

APPLYING PHENOMENOGRAPHY TO EDUCATIONAL RESEARCH IN VIETNAM

ÁP DỤNG PHENOMENOGRAPHY CHO NGHIÊN CỨU GIÁO DỤC TẠI VIỆT NAM

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Abstract - As a new approach to educational research, phenomenography has surprisingly escalated in popularity in many countries. However, within the research context in Vietnam, there has been a lack of literature related to this research approach. This paper overviews phenomenography as a research approach and discusses its potential applications in the educational context of Vietnam. The author believes studying this approach would help to fill knowledge gaps in research methods and develop phenomenographic research in the future. Applying phenomenography to educational research will also contribute to the way of seeing pedagogical theories and practices in various ways. The approach can be applied to certain areas of the Vietnamese educational context including (1) students' perceptions of disciplines, (2) students' perceptions of the influence of learning environment on their performance, and (3) teachers' experiences of teaching and doing research.

Key words - phenomenography; phenomenographic research; research approach; educational context; students' perception; teachers' experience; application of phenomenography; research context in Vietnam.

1. Introduction

Phenomenography is the empirical study which has been used to research experience of learning, teaching, ways of experiencing the content learned, and describing aspects of the world around us. As a new approach to educational research, phenomenography has reached a surprising degree of popularity in many countries beyond Sweden where it originated. Learning to undertake phenomenographic research helps to contribute to the way of seeing pedagogical theories and practices in various ways [3].

Within the research context in Vietnam, there has been a lack of literature related to phenomenography. The purpose of this article is to overview this research approach and discuss possibilities of its application to the educational context of Vietnam.

2. Phenomenography as a research approach

In the 1970s, a research group in Sweden carried out a number of projects on student learning. The findings of the projects showed that each phenomenon, concept or principle can be understood in a limited number of qualitatively different ways, which means there is a variation in what students understand and in how they understand a phenomenon. This work of the researchers laid the foundations for the research approach known as *phenomenography*.

2.1. Questions raised in phenomenography

Phenomenography is a research approach developed from an educational framework that is designed to answer

Tóm tắt - Phenomenography được xem là một phương pháp tiếp cận mới trong nghiên cứu giáo dục và ngày càng được sử dụng rộng rãi ở nhiều quốc gia. Tuy nhiên, trong bối cảnh nghiên cứu ở Việt Nam hiện còn thiếu thông tin về phương pháp nghiên cứu này. Bài báo trình bày sơ lược phenomenography như một cách tiếp cận nghiên cứu và giới thiệu những khả năng áp dụng phương pháp nghiên cứu này vào bối cảnh giáo dục của Việt Nam. Tác giả cho rằng nghiên cứu phenomenography giúp bổ sung khoảng trống thông tin và giúp phát triển phương pháp nghiên cứu này trong tương lai. Áp dụng phenomenography vào nghiên cứu giáo dục sẽ góp phần nâng cao nhận thức về những vấn đề lý thuyết và thực hành sư phạm theo nhiều cách khác nhau. Phenomenography có thể được áp dụng trong một số lĩnh vực trong nghiên cứu giáo dục tại Việt Nam: (1) nhận thức của sinh viên về môn học, (2) nhận thức của sinh viên về ảnh hưởng của môi trường học tập đến kết quả học tập, (3) trải nghiệm của giảng viên về giảng dạy và nghiên cứu.

Từ khóa - phenomenography; nghiên cứu phenomenography; các tiếp cận nghiên cứu; bối cảnh giáo dục; nhận thức của sinh viên; trải nghiệm của giảng viên; áp dụng phenomenography; bối cảnh nghiên cứu ở Việt Nam.

certain questions about thinking and learning. The point of departure for the early phenomenography was to empirically investigate the two following question: (1) *What does it mean, that some people are better at learning than others?*, and (2) *Why are some people better at learning than other?*

In both phenomenography and phenomenology, what is under study are phenomena, objects as they appear to people. However, the major difference between phenomenography and phenomenology is that in a phenomenological study the phenomenon per se is investigated, whereas in a phenomenographic study the researcher investigates how a group of people view or understand the phenomenon. In other words, in phenomenology the essence of the phenomenon is sought while in phenomenography the researcher looks for the variation of people's ways of understanding or conceptualising the phenomenon, that is, the different ways the phenomenon with its different aspects appear to people. This is referred to as a second-order perspective [5].

The subject matter of phenomenography is man-world relations, or described in another way, phenomenography is concerned with the relations that exist between human beings and the world around them [6]. Within the interpretive paradigm, a phenomenographic research project reveals qualitatively different ways in which a phenomenon can be experienced, understood or perceived by a student cohort [7].

2.2. Object of study in phenomenography

The object of study in phenomenography is variation in

the ways that a phenomenon has been experienced by a group of people [7]. Phenomenography aims at collective analysis of individual experiences. The object of study is the relationships between the study's population and the phenomenon, that is, how a phenomenon is experienced by the study's population and the variation in the ways this phenomenon is understood [5]. Therefore, the aim of the research project using a phenomenographic approach is to understand the object of the study by analysing the relationship between the population of the study and the phenomenon.

The relationships between the researcher, the population of the study, and the phenomenon is illustrated in Figure 1, in which the phenomenon cannot be seen in isolation because the point of interest in the study is the way the phenomenon is understood and experienced by the subjects. Phenomenography takes the position that experience is relational, not purely objective, independent of people, nor purely subjective, independent of the world. The relationship between the researcher and the phenomenon is unavoidable because the researcher is required to have a thorough knowledge and understanding of all aspects of the phenomenon they are attempting to analyse [11].

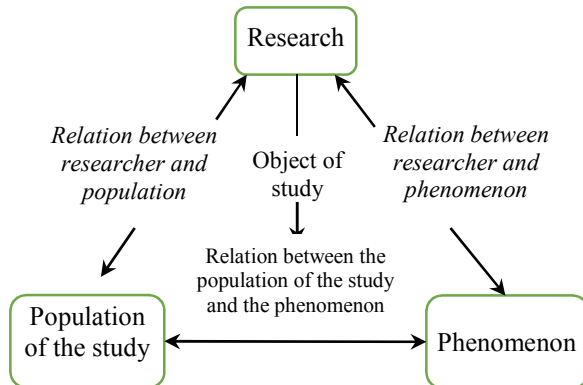


Figure 1. Object of Study
(Source: Adapted from Bowden, 2005)

As Figure 1 shows, there is also a relationship between the researcher and the population of the study to help the researcher work toward an articulation of the interviewees' reflections on experience that is as complete as possible [7]. According to Stamouli & Huggard (2007), the relationship between the researcher and the phenomenon, and the relationship between the researcher and the population of study is necessary so that the researcher is able to discuss and query the learner about the various facets of the phenomenon [11]. However, the researchers need to be careful about imposing their own interpretation of the phenomenon on the student cohort, and their relationship with the population may affect their viewpoint and analysis. The researcher should ensure that the focus of the research is maintained on the object of study, that is the relation between the subjects and the phenomenon, rather on the researcher's own relation to the phenomenon [3]

2.3. Variation and the structure of awareness

In order to characterise the variation of experiencing

different phenomena, it is important to understand what it means to experience a phenomenon in a particular way. This section turns to an in-depth discussion of the participants' experiencing phenomena using the phenomenographic concept of the variation theory.

According to the variation theory, every phenomenon can be experienced in a finite number of qualitatively different ways and a way of experiencing something is defined in terms of critical aspects of the phenomenon in question as discerned and focused upon by the experiencer at the same time [9]. Participants can discern an aspect of a phenomenon when they experience variation in a dimension corresponding to that aspect [7].

Literature shows that a number of phenomenographic researchers have used a structure of awareness as a framework to analyse and describe different ways of experiencing a phenomenon. A description of a structure of awareness can be illustrated as in Figure 2.

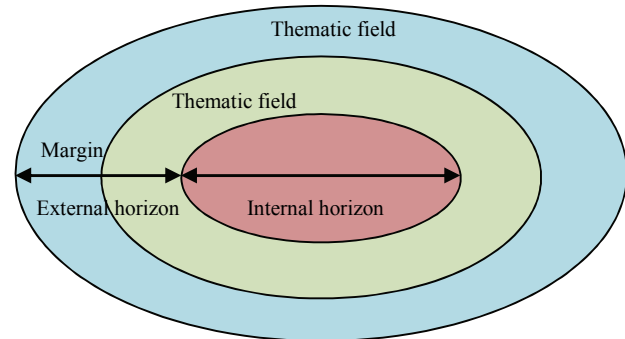


Figure 2. A structure of awareness
(Source: Marton & Booth, 1997)

As can be seen in Figure 2, a structure of awareness is described in terms of an internal and external horizon. The internal horizon consists of the aspects of the phenomenon simultaneously present in the theme of awareness, and the relationships within these aspects and between the aspects and the phenomenon as a whole. The external horizon consists of the thematic field and the margin, that is, all aspects that are part of awareness at a particular instant but which are not thematic. The external horizon as an area of awareness forms the context in which the theme sits. The boundary between the external and internal horizons delimits the theme from its context [7].

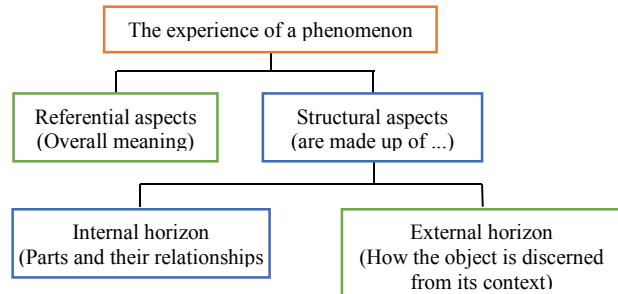


Figure 3. Referential and structural ways of experiencing
(Source: Marton & Booth, 1997)

Cope (2004) explains one way of describing a way of experiencing a phenomenon using referential and structural aspects of the structure of awareness [4]. The

referential aspect refers to the overall meaning given to experience which may differ among participants or even for the same participant over time [9]. The structural aspect which represents the discernible aspects of the phenomenon consists of internal horizon and external horizon. The description of a way of experiencing a phenomenon should incorporate a structural aspect and a referential aspect. In the structural aspect, the dimensions of variation should be simultaneously presented in the internal horizon.

The description of the referential and structural ways of experiencing a phenomenon is illustrated in Figure 3.

2.4. Outcomes of phenomenography

The main findings of a phenomenographic study are *categories of description* of the various conceptions of a phenomenon. However, a phenomenographic study is not only simply reporting these different conceptions. It also involves identifying the conceptions *and* looking for their underlying meanings and the relationship between them [6]. Marton also says that the different ways of experiencing different phenomena or concepts are representative of different capabilities for dealing with those phenomena or concepts. Some ways of dealing with phenomena or concepts are more productive than others. Thus, the conceptions, or ways of experiencing, and their corresponding descriptive categories can not only be related, but also be hierarchically arranged. The ordered and related set of categories of description is called *outcome space* of the concept being studied [6].

The outcomes of a phenomenographic study include *categories of description* and *outcome space*. The categories of description refer to a range of qualitatively different ways in which the same aspect of the world has been experienced by a group of people who are highly confident that their interpretation is the most reasonable [2]. The description of the logical relationships between the categories of description, often in the form of a hierarchy from less comprehensive to more comprehensive is referred to as an outcome space. Central to this outcome space is that the categories will be logically related, typically hierarchical in nature, with each successive category being more complex way of experiencing the phenomenon under investigation.

According to Marton & Booth (1997), the categories of description are required to meet three criteria:

- (i) the categories must be logically related,
- (ii) the categories should be parsimonious. The minimum number of categories should be used to fully describe the variation in the ways of experiencing the phenomenon, and
- (iii) each category must completely describe a distinctly different aspect of the experience of a phenomenon. In other words, each category of description must be qualitatively different from the others [7].

The hierarchical relationships between the categories are not value judgments from 'better' to 'worse' [1]. However some categories of description are inclusive of

other categories and, as such, the structural relationships in a phenomenographic outcome space are those of hierarchical inclusiveness. Categories of description developed can never form an exhaustive system for the aspect of the world, but they should be complete for experiences of the groups of people under consideration at a particular point in time [7].

3. Potential application of phenomenography in the educational context of Vietnam

Bowden (2005) states that phenomenographic research methods can be used to study a range of issues, including approaches to learning, approaches to teaching, understanding of scientific phenomena learned at school, or understanding of general issues in society unrelated to educational systems [3]. An overview of literature shows that the amount of phenomenographic research used in educational context has been increasing in many countries. The benefits of phenomenographic study in education research may encourage the use of this research approach in the educational context of Vietnam in the following, but not limited, areas.

3.1. Studying how students experience understanding and constructing of new knowledge in a specific discipline

Phenomenography has proved to be a fruitful approach for studying students' experience of learning in higher education where students are generally encouraged to develop conceptual understanding. The goal of teachers or instructors is to assist their students in developing conceptions that are consistent with those of experts in different disciplines. By experiencing a skill or concept in different ways, an individual is able to compare their original experience of that skill or concept to their new experience of the skill or concept.

Literature indicates that phenomenographical research has become more popular in studying to probe how students experience understanding and constructing of new knowledge about a variety of disciplines such as general education, IT, engineering and technology, business, nursing and health... Funda Ornek (2008) argues that it is appropriate to use the framework of phenomenography to investigate students' ways of experiencing of an introductory physics course [8]. Bowden (2005) used the research to provide findings which could then be used in teaching and learning physics, especially the research outcomes could further be employed to comment on textbook treatments of the physics phenomena under scrutiny, and on the way in which physics students are taught and assessed [3]. A group of researchers from the Queensland University of Technology applied phenomenography approach to undertake research to understand the various ways of students' experience of significant aspects of Civil Engineering. Literature also points out that phenomenographic approach may supply the disciplines of nursing and nursing education with knowledge about variations in how patients, nurses and students think, but especially the structural and content aspects of how phenomena are experienced in nursing situations.

The critical aspects of the phenomenon of a specific

discipline are necessary for developing scientific understanding in education. Phenomenographic information about the different conceptions that students hold for a particular discipline may be useful to teachers in adjusting curricula and teaching methods. Another possible advantage of phenomenographical research is that “students may become aware of contradictions in their own reasoning and become more open to alternative ideas as they reflect on their views and understandings of their world experiences” [6]. The research outcomes can help in the planning of learning experiences which will lead students to a more powerful understanding of the phenomenon under study, and of other similar phenomena. They can also be used to develop generalisations about ways to organise learning experiences in particular subjects.

3.2. Studying to understand students’ perceptions of the influence of learning context on their academic performance

As a research approach, phenomenography has historically been concerned with exploring questions relating to learning and understanding, that is, how students learn and how they see knowledge within a particular context. The focus of phenomenography on learning and the experience of learning in different contexts has meant that learning related to phenomena comprises the most typical experiences investigated using this research approach [10]. Furthermore, the historical foundation of phenomenography in the discipline of education has endured and its on-going development as a research approach has primarily occurred in this sphere.

In this area, it is suggested that phenomenographical researchers focus on studying particular groups of students such as students in specified programs, disadvantaged groups or minority groups of students... The knowledge about how these students perceive the factors influencing their learning in a specific context may help educators and policy makers to make some changes for improving the students’ academic performance.

3.3. Studying how teachers experience their teaching and doing research

The outcomes of phenomenographic research are often subsequently dealt with within the broad phenomenographic framework which has a characteristic theory of learning. However, as Bowden (2005) argues, this is not the only possible application; the research outcomes may later be used within a quite different framework. The authors applied phenomenography to examine a range of ways in which researchers experience their research activities and success in their research [3]. Akerlind (2005) also conducted this research approach to investigate academics’ ways of experiencing being a researcher. The results can be fed back into training activities for researchers and research supervisors [1].

4. Conclusion

Phenomenography is an empirical research tradition that was designed to answer questions about thinking and

learning, especially for educational research. Within the research context in Vietnam, there has been a lack of literature related to phenomenography. The overall purpose of this article is to discuss potential applications of phenomenography as a research approach in the educational context of Vietnam.

In order to respond to the requirements of basic and comprehensive innovation in higher education in Vietnam, educators can benefit from this research approach to improve or develop their teaching strategies and their curricula by understanding students’ conceptions and thoughts about the disciplines. Studying this method would help to fill the gap in the knowledge of research methods and to develop phenomenographic research in the future. Potential areas of using this research approach may include, but not limited to: (1) students’ perceptions of understanding specific disciplines, (2) students’ perceptions of the influence of learning environment on their performance, and (3) teachers’ experience of teaching and doing research.

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