A RESEARCH TOOL IN INVESTIGATING ELT TEACHERS' THINKING: THE REPERTORY GRID OBSERVATION TOOL (CHECKLIST & NOTES)

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ÖZET
Bu çalışmadaki amaç öğretmenin nasıl düşündüğünü ortaya çıkaran çalışmalarda kullanılan bir veri toplama aracını tanıtmaktır. 7 İngilizce öğretmeninin kişisel teorilerini uygulamadaki davranışlarında gözlemleyebilmek için geliştirilen Repertory Grid Gözlemleme aracı sunulmaktadır. Bu veri toplama aracı orijinal olarak ilk kez bu çalışmada kullanılmıştır, değişik çalışmalarda da gözlemleme yapmak amaçlı olarak kullanılabilinir.

Bu araç, öğretmenlerin kişisel teorileri ile birlikte onları sınıf ortamlarında izleyebilmeyi ve oluşan davranışsal değişiklikleri ortaya koymayı olanaklı kılmaktadır. Öğretmenlerin bilişsel gelişmelerinin yanı sıra davranışlarında oluşan değişiklikleri ve ilişkiyi gözlemlemek amaçlı geliştirilmiş bir araştırma aracıdır.

Anahtar Kelimeler: Repertory Grid, Öğretmenin düşünme sistemi, Gözlemleme Aracı, Yapılandırmacı Yaklaşım, Bilişsel ve Davranışsal değişim

ABSTRACT
The main aim of this paper is to present an observation tool that was used in teacher thinking. The "repertory grid observation" tool was designed to see 7 ELT teachers' theories in action. The originality of the tool is that it can be used as an observational tool for varied purposes together with repertory grid tool.

In accordance with the teachers' personal theories through repertory grid, the repertory grid observation tool was improved so as to observe the teachers in classes and to be able to see their behavioural changes between the beginning and end of the study. This tool also helped us see the consistency between teachers' behavioural change and conceptual change.

Keywords: Repertory Grid, teacher thinking, observation tool, constructivism, conceptual & behavioural change

INTRODUCTION

Many studies were concerned with teacher thinking. They were interested in the content and nature of teachers' thinking. These studies (see Munby, 1986) were based on an assumption that the differences in teachers' beliefs would be reflected in the teachers' teaching behaviours. Some of the researchers investigated teachers' background, their content knowledge, curriculum decisions made in class, lesson planning strategies, classroom management decisions, reflection and educational philosophy. But little formal attention was given to researching the nature of the relationships between the teachers' thinking and action (or behaviour, which will be used interchangebly). We believe that the process of teacher thinking is such a private

experience that it cannot be explored through classroom observation by itself. In our discussion, we approach teacher thinking from the constructivist perspective. The core assumptions, mentioned by Pope (1993: 20-1), for teacher thinking from the constructivist perspective are:
- the world is real but individuals vary in their perception of it;
- an individual's conception of the real world has integrity for that individual;
- teachers use personally pre-existing theories to explain and plan their teaching;
- teachers test these theories for fruitfulness and modify them in the light of such testing.

Literature Review

Teacher thinking in terms of methodology and the area of focus have been influenced by the work of Kelly (1955) and his philosophy of constructivist alternativism. Ben Peretz (1984, cited in Pope, 1985: 106) notes that

> *Investigating teacher thinking in the framework of personal construct theory may have practical implications. Making people aware of their own construing patterns and processes play an important part in allowing them to change, i.e., to learn. Thus, participation in the research may become an educative process for teachers. More-over, workshops and exercises for identifying personal constructs may be planned as part of teachers' professional training and development.*

Personal construct theory enables analysis of learner and teacher thinking in terms of the content and structural relationships between constructs. Sendan (1995) and Sendan and Roberts (1998) described the complexities of change in student teacher thinking. Until Sendan's (1995) research, studies approached ELT teacher thinking in terms of one-dimensional lists of variables, which reflected neither the complexity of learning processes nor the systematic nature of changes in teacher thinking. The key points to be researched were to describe "the way in which student teacher thinking developed as a process, and how personal constructs related to each other as a system." Sendan found the content and structure distinction to be of great importance when describing conceptual change in student teachers. When structural development was taken into account, it was necessary to disqualify the conventional view of preservice training as a not very powerful intervention on student teachers' personal theories (Zeichner in Roberts, 1998).

Some of the recent researchers have begun to address questions related to the relationship between teacher thought and teacher behaviour (Livingston & Borko, 1989). There is Clark's study (1986) on teachers' thoughts and actions. Teachers' thinking, reflections on their concerns and experience of reflection and clarification were discussed in Day, 1984; Connelly & Clandinin, 1985; Butt, 1984 and Yinger, 1987. On the other hand, Ben Peretz (1984), working within a constructivist tradition, has studies which explored the constructs teachers have regarding curriculum materials, modes of curriculum interpretation and implementation of innovative curricula. Pope (1993: 22) mentions the current paradigm in research which aims to link teacher personality to action in the classroom and asserts that

a current core assumption is that teacher thinking researchers are trying to understand and interpret ways in which teachers make sense of and adjust to and create the educational environment within their schools and classrooms. Whilst sharing a focus and ideological commitment to viewing teachers as active agents in the development of educative events, the field of teacher thinking is diverse in terms of theoretical and methodological approaches.

Another focus in teacher thinking is the patterns of beliefs which have been intensively used by educational researchers in order to understand the nature of teaching and learning in classrooms. There is a growing body of research literature which suggests that the beliefs that teachers hold directly affect both their perceptions and judgements of teaching and learning interactions in the classroom, and affect their teaching behaviours (Clark & Peterson, 1986; Clark & Yinger, 1987). Evidence is also growing that beliefs and patterns of thinking are an essential aspect of the development of effectiveness both through initial teacher education and training, and later through teachers' professional development and their effectiveness in the classroom (Cole, 1990). In the educational psychology or cognitive science literature, there is a significant amount of research on individual belief systems, that is, integrated systems of concepts, scripts and scenes that lend meaning to action systems in classrooms (Mayer et al., 1984).

The Problem and the Philosophy

In this paper, we will deal with a research instrument - the observational tool of repertory grid. The reason for designing such a new instrument was to be able to see behavioural change/s of 7 ELT teachers at the end of an in-service teacher development program. The repertory grid tool helped us only to see the conceptual change/s of teachers. We needed more data since we aimed to see the behavioural changes of the teachers and the consistency between the teachers' conceptual change and behavioural change at the end of the study.

Kelly's constructivism is powerful in terms of understanding teachers' thinking and also this theory has got methodological component - the repertory grid elicitation tool (see Appendix 1). The repertory grid (in Kelly's introduction- the "role repertory grid") is used as a means for investigating a person's conceptual structure relevant to inter-personal relations by having them classify a set of people significant to them in terms of elicited personal constructs. It is a technique for exploring a person's personal construct system and its organization in order to understand the world of meaning in which that person lives. It is an indirect knowledge acquisition technique, derived from Kelly's (1955) personal construct theory.

We may say that it is a heuristic tool for investigating the person's conceptual schemeta (see Notes). It is utilised to investigate the content; the nature of the constructs (see Notes), and their structure; the way constructs are related to each other as a system of teachers' personal theories. Moreover, this tool is heuristic for elicitation of teachers' personal theories because of not imposing any structure on the teachers (as in the case of a questionnaire or an interview), but represents the teachers' own construction of issues. While concept mapping is a powerful method for assisting

learning at the conceptual level, it is not as effective at improving the recall of details as the repertory grid.

However, the repertory grid tool cannot be used for evaluating a person's behaviour/s. Neither can it be used as an observation tool for investigating behavioural change/s of a person. Observation was the only tool that we had to use in order to study the teachers' behaviours. Choosing the right observation tool was one of the most difficult decision of this study. It took long time to search for the right one. We could not find a right one. Therefore, we needed a new observation tool which was consistent with the nature and the philosophy of constructivism and the repertory grid.

The reason for choosing observation is that it provides direct evidence of teacher behaviour, teachers' interactions with students, and offers first hand information of their teaching in their own classes. We may call the observations "structured" but not fixed for all teachers. Since the teachers' priorities and concerns are different, so their constructs along with its scope and limitations are subject to the teachers.

The Study

The teachers' personal theories--from different starting points and concerns on the research questions were elicited through repertory grid to find out teachers' perceived needs. The focus in content of the repertory grid was "the features of an ELT teacher that lead to effective language teaching". Of the research questions, the researcher was able to identify changes in the content and structure of teachers' learning throughout the program. As mentioned before, one of the aims of the study was to investigate if there were any conceptual changes and behavioural changes at the end of the program. And another aim was to see whether conceptual change was consistent with the teachers' behavioural change. So, within these limited aims, we needed an observation tool which was consistent with the philosophy of the study. In the literature, we searched for an appropriate observation tool but could not find one. Any observational tool would not suit the needs of this study. As a result of this need, we designed our own tool; the repertory grid observation checklist and notes. In the following paragraphs, we will explain how the tools are prepared and used.

How This Tool is Used

To observe the behaviours and the changes of the teachers personal constructs, the researcher employed observation at the beginning and end of the study, right after the repertory grid administrations. At the end of the study, teachers' conceptual change/s and behavioural change/s were analysed and any consistencies between conceptual and behavioural changes were identified.

In the process of the teacher development program, after each repertory grid session, an observation time was scheduled with the teachers. The teachers were aware of the research process and what/why the researcher was doing. The researcher visited the classes with observation notes in which each teacher's elicited constructs were written down on observation sheets as "the items on which the teachers will be observed." Besides observation notes, the researcher used observation checklists in which each teacher's constructs were written down and a 5-point rating scale (as in the repertory grid sheet) is included.

The research instrument prepared for observation as observation checklists and observation notes were different for each teacher since each teacher's elicited constructs (through repertory grid elicitation technique) were different at both times. The teacher's name, observation date, and the observation number (1st or 2nd) were noted (see Appendix 2). The rating scale was kept in its original place and each teacher's emergent and implicit constructs (similarities and contrasts) were listed down with the same numbers as on the original repertory grid sheets. At the top of the sheets, high priority constructs of the teachers' were written down. Only the element columns and teacher's ratings of constructs in the original repertory grid sheets were omitted. So, the researcher had one observation note and one observation checklist for each teacher beforehand for the observation sessions. On the observation note sheets, each teacher's elicited constructs were observed in classes, and observed constructs were noted in detail by the researcher. The researcher entered the classes and sat at the back of the classrooms. In order to be objective, the researcher observed each teacher for two hours (45 minutes each lesson). All observable constructs elicited from the teachers were rated through the observation sessions by the researcher on the base of the teacher's actual performance in class. The observations of constructs were limited by what meaning was attached to the construct by the teachers in the elicitation process. So, the teachers' constructs (only observable ones; some were not observed such as "open to change") were observed and rated within the scope and limits of the meaning they attached. In order to avoid bias, the researcher did not note down the teacher's actual own ratings of constructs for self as teacher. During each classroom observation, the researcher made use of detailed field notes using classroom observation checklists and classroom observation notes (see Appendix 2)--so as to produce lesson profiles, which provide specific notes on each construct provided by the teacher.

During the data analysis of behavioural changes of teachers, the teacher's ratings and the researcher's ratings were placed side-by-side and compared (See Appendix 3 as an example). Teachers' own ratings for themselves (self as teacher) on the constructs and the researcher's observation ratings on observed constructs were listed and compared at the end of the observation sessions. After the comparison of teachers' own ratings for "self as teachers" and the researcher's ratings of teachers, the data were discussed and the findings were presented (see Appendix 3). Discussions and the findings of this study are also limited with the participants of this study. We do not want to generalize the findings.

After Observation

After each teacher's observation sessions, teachers were given feedback on their constructs (personal theories) and behaviours (theories in action), the strengths and weaknesses of teachers on the observed constructs. Teachers were given feedback both on their own constructs and other observed behaviours (that is, those not mentioned in their repertory grids) during observation sessions. The purpose for doing this was to make them more aware of how they see themselves (verbally expressed constructs of their own) and what else they have in their repertoire. Giving feedback allowed the teachers to review and react to evidence of their teaching. It gave the teachers advance warning and a clear indication of what improvement is needed. We negotiated with the

teachers on each construct and thus it allowed them to think about "why and how they are doing" instead of "what they are doing." It was a completely new experience for teachers.

In order to avoid bias, only the researcher conducted observation assessments. Observations lasted two class hours in each session. The observation assessment was used as pre and post measures right after the repertory grid sessions with teachers. The researcher, while interpreting the data, referred to the observation checklists and observation notes as well as the feedback notes.

CONCLUSION

We interpreted each teacher's repertory grid data obtained at the beginning and end of the study in order to see the teachers' conceptual change. And the interpretations of classroom observation notes and checklists let us see behavioural change/s of the teachers as well as investigate to what extent each teacher reflected his/her personal theories on his/her actual behaviours.

The observation was noteworthy because of the immediate impressions of the teachers and the researcher. Observation data were triangulated by follow-up interviews with the teachers in order to give feedback and clarify the notes on each construct during observation. From the above mentioned points, the repertory grid observation tool is valuable. In practice, the researcher gained a more accurate and deeper understanding of the teachers' values, structures, and conflicts from their actions (Ekmekçi, 1999: 30). The findings helped us see the consistency between their personal theories and theories in action.

The repertory grid and the observation data obtained from the teachers suggest that both the content and the structure of seven teachers' personal theories regarding the features of a teacher that lead to effective language teaching showed significant changes. The data suggested that most of the constructs of the teachers' were observed in classes except high inference constructs such as; experienced / inexperienced, open to change / closed to change.

By using repertory grid as a research method, we were able to gain access to the teachers' personal theories. So, we could monitor changes in their thinking. We, now, feel that using repertory grid tool should be encouraged in education as an appropriate instrument for investigating and exploring personal construct systems of the participants. In our study, the repertory grid data gave opportunity to discuss the initial patterns with the teachers in the subsequent interviews, enabled triangulation of the data.

However, repertory grid elicitation tool did not enable us to see and test the personal theories elicited through repertory grid from the teachers. The repertory grid observational tool we designed gave us the opportunity of seeing the behaviours and testing behavioural changes of the teachers. For the teachers, active involvement in the research process—elicitation, interview and observation- seems to have led to greater consciousness of their personal theories held on teaching and on self as teacher. They have developed their abilities to reflect on their experiences in conjunction with their personal theories.

NOTES: Some Key Terms

Conception is seen as mental structure of a person's beliefs, assumptions, and presuppositions, some of which are tacit. "It is a schema of concepts developed from theoretical studies, from practice and from interactions with the world and society. A conception is a dynamic entity that can undergo changes based on practice and/or exposure to other sources of knowledge" (Gorodetsky, 1997: 424).

Perceptions are represented by what Kelly called "constructs." Constructs are bi-polar concepts which can be used to discriminate events in a given context. Based on a person's past experiences, elements are rated according to the constructs. A person represents his/her environment by using constructs. Constructs are in an interrelated organisation which change from time to time. And the repertory grid technique elicits the person's constructs accurately and reflects the changes in an individuals construct system over time. The grid technique elicits the true structure and organization of the individual's construct system.

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APPENDIX 1
The Repertory Grid Elicitation Sheet

(Source: Sendan, 1995)

Participant: Class: Date: Category: No.:

Construct No	Triads	Emergent Constructs (Similarities)	Elements	Rating Scale 1 2 3 4 5											Elements	Implicit Constructs (Contrasts)
				E1	E2	E3	T1	T2	T3	I1	I2	I3	Self	Ideal		
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																

Rank Order: 1. 2. 3. 4. 5.

APPENDIX 2

REPERTORY GRID OBSERVATION CHECKLIST

Participant's Name: **Observation Number:**
Date of Observation: **Hour:**

EMERGENT CONSTRUCTS **(SIMILARITIES)**	1 - 2 - 3 - 4 - 5 ⟵ ⟶	IMPLICIT CONSTRUCTS **(contrasts)**
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

RANK ORDER OF CONSTRUCTS: **1.** **2.** **3.** **4.** **5.**

APPENDIX 2

REPERTORY GRID OBSERVATION NOTES

Participant's Name: **Observation Number:**
Date of Observation: **Hour:**

EMERGENT CONSTRUCTS **(SIMILARITIES)**	**DURING OBSERVATION**	IMPLICIT CONSTRUCTS **(contrasts)**
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

RANK ORDER OF CONSTRUCTS: **1.** **2.** **3.** **4.** **5.**

APPENDIX 3

OBSERVATION ANALYSIS (an example)

OBSERVATION 1 (At the Beginning of the Study)

Consruct Number	CONSTRUCTS	Berna's rating for Self as teacher	Observer's rating
C1	Friendly	2	2
C2	Is prepared before lesson	2	2
C3	Open to change	2	Not observed
C4	Is well organised in teaching	2	3
C5	Gives importance to ss' ideas in class	1	2
C6	Makes students work harder	2	2
C7	Uses extra materials	2	1
C8	Uses English in class effectively	2	1
C9	Motivates students	2	1
C10	Makes students search for new things	2	2

OBSERVATION 2 (At the End of the Study)

Consruct Number	CONSTRUCT	Berna's rating for Self as teacher	Observer's rating
C1	Friendly	1	2
C2	Is prepared before lesson	2	1
C3	Open to change	1	Not observed
C4	Is well organised in teaching	2	1
C5	Gives importance to students ideas in class	1	1
C6	Makes students work harder	1	1
C7	Uses extra materials	2	1
C8	Uses English in class effectively	2	1
C9	Motivates students	2	1
C10	Makes students search for new things	2	1
C11	Has good English knowledge	2	1
C12	Speaks English fluently	2	1
C13	Has good pronunciation	1	1
C14	Gets on well with students	2	2
C15	Is active during lesson	1	1