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Missing Link on Construct Validity in Qualitative Case Study

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ABSTRACT

This paper aims to evaluate supporting references for the utilization of construct validity at the beginning of a qualitative case study. The term 'construct validity' is used in quantitative study, but it has been claimed to be appropriate for use in qualitative case study as well. However, the quantitative research paradigm is inherently different from qualitative research. The research method in this paper uses descriptive analysis by literature study. It would be compared the consistency for each reference. Results may show that the supporting references for using construct validity in qualitative case study are not so strong. In fact, the revised supporting reference for construct validity has been changed in Yin case. This may be the first paper which criticizes the terminology of construct validity as it actually belongs to quantitative research method.

Keywords: Construct validity, rigor, qualitative, research, case study

JEL codes: M10, M00, M19.

1. INTRODUCTION

The determination of paradigm in qualitative research is important because each paradigm has a different qualitative evaluation (Guba & Lincoln, 1994). It is different from quantitative research, which is only based on positivist paradigm. In quantitative research, construct validity is used to evaluate the rigor of the research and is based on a test of the research to determine the operationalization of the research, which is positivist.

In qualitative case study research, some researchers use construct validity as an evaluation for rigidity by referring to books and articles as a legal basis. In fact, case study also can be used in quantitative research if they conduct a statistical test and then use construct validity as the evaluation test. In a qualitative case study, construct validity may not be appropriate as there are no testing tool is involved.

This paper consists of several sections; first the introduction, which discusses why some qualitative case studies use construct validity as a measure for rigidity, after which the legal basis will be investigated. This paper will look at the fact that qualitative has different evaluation tests than quantitative. Secondly, the literature review discusses the history and development of construct validity in research. The third section discusses methodology and the fourth section includes an analysis which consists of (a) a construct validity claim, (b) a case study in quantitative approach, and (c) Yin construct validity. Finally, there is a conclusion.

2. LITERATURE REVIEW

Construct validity is one of the rigor components in research evaluation, especially in quantitative research. Historically, the term "construct validity" was first proposed in psychology science when testing experiments for the first time. Cronbach & Meehl (1955) studied construct validity from 1951-1954 before the results of the research were published. In this case, there are three steps for the evaluation of construct validity:

- a. Articulate theoretical concepts and interrelations. A theoretical concept should be related to other factors.
- b. Ways to measure the theory for hypothetical construct.

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c. Testing the hypothesized relation empirically.

These steps should be based on an empirical test which is positivist. Then, some years later, Messick (1989) stated that validity was dependent on the quality of construct. In 1995, Messick (1995) added six aspects to measure the test of validity; they are consequential, content, substantive, structural, external, and generalizability. However, these aspects were based on a positivist paradigm with a quantitative approach.

For qualitative research in case studies, the term 'construct validity' was first may be introduced by Yin (1984), who referred to Kidder (1981) in pages 7-8. The book title is "Research method in social relations", and in the book it was stated that construct validity referred to Cronbach et al. (1972). He did not mention the research paradigm of the case study and its approach, quantitative or qualitative. In fact, he compared construct validity to the positivist paradigm which was used in a quantitative approach.

In the first edition, Yin (1984) only described the definition of construct validity in general. He did not explain why construct validity can be used in case study, which was based on Kidder (1981). Then, he separately explained that the use of construct validity is to avoid subjectivity. To pass construct validity, there are two requirements (a) identify a specific change type and (b) measure how the specific change reflects the true change. Then, he used three tactics to achieve rigor; (a) multisource, (b) develop evidence, and (c) evaluate reports by informants. In that book, no specific research approach was used for construct validity, such as a qualitative or quantitative approach. In fact, Yin was a practitioner who worked at Cosmos Corporation which specialized in case study projects.

On the other hand, Silverman (2005; 2006) rejected the use of construct validity as credible criteria in qualitative research. Golafshani (2003) also opined that quantitative inquiry (validity and reliability) cannot be applied in qualitative research as it has a different paradigm. He quoted Wainer and Braun (1998) which stated that the term 'construct validity' was applied only in quantitative research.

3. METHODS

This research applies simple descriptive analysis using a literature study. Papers and books which discuss case studies are analyzed further. The method involves checking quoted references and the analysis is based on researcher quotations, for example:

- a. Paper A quoted from book B on construct validity, then book B was checked for the existing terminology of construct validity.
- b. Book C quoted construct validity from book D, and then book D was analyzed which was under research paradigm and approach.

From those steps, we can see the actual issue on construct validity as well as the paradigm and approach used. In total, there are six papers and eight books used in this paper to check on construct validity issue.

4. ANALYSIS

The analysis of this research consists of three parts, (a) construct validity claim, (b) case study in quantitative approach, and (c) Yin's construct validity. Each part shows that construct validity may find missing links to some quoted references.

4.1. Construct Validity Claim

Gibbert & Ruigrok (2010) claimed that construct validity was referred to from Denzin & Lincoln (1994); however, the term 'construct validity' was not used in that book. Similarly, Anisimova & Thomson (2012) claimed that Stake (1995) used the term of construct validity but the term was not used in that book. Baskarada (2014) stated that construct validity is an operationalization concept in order to make it measureable through empirical observation. This is taken from Loseke (2012), but again there is no term of construct validity in that book. Tarba & Weber (2008) used triangulation and claimed that it used construct validity, which was from Denzin (1978). However, the term construct validity was not available in that book. From these phenomenon's, it can be concluded that some people have different opinions on construct validity. They assumed and concluded that validity on the research was similar to construct validity.

Good research must be based on supporting previous research and clear connections must be made. All relevant previous research must be quoted to link-related theories. The use of construct validity in qualitative research may lose connection to previous research which would implicate the absence of good references used in the analysis. In case study research, construct validity is used in order to achieve better rigor. However, it may lose inherent research paradigm as it only replicates quantitative research which has a different paradigm.

4.2. Case study in quantitative approach

Coleman (2008) used case studies under a quantitative method with construct validity by undergoing statistical tests, whilst Hussein (2009) used construct validity with a mixed method, using the quantitative as a complementary method. A quantitative approach can be used in a case study which uses statistical testing. This, however, was used in the beginning of psychology studies, such as Cronbach & Meehl (1955).

4.3. Yin's Construct Validity

This analysis focuses on Yin's quotation on construct validity. This analysis would show why Yin may have missing link references in qualitative case study research. Some researchers, such as Andrade (2009), use construct validity from Yin (2003) as well as Benijt et al. (2011). However, construct validity may be based on a quantitative approach which is not suitable with a qualitative approach (see table 1).

In the first edition, Yin (1984) stated that the construct validity referred to Kidder (1981). Kidder (1981) also referred construct validity from Cook & Campbell (1979), which was a statistical book, Judd & Kenny (in pres) which cannot be traced, and Cronbach et al. (1972) which was also a statistical book. Thus, the construct validity of Yin was indirectly based on a positivist paradigm with a quantitative approach. This can be also inferred by Kidder (1981) who explained construct validity as variable or as elements which have effect on others.

In the second edition, Yin (1994) changed the reference to Kidder & Judd (1986). In fact, at that time there was a newer revision, a 6th edition, Judd, Smith & Kidder (1991). In a newer edition, construct validity is explained as operationalization or accurately measure how independent variable affect the dependent variable. This may show a model which is based on positivist paradigm. Then, in that book he added the quotation with Campbell & Stanley (1963) on psychological research with quantitative basis as well as Cronbach & Meehl (1955) and Judd & Kenny (1981) on statistical approach.

In the third edition, Yin (2003) added supporting sample papers such as Bradshaw (1999) and Keating & Krumholz (1999), however these references did not quote Yin's paper. Yin (2003) still continued to refer to Kidder & Judd (1986).

In the fourth edition, Yin (2009) added Hipp (2007) who proposed construct validity requirements such as (a) define changes and relate to original objectives and (b) identify operational measurement to match the concept. Thus, this is based on a statistical test. At that time, Judd, Smith & Kidder (1991), the 6th edition had been revised to the 7th edition which was written by Hoyle, Harris & Judd (2001).

In the fifth edition, Yin (2014) added Gibbert, Ruigrok, & Wicki (2008) as reference for construct validity in strategic management. Construct validity was claimed to exist in a higher ranking journal. At the same year, the edition of Hoyle, Harris & Judd (2001) the 7th, was revised by the 8th edition with a new author, Maruyama & Ryan (2014). In the 8th edition, they no longer refer to Cook & Campbell (1979), Judd & Kenny (in pres) or Cronbach et al. (1972). This can be called the missing link of references as no reasons were stated as to why those references were eliminated.

In the sixth edition, Yin (2018) raised the issue of generalization in case study and the weaknesses of subjectivity in case study (Flyvbjerg, 2006; Ruddin, 2006). Still, they referred to Bradshaw (1999), Keating & Krumholz (1999) which have been discussed in the previous edition.

Table 1. The evolution of Yin case study book.

Edition	Year	Reference	Supporting Reference	Sample Papers
1 st	1984	Kidder (1981)	-	-
2 nd	1994	Kidder & Judd (1986)	-	-
3 rd	2003	Kidder & Judd (1986)	-	Bradshaw (1999), Keating & Krumholz (1999)
4 th	2009	Kidder & Judd (1986)	Hipp (2007)	Bradshaw (1999), Keating & Krumholz (1999)
5 th	2014	Kidder & Judd (1986), Gibbert, Ruigrok, & Wicki (2008)	Hipp (2007)	Bradshaw (1999), Keating & Krumholz (1999)
6 th	2018	Kidder & Judd (1986), Gibbert, Ruigrok, & Wicki (2008)	Hipp (2007),	Bradshaw (1999), Keating & Krumholz (1999), Flyvbjerg, 2006, Ruddin, 2006

5. CONCLUSIONS

A quantitative research approach, which is based on positivist paradigm, may have a view with the qualitative one. A case study is part of qualitative research so it has different characteristics; however, some case studies explicitly stated that they were under quantitative approach as they used statistical tests. In this case, case study is not under a qualitative approach. Problems may occur if researchers try to use qualitative case study with quantitative tools such as construct validity.

Research may show researchers claimed that using the terminology of construct validity linked with a qualitative research approach resulted in poor evidence. On the other hand, Yin indirectly refers to quantitative research. The paradigm and approach of qualitative case study methods must be clearly defined in the beginning of research. This would ease the determination of which criteria evaluation was used.

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