

SETTING UP A RESEARCH QUESTION FOR DETERMINING THE RESEARCH METHODOLOGY

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ABSTRACT

This paper presents an approach to determine a research question that would enable design researchers to fix their research question as early as possible. It supports Yin's recommendation that a researcher must determine the research question first because it will guide him or her on the appropriate research approach. The author has developed three main constructs for the formation of a research question—the "how", the "what" and the "who"—that would lead researchers to develop the subsequent research objectives. They, in turn, will guide the researchers to formulate their sub-research questions, and the appropriate research strategies. The author hopes that this approach will assist novice researchers in unraveling a preliminary design research approach very early on. Hence, it allows the researchers more time to refine their research methodologies upon further literature review.

Keywords: Design Research, Research Methodology, Research Questions

1. INTRODUCTION

Design research is complex and many novice researchers end up confused during the early phase. Many are unable to pinpoint a definite research approach to answer their research questions because in many instances, they need to utilize multiple research methodologies. Due to a strong desire to realize a study, many of these new researchers have prematurely embarked on data collection procedures causing prolonged data analyses due to inconclusive results. The methodology to develop a research question (RQ) appropriate for either a Masters or Ph.D. study stemmed from frequently asked inquiries from students on how the author would know whether one question meets the Masters level or the Ph.D. level.

The methodology is only one of the numerous approaches that the author believes senior and established researchers have developed over the years (Creswell, 2003; Yin, 2002; Barbie, 2001). This article makes no effort to conduct a comparative study amongst established researchers; hence, it makes no claim of any new knowledge contribution other than formalizing the author's personal approach in supervising graduate students in their first year of their graduate studies. In this article, the author presents the prerequisites for developing a RQ, how the author identifies the constructs for the RQ, how RQs are developed and ascertained, how to determine the research objectives, how the sub-RQs are developed, and finally the identification of which research methodology is the best to answer the main RQ and its sub-RQs.

2. PREREQUISITES FOR SETTING THE RQ

There are two prerequisites that graduate students require before developing their RQs. The first is, knowing the problem they intend to solve, and secondly, having completed substantial literature review in the area of their research interests. Both factors play an integral part in the early phase of a postgraduate study. Professionals who have several years of practice experiences have much easier time identifying their industry problems. However, they will need to conduct an extensive literature review to ascertain that there are no existing solutions that previous scholars have not resolved. On the other hand, those lacking professional experiences tend to work on issues that they found from gaps in the literature review. In either case, there is no excuse for not reading previous scholarly works in the problem area of interest. In a Ph.D. study, the need to read and critically analyze existing literature is very important since the Ph.D. candidate must prove that he or she truly contributes a new knowledge to the current body of knowledge (Hart, 2002).

