Using multiple perspectives to interpret empirical results:

Does it add value to the interpretation?

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Abstract: Can value be added to the interpretation of research results if different perspectives to view research results are used? It is the contention of the authors that it is possible to get a richer interpretation of research findings by reviewing the results more than once, using more than one interpretive perspective. After a first round of interpretation was done, using Habermas' knowledge interests, hermeneutics and Giddens' 'consequences of contemporary modernity' as perspectives, certain concepts in the abundance of empirical results emerged as being more important than others. A further round of interpretation (using Klein and Myers' principles for evaluating interpretive studies) was done to refine the model in order to derive a conceptual framework.

Keywords: hermeneutics, critical social theory, interpretive research, consequences of contemporary modernity

1. INTRODUCTION

The intention of this paper is to consider whether value can be added to the interpretation of research results by using different perspectives to view it. It is the belief of the authors that by *interpreting* various facets of a problem using a variety of perspectives, it is possible to create a theoretical framework for an improved understanding of the problem.

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: [10.1007/978-0-387-35615-0_52](https://doi.org/10.1007/978-0-387-35615-0_52)

2. BACKGROUND

At the University of the Western Cape (UWC) students are linguistically and culturally diverse and their prior educational backgrounds and experience are often not on par. In these circumstances the traditional lecture-based approach to teaching was found to be of limited value. Teaching approaches such as teamwork (Belbin, 1993) (where Belbin's team role theory was used to constitute balanced teams), collaborative learning (Jaques, 1991) and Buzan's (1995) 'mind maps' were used in order to help these students to learn more effectively. Although this study deals with tertiary students in computer-related fields the possible benefits of this innovative approach would be of interest in any field where traditional teaching methods are being reviewed and where students are culturally and educationally diverse. Soft systems methodology (SSM) was used to manage the research process and is described by Checkland and Scholes (1990) as "*an organized way of tackling messy situations in the real world*". Both qualitative (unstructured interviews) (Schön, 1983) and quantitative (self-administered questionnaires) methods were used to collect comprehensive data. Several case studies were conducted and the question thus was: How does one make sense of the derived results?

3. REVIEWING THE RESULTS

It was decided to add a further layer of understanding to the findings of these case studies by interpreting the results using several perspectives: Habermas' knowledge interest perspective (Habermas, 1974), Giddens' "*consequences of contemporary modernity*" perspective (Giddens, 1992), as well as the hermeneutic perspective (Lee, 1993). The results of these inductive interpretations were used to develop an initial conceptual framework (see Figure 1). To evaluate the interpretation and the quality of

Figure 1. Using Klein and Myers' principles to evaluate a conceptual framework

framework, the set of principles for interpretive studies as proposed by Klein and Myers (1999) was used and a final framework was derived.

3.1 The Habermas perspective

Habermas identifies three types of “*knowledge interests*” which he believes drive all human inquiry. **Technical:** the human need for prediction and control of the natural and social world. **Practical:** the quest for understanding social forms of life and traditions, thus improving humanity. **Emancipatory:** the concern for freedom from physical and mental restrictions and social distortions. In Table 1 the empirical results of the case studies using this perspective are summarised (also in Venter and Blignault, 1998).

KNOWLEDGE INTEREST	KNOWLEDGE PRODUCTS	RESULTS OF THE RESEARCH
TECHNICAL	Scientific Knowledge	Students acquired scientific knowledge – they improved their academic achievement. <i>I used to memorise everything – I did not try to understand it. Now I find that if you understand it, it makes it less work</i>
	Technology	They applied their knowledge using available technology.
PRACTICAL	Social Consciousness	Students learnt to respect and value diversity within their teams. <i>You learn from each other, we discuss and you get different ideas and different views ...¹</i>
	Humanity	<i>... getting a sense of where you all are coming from because we had all different ideas about things and how to do things.</i>
EMANCIPATORY	Norms for Justice	They were released from the “shackles” of their educationally disadvantaged background – an emancipatory experience.
	Freedom	<i>I never thought I could be a leader</i>

Table 1. The empirical results of the study in terms of Habermas’ knowledge interests

3.2 The Hermeneutic perspective

Five concepts are central to the hermeneutic discipline (Lee, 1993) (see Table 2). **Distanciation:** the separation that occurs between the author and his work. **Autonomisation:** separated from the author, the author’s work “*takes on a life of its own*”. **Social Construction:** the text of the author is not restricted to the meaning he had intended. **Appropriation:** the reader’s interpretation may differ from the meaning the author had intended. **Enactment:** Once the reader has appropriated the text, he or she can now

enact the meaning of it. Results of the research through this perspective are summarised in Table 2 (and are also in Venter and Blignault, 1998).

HERMENEUTIC CONCEPTS	RESULTS OF THE RESEARCH
DISTANCIATION	Belbin roles – the intended use is different from the actual use. The lecturer becomes the facilitator – thus the role is distanced from the traditional role. <i>I mean it brought the whole class like together . . . formal lectures is, you just sit down and listen to the lecturer ...</i>
AUTONOMISATION	Belbin is applied to develop lifelong skills instead of constituting effective managerial teams. <i>I gather information and then give it to my group .. I am a Resource Investigator.</i>
SOCIAL CONSTRUCTION	Team member socially constructs team role. Material to be mastered is not studied verbatim but <i>understood</i> .
APPROPRIATION	Team member appropriates Belbin role. Mind map allows appropriation of study material. <i>There is a structured approach to it. So the mind map shows you exactly this comes from this section...</i>
ENACTMENT	Student applies material mastered to contribute effectively to team. <i>You can't gauge a person's worth from what they study in a book</i>

Table 2. The results of the case studies in terms of the hermeneutic perspective

3.3 Giddens' perspective

Communities are being transformed by modern society with its globalising tendencies. According to Giddens (1992), time and space play a central role in the structuring of social practices. Modern practices allow for the *separation of time and space* in social relations, as they allow relations to exist between people present and absent in time and space. This separation of time and space '*disembeds*' the local context of the interaction of social relations. Social life is thus propelled away from the certainty of pre-established rules and practices, giving rise to the concept of *institutional reflexivity*. The notion of the *separation of time and space*, the *disembedding* of social practices and *institutional reflexivity*, are directly connected to the psychological security of the individual and groups (see Table 3). With this interpretive layer of research, important concepts emerged that will be drawn together in a conceptual framework.

GIDDENS	TRANSFORMATION	RESULTS OF THE RESEARCH
"GLOBALISATION"	Separation of Time and Space	Students ' <i>meet</i> ' lecturer and team colleagues virtually. Learning is removed from the classroom – thus it is separated in time and space
	Disembedding Mechanisms	Traditional student-lecturer relationship changed
	Institutional Reflexivity	Chronic revision of the teaching process. Roles of both lecturer and learner revised
INDIVIDUAL TRANSFORMATION	New Trust Systems	Students need to trust new approach and trust their colleagues (team).
	Reflexive Project of the Self	Individual becomes team member. Student needs to be reflexive about contribution he/she can make to team

Table 3. The results in terms of Giddens' 'consequences of contemporary modernity'

4. A PRELIMINARY FRAMEWORK

A number of principles, as described by Klein and Myers (1999), were used to evaluate the results achieved in a first attempt at deriving a framework (see Figure 2), and will aid in its further refinement. **The fundamental principle of the hermeneutic circle** suggests that understanding can be achieved through an iteration process, thus with each 'pass' (of interpretation) the understanding of the research problem and the findings of the research become more complete. **The principle of contextualisation** means that: the situation must be seen within the social and historical context. The context of this research is the theoretical preconceptions of the researcher, the subject (students at UWC) and the background (students with a poor grasp of English and an unacceptably low throughput). **The principle of interaction between researchers and the subjects** means that: the researcher needs to be sensitised to the 'subjectivity' of interpretation. When applying **the principle of abstraction and generalisation**, the first two principles should be kept in mind. It is thus applied (in Figure 2) 'over' the results and findings, in an attempt to allow common and prominent themes to emerge. **The principle of dialogical reasoning** requires sensitivity in order to identify contradictions between preconceptions and actual findings. Habermas' knowledge interests, Giddens' '*consequences of contemporary modernity*' and hermeneutics, represent the **principle of multiple interpretations**.

Researchers need to be aware of bias and the twisting of the 'truth' - **the principle of suspicion**. 'Biases' can be revealed when using the interpretive 'lenses'.

5. CRITIQUE

The conceptual model depicted in Figure 2, when considered closely, does not represent a conceptual model for *understanding* group constitution for small group learning but rather a conceptual model for understanding the *research process* that has taken place. In an attempt to refine the rough framework, we consider an alternative – the rectangle on the right (see Figure 2), which depicts the **Principle of Abstraction and Generalisation**. This subset will now be considered separately and will be used to derive a conceptual framework for *understanding* group constitution for small group learning.

Figure 2. Towards a framework for group constitution for small group learning in the field of information technology

The principle of abstraction and generalisation requires a relating of the factual details revealed by the data interpretation to general concepts that describe the nature of *human understanding* and *social action*. In the traditional lecturer-student relationship the student learns about the subject and applies knowledge, while the lecturer has knowledge about the subject. In Table 4 the concepts that describe the nature of human understanding and social action are applied to both the student and the lecturer; both are

transformed after the implementation of small group learning. In a traditional lecturer-student relationship model the complete *social action* dimension, as well as the reflexive project of the self and institutional reflexivity of the *human understanding* of Table 4 are lacking. Small group learning thus adds a *social action* dimension to the learning experience.

	Student	Lecturer
Human Understanding	<p>Reflexive project of the self (Reflect on learning, and role within team)</p> <p>Technical Knowledge Interest (Learn about subject, improve academic achievement and apply knowledge learnt)</p>	<p>Institutional Reflexivity (Chronic revision of teaching methods)</p> <p>Technical Knowledge Interest (Lecturer has knowledge about subject, cooperative learning and teamwork, but learns about group development and applies this new knowledge gained)</p>
Social Action	<p>Disembedding Mechanism (Transformed from individual to team member, tasks/study material previously "linear", now mind maps)</p> <p>New Trust Systems (Must trust effectiveness of small group learning and trust team members)</p> <p>Separation of time and space (Students meet with lecturer virtually as well as with team members)</p> <p>Autonomisation (Students create their own understanding of the study material)</p> <p>Social construction, appropriation and enactment (of team roles as well as appropriation of tasks to be completed)</p> <p>Empower and emancipate</p> <p>Practical Knowledge Interest (Social consciousness and valuing diversity)</p>	<p>Disembedding Mechanism (From lecturer to facilitator)</p> <p>New Trust Systems (Trust that new role will not let him/her lose control)</p> <p>Separation of time and space (Virtual classroom has no time boundaries)</p> <p>Autonomisation (Lecturer has to accept the different interpretations of tasks set)</p> <p>Distanciation (Intended use of Belbin roles distanciated from original use, lecturer distanciated from traditional role)</p>

Table 4. A framework for understanding group constitution for small group learning

6. CONCLUSION

When using the framework (Figure 3), derived from Table 4, to understand group constitution for small group learning, a much 'richer' insight is achieved compared to the simple narrative of the teaching strategies used. This richer insight was derived by implementing a cyclical process in which the original findings of the case studies were interpreted using three perspectives, and the findings of this process were then evaluated using Klein and Myers' principles for interpretive studies. This framework thus simplifies the knowledge transferal of the transformed student-lecturer relationship.

Figure 3. Framework for understanding group constitution for small group learning

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