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# The domain generality–specificity of epistemological beliefs: A theoretical problem, a methodological problem or both?

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#### Abstract

Research on epistemological beliefs has clearly increased in the last decade. Even though the construct is clearer and relevant data are being collected, there are important theoretical and methodological issues that need further clarification. One of them is the debate about the domain generality–specificity of epistemological beliefs.

I argue that there are both theoretical and methodological difficulties that hinder a more fruitful approach of the domain generality–specificity debate. Differences in goals and scope of the diverse conceptualizations about epistemological beliefs and how they devise the role of content-domain and context are a major source of difficulties. Methodological problems such as whether such epistemological beliefs can be measured "in isolation"—free of content and context influence—or the impossibility of collecting direct measures of epistemological beliefs may influence how the domain generality—specificity question is approached. Some suggestions about how these difficulties may be overcome are developed. The relevance of exploring epistemological beliefs across domains and across contexts is emphasized.

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#### 1. Introduction

Research on epistemological beliefs and students' beliefs about different domains has clearly increased in the last decade, as a review of literature shows (e.g. Braten & Stromso, 2004; Hofer, 2004; Hofer & Pintrich, 2002; Schraw & Sinatra, 2004; Sinatra & Kardash, 2004). Even though as a result of it the construct is clearer and relevant data are being collected, there are some important theoretical and methodological issues that, from my view, need further clarification in order for research in this field to move forward.

One of these problems (e.g. Buehl, Alexander, & Murphy, 2002; Hofer & Pintrich, 2002) has been the generality-specificity of epistemological beliefs, which has been often formulated in terms of providing an answer to the question "Are epistemological beliefs domain general or on the contrary, are they domain specific?" As it has been pointed out in this special issue (see the introduction to the special issue) several criticisms have been made regarding the adequacy, the relevance and the fruitfulness of this question and subsequently, of research inspired from it.

One of these criticisms has referred to the conceptualization of *domain*. Sternberg (2005) argues that in order to further address the problem of domain generality versus domain specificity, a theory of "domain" is needed, and particularly, a clear definition of "domain" is essential. This is not a new problem, but a rather old one (see for instance, Alexander, 1992; Alexander & Judy, 1988; Ceci, 1989; Limón, 1995; Marini & Case, 1989; Wellman & Gelman, 1992) that has affected areas beyond epistemological beliefs, such as thinking and problem-solving skills, conceptual change, motivation and even creativity (e.g. Kauffman & Baer, 2005).

A second criticism has been that the consideration of the dichotomy between domain generality vs. domain specificity yields a kind of "false" dichotomy (Sternberg, 1989), as was also the case of other "classical" controversies in psychology (e.g. nature vs. nurture). That is, it is widely accepted that in all likelihood posing this question as an *either* ... or one is not productive at all, because within a domain there will be both domain-general and domain-specific aspects. In the case of epistemological beliefs, this would mean that some epistemological beliefs will be domain-general and some of them will be domain-specific (Buehl & Alexander, 2001, this issue; Schommer-Aikins, 2002).

These two general criticisms apply not only to the particular problem of the domain generality–specificity of epistemological beliefs, but rather to psychological research focused on establishing comparisons across domains and on identifying what can be transferred from one domain to another.

Given that in the introduction of this special issue I have already referred to these criticisms, here I will introduce my view on some of the main obstacles researchers are facing in dealing with the domain generality–specificity of epistemological beliefs, and I will present some suggestions about how they might be overcome in order to make this problem more productive for research.

Thus, I will address two major obstacles I consider that are impeding a higher clarification of this debate: namely, the *differences among the current conceptualizations of epistemological beliefs*, and some *methodological problems* derived from these differences. The latter obstacle refers to the measure of epistemological beliefs: what should be measured and how. The first one is a clear theoretical problem, while the second one is mainly methodological, though how epistemological beliefs are conceptualized clearly influence how researchers try to measure them and what specific aspects of epistemological beliefs intend to measure.

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