory approach to draw on layers and structural coupling to share diversity within and among technologies. The work highlights moments in which educators are experiencing *Dasein* (being-in-the-world) with technology, students, research, and self.

The authors offer a selection of arguments for consideration. Consider how the structures of these arguments are composed; they contain two types of rationalities, as defined by James Macdonald (1967). The first is a technological rationality. While this is often the primary metric that many researchers use to examine scientific theories, Macdonald warns us:

*The danger of using technological rationality in human behavior is that, in our desire to gain control, understand, and predict, we may (and perhaps already have) come to see ourselves as objects or the representation of these objects that we find useful for our purposes. In time, through historical feedback procedures, we will learn to know ourselves only as the representations we make. (p. 167)*

Holding only to a technological rationality objectifies and reduces the complexities of lived experiences. Though the presentation of the research and practices shared are explained well, that does not mean that the author(s) intend for others to duplicate. Rather, the work that was conducted is intended to share *a way* in which someone could incorporate new and advancing technologies.

To create another dimension with which to analyze, Macdonald suggests an aesthetic rationality. This term is defined as the “capacity to cope rationally with the world on an intuitive basis-to return to the world for insights which will enable him to transcend his present systems of thought and move to new paradigms (as Kuhn demonstrates, for example) or fresh perspectives” (p. 168). In the aesthetics is where the potential for emergence lies. The authors convey aesthetics, each in their unique ways. Bringing together the technological with the aesthetic, the book promotes scientific thought that also includes story and spirit (Doll, 2003/2012).

Douglas J. Loveless, Bryant Griffith, Margaret E. Bérci, Evan Ortlieb, and Pamela Sullivan have woven a fascinating tale through the voices of different authors and stories. Together they highlight scientific thought with considerations of both technological and aesthetic rationalities. As you read this book, consider what ideas you imagine and what strategies you devise that emerge from your conversations with the text. Prompted by these ideas, I hope you will share your enthusiasm with others in ways that develop into new, different, and exciting research and practices that have both technological and aesthetic rationality embedded, where new stories can emerge.

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## REFERENCES

- Doll, W. (2012). Modes of thought. In D. Truiet (Ed.), *Pragmatism, post-modernism, and complexity theory: The fascinating imaginative realm of William E. Doll, Jr* (pp. 103–110). New York, NY: Routledge..
- Macdonald, J. (1967). An example of disciplined curriculum thinking. *Theory into Practice*, 6(4), 166–171. doi:10.1080/00405846609542082.