

Teacher Learning and Change: Consistency between Personal Theories and Behaviours

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Abstract –The purpose of the research reported here is to discuss teachers' learning and perceptual change/s of ELT teachers and to be able to find out the consistency between conceptual and behavioural changes of teachers from the view of constructivist approach. The relationships of personal theories (constructs) and theories in action (behaviours) will be dealt with. Furthermore, the content and structural changes of constructs between the beginning and end of the study will be discussed. The nature of the constructs studied here will be presented through the use of multiple data sources-but with special reference to repertory grid data-so that a more comprehensive understanding of the participant's thinking system is possible. We will exemplify the change by considering the constructs of an ELT teacher. In this study, we have presented the participant's personal theories deeply and from various perspectives during an in-service teacher development program.

Key words: Conceptual & behavioural change, constructivist approach, ELT teacher, personal theory, repertory grid.

Özet – Öğretmenin Öğrenmesi ve Değişimi: Bireysel Teoriler ve Davranışlar Arasındaki Tutarlılık – Çalışmanın amacı İngilizce öğretmenlerinde öğrenme ve bilişsel düzeyde yaşanan değişim ile davranışsal düzeyde yaşanan değişimi bir hizmet-içi program sürecinde çalışıp bu değişimlerin arasındaki ilişki ve bu ilişkinin birbiri ile uyumluluğunu tartışarak yapılandırıcı bakış açısından sunmaktır. Çalışmada öğretmenin ortaya koyduğu bireysel teorilerini pratikte ne kadar yaşama aktardığı ilişkisi ele alınacaktır. Bireysel teoriler içerik ve yapısal düzlemde ele alınıp çalışmanın sonunda alınan mesafe oranındaki değişim incelenecektir. Bireysel teorilerin içerik ve doğası birkaç veri toplama aracı ile sunulacak olup, özellikle *repertory grid* ölçme aracı ile yapılan ölçme ve analizlere gönderme yapılmasının nedeni çalışmadaki öğretmenin düşünme sistemini daha iyi kavramamızı olanaklı kılmasıdır. Bu çalışmadaki değişim bir öğretmen özelinde örneklendirilerek aktarılacaktır. Katılımcı bir dil öğretmenin bireysel teorileri hizmet-içi öğretmen geliştirme programı boyunca ele alınıp değişik açılardan incelenmiştir.

Anahtar kelimeler: Bilişsel & davranışsal değişim, yapılandırıcı yaklaşım, İngilizce öğretmeni, bireysel teoriler, *repertory grid*.

Introduction

In this study, we are trying to report and discuss learning of professional language teachers and perceptual change/s of teachers, and to find out the consistency between

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conceptual and behavioural changes of teachers from the view of constructivist approach.

Learning may mean different things in different disciplines. Learners may think of learning as a way to know in detail s/he has to acquire and/or memorize. Or learners may think of it as acquiring new skills and methods. While a learner is trying to learn new ways of thinking and doing, it is likely that change is inevitable. Since learners at different levels and fields may have different needs, they, in the early stages of learning, need more guidance than learners in the later process. When they advance their studies, learners come to reflective process. By furthering learning with their own understanding, their world begins to change through reinterpreting and integrating knowledge with their own experiences. So, learning is important in terms of understanding how a person can change, and it may be important for developing and encouraging for the sake of change. That is change is not viewed as modification of behaviour, but referred to as teachers making coherent sense of personal meaning regarding new ideas and information; mapping new onto old, formulating beliefs in light of experience and input, forming ideas in light of beliefs, and reviewing ideas in light of observation and reflection (Mathur, 1987, cited in Yumru, 2000). Understanding, learning and change in this study is conceptualized from the view of personal construct theory- or so called constructivism.

Constructivism is an approach that has emerged within the cognitive school of thinking and it underlies much work currently undertaken in the field of education. The essence of constructivism is that people are “personal scientists” (Kelly, 1955) who are active sense-makers and continually assessing their environment and acting according to the ways in which they interpret the situation. This perspective highlights the fact that people may react to the same information in very different ways while learning. Importantly, constructivism sees learning as an internal process of interpretation, rather than a process of knowledge transmission. In this point, we should distinguish constructivism from behaviourism.

In behaviourism, learning is seen as the conditioning of human behaviour through habit formation. It implies the dominance of the teacher, with learners characterized as essentially passive, which constructivism strongly disagrees. Knowledge and social reality are seen as external, value-free and objective whereas constructivism (Kelly, 1955) emphasizes the notion of “context and process” to understand behavioural change. Considerable research across a range of disciplines has contributed to ideas about how people change their own behaviour.

From the above discussions, this study is an attempt to accomplish the nature of EFL teachers’ perceived needs for change at the outset of a teacher development program. Within this framework, the participant of this study is expected to be aware of the process of learning through problem solving and decision making. So we adopt a problem-centered approach to professional development by setting up one’s own agenda for change

The Study

This part of the paper presents about the participant and the research instruments (see appendix) used in this study. The repertory grid tool (see appendix 1) was used for the elicitation of teachers' personal theories about effective teaching, and the observation tool of the repertory grid (see Yaman, 2004) was used as well as the learning log (see Yaman, 2004), reflecting the teacher's feelings during the process of learning and change.

The participant mentioned in this study was a teacher of English at a private school in Mersin. She had taught English for 3 years when the study was conducted. She was the graduate of ELT department. Throughout this study, we will call the participant as "the teacher", and when a pronoun is needed, "she" will be used because of her sex. She was a volunteer participant of the program, and she spent valuable time and effort for this study.

Repertory grid elicitation suited to the development of reflective practice through reflection-on-action. Since constructivist view implies certain principles for language teachers, the ELT teacher's strengths and weaknesses were analyzed; her starting point and concerns were identified. The content of the repertory grid was constructed by the researcher but nothing was imposed as used in other data collecting tools. This gave to the researcher a chance to see things from the teacher's own perspective objectively and chance to uncover the teacher's personal theories related to effective language teaching in her profession.

The repertory grid is a good technique for elicitation of the teacher's personal theories because it does not impose any structure on the teachers (as in the case of a questionnaire or an interview, for example), but represents the teachers' own construction of issues. This made the teacher feel at ease. The utmost aim of the researcher in using repertory grid (see Yaman for the procedure) was to find out conceptual change of the teacher between Times 1 and 2 (the beginning and the end of the study). To observe the behavioural change/s of the teacher, the researcher employed observation at Times 1 and 2, right after the repertory grid administrations. At the end of the study, the teacher's conceptual change/s and behavioural change/s were analyzed and the consistency between conceptual and behavioural changes was identified.

After each repertory grid session, observation dates were negotiated with the teacher. She was asked to arrange a suitable date for a 2 class period observation. During each classroom observation, the researcher made use of detailed field notes—classroom observation checklists and classroom observation notes (see appendix 2,3) so as to produce lesson profiles, which provide specific notes on each construct provided by the teacher.

The reason for choosing observation is that it provides direct evidence of teacher behaviour, the teacher's interactions with students, and that it offers first hand information of their teaching in their own classes. We may call the observations as

“structured” but not fixed for all teachers and any cases. Since we believe that the teachers’ priorities and concerns are different, its scope and limitations are subject to the teachers.

The researcher, after completing repertory grid sessions, designed observation checklists in which the teacher’s elicited constructs were written down on separate sheets as “the items on which the teacher were going to be observed.” Besides observation checklists, the researcher designed another sheet for observation notes in which the teacher’s constructs are written down and a 5-point rating scale is included. The teacher’s class was observed for 2 class periods in order to see the teacher’s personal theories in action. The researcher, this time, rated each construct of the teacher based on the observed lesson. The teacher’s own rating for herself (self as teacher) on the constructs and the researcher’s observation rating were listed. The teacher’s own rating for “self as a teacher” and the researcher’s rating were compared and used for data analysis. The aim for this type of observation was to see the consistency (if any) between their personal theories and theories in use. After each observation sessions, the teacher was given feedback on provided constructs (personal theories) and behaviours (theories in action), the strengths and weaknesses of the teacher on the observed constructs. The teacher was 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 her more aware of how she sees (verbally expressed constructs of her own) herself and what else she has in her repertoire. Giving feedback allowed the teacher to review and react to evidence on her teaching. It gave the teacher advance warning and a clear indication of what improvement is needed. The teacher was negotiated on each construct and this allowed her to think “why and how she is doing” type of thinking instead of “what she is doing.” In order to avoid bias, only the researcher conducted observation assessments and conducted observations for each session in her class. The observation assessment was used as pre and post measures right after the repertory grid sessions with the teacher. The researcher, while interpreting the data, referred to the observation checklists and observation notes as well as the feedback notes. The recordings were noteworthy because of the immediate impressions of the teacher and the researcher. Observation data were triangulated by follow-up interviews with the teacher in order to give feedback and clarify the notes on each construct during observation.

Data Analysis and Discussion of the Findings

The Content and Structure of the Teacher’s Personal Theories Regarding Effective Language Teaching at the Beginning of the Study

The teacher’s grid data consists of 10 constructs (see operational definitions) and 11 elements (see operational definitions). Her FOCUSed grid shown in Figure 1 illustrates the construct and element trees drawn at 80% cut off point (see operational definitions).

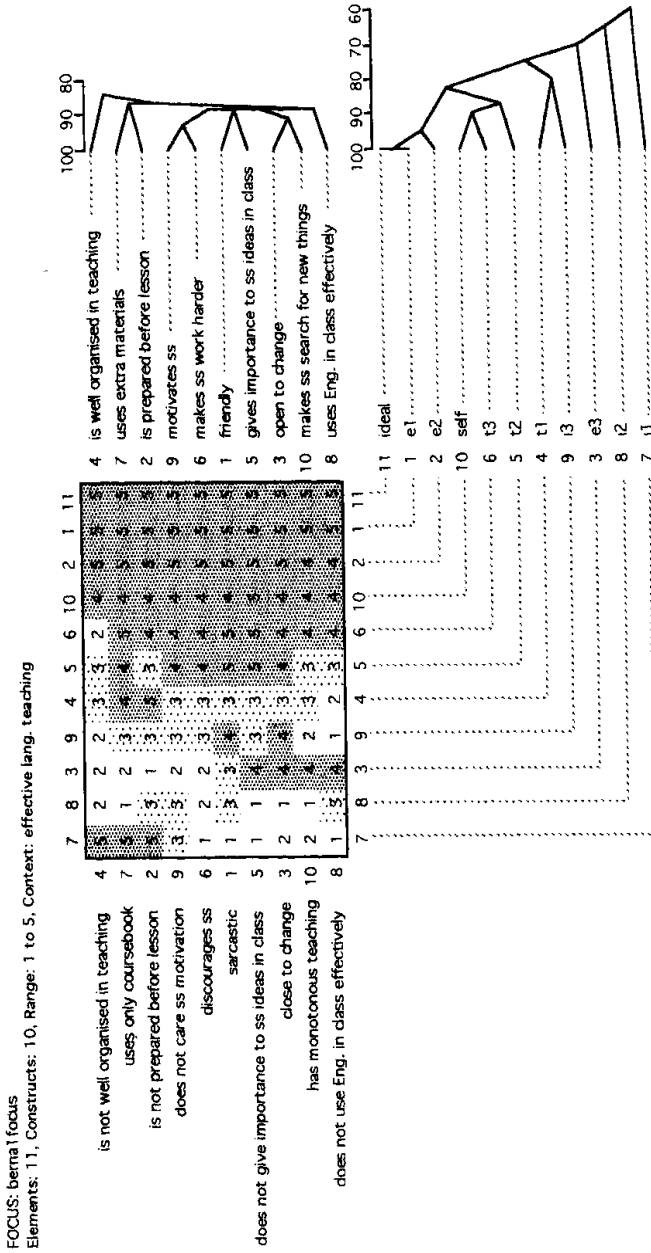


Figure 1. Her FOCUSed grid at Time 1

Construct Links

The FOCUS analysis of her Time 1 grid produced one main construct cluster consisting of 3 pairs and an isolated construct linked to the rest at a high level (88.6%). Another small cluster consisting of 3 constructs, a pair and an isolated construct are linked to the pair at 84.1% level.

She associates ‘uses extra materials’ (C7) and, one of her most important construct, ‘is prepared before lesson’ (C2) at 86.4% match level. That is, she seems to think that using extra material in class needs teachers to be well prepared for their classes before the lesson. So, teachers who use extra materials in class prepare themselves and materials before the actual lesson. She associates these two constructs close to each other by putting them in pair.

Towards the middle of the grid, main cluster consists of 6 constructs, each two of them forming a pair. The construct pair ‘motivates students’ (C9) and ‘makes students work harder’ (C6) have the highest level of link (93.2%) in her Time 1 grid. She appears to construe these teachers who believe that making students work better is a way of motivating students. So, she sees a direct relationship with motivation and directing students for better working. In fact motivation (C9) is one of her top priority constructs.

In the second pair, she associates ‘friendly’ (C1) and ‘gives importance to students’ ideas in class’ (C5) at 88.6% match level. Thus, she seems to think that teachers who give importance to students’ ideas in class behave friendly. In another saying, teachers who are sarcastic do not give importance to students’ ideas in class.

In the last pair, ‘open to change’ (C3) and ‘makes students search for new things’ (C10) are construed similarly at 90.9% match level. She construes two of her top priority construct pair (C3 and C10) in this cluster. To her, teachers who are open to change, naturally, make their students search for new things. In this main cluster, she places 3 of her 5 most important constructs (3, 9 and 10).

Her second most important construct ‘uses English in class effectively’ (C8) has direct links with the constructs in the main cluster (9, 6, 1, 5, 3 and 10) and the pair (7 and 2). This construct is construed highly with ‘makes students search for new things’ (C10) at 88.6% match level.

The construct, ‘is well organised in teaching’ (C4) remains in isolation at Time 1 grid. She appears to construe the issue of being well organised in teaching as a construct rather loosely related to the other constructs in her grid. She does not associate this construct closely with effectiveness in language teaching. She does not seem to be ready to associate this construct with her other personal theories.

Element Links

The element links in her FOCUSED grid at Time 1 (see Figure 1) do not indicate a clear pattern. Different types of teachers do not form clearly separate clusters. When we look

at the position of ideal self as teacher in her Time 1 grid, we see that it is very highly matched (100%) with the one she classifies as the most effective teacher (E1). The second highest match is with that of an effective teacher (E2) at 95% level. Her ideal self as teacher seems to be almost identical to teacher E1 and almost identical to teacher E2 with the exception of the constructs ‘makes students search for new things’ (C10) and ‘uses English in class effectively’ (C8).

Current self as teacher is positioned in a cluster comprising typical teachers T3 and T2, having links with them at 90 and 87.5% levels respectively. When we compare the current self and ideal self, we can see that on 9 out of 10 constructs, she is closer to preferred construct poles. She seems to think that there is room for improvement in these nine constructs (1, 2, 3, 4, 6, 7, 8, 9 and 10). Although she sees her current self close to the one of her typical teacher (T3) at 90% match level, she believes that her current self is a better teacher than her T3 on being well organised in teaching and her T3 is better than her current self on using extra material and being friendly. Thus, we assume that she perceives self as teacher as having the features of typical teachers more than that of her ideal self as a teacher and her best teacher (E1). Therefore, we may state that she is ready for change as she believes she has not achieved the features of her ideal self as teacher yet.

She views her T1 and I3 as a loose pair matched at 80% level. One of the effective teachers, E3 is viewed as possessing some features of ineffective teachers and places in isolation like her I1 and I2.

The Content and Structure of Her Personal Theories Regarding Effective Language Teaching at the End of the Study

Construct Links

Her grid data consists of 15 constructs and 11 elements. Her FOCUSed grid shown in Figure 2 illustrates the construct and element trees drawn at 80% cut off point.

Her FOCUSed grid at Time 2 produced 2 tight main clusters, one pair and 2 isolated constructs. The first main cluster consists of two pairs—each having a subordinate construct. There is one other pair directly linked with the constructs in the first main cluster. The second main cluster consists of a tight pair and a subordinated construct with one other rather loose pair.

At the very top of the grid, she associates ‘has good English knowledge’ (C11) and ‘makes students search for new things’ (C10) as a tight pair at 90.9% match level. Her second most important construct (C11) at Time 2 and one of her previously most important constructs at Time 1 (C10) form a pair very closely (at 90.9% level). To her, only those teachers who have good English knowledge can make their students search for new things. Those teachers who have limited English knowledge teach English monotonously.

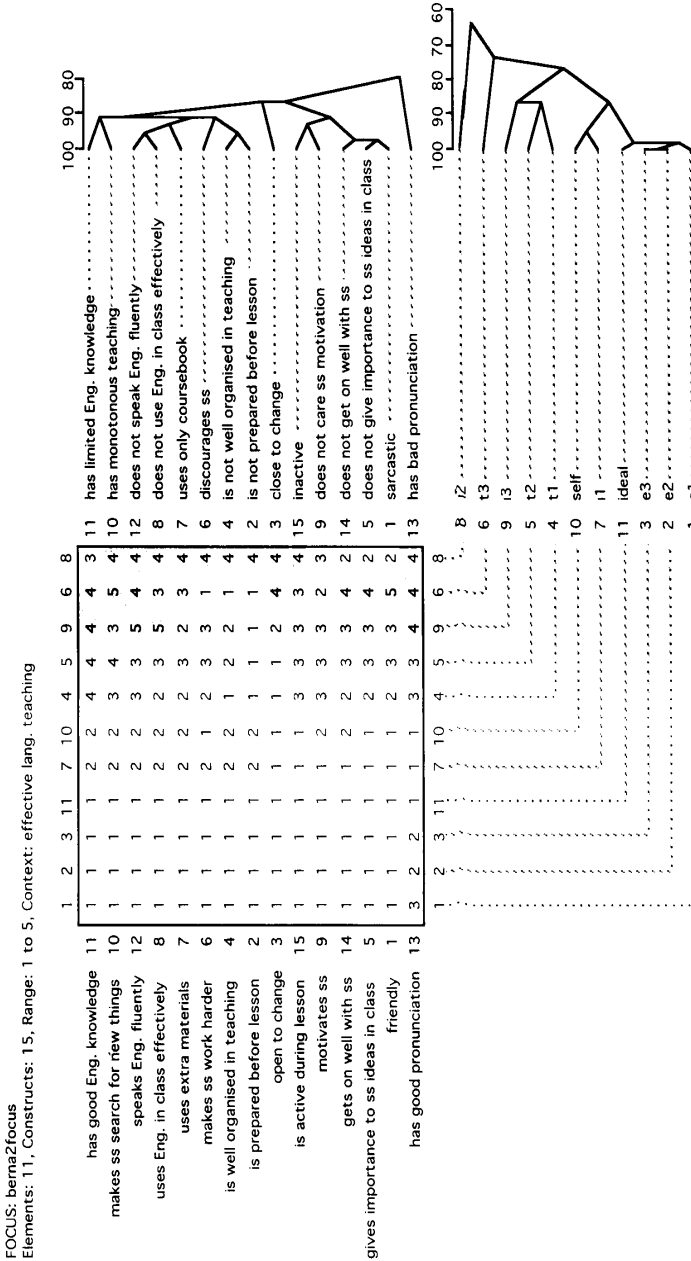


Figure 2. Her FOCUSed Grid at Time 2

In the first main cluster, ‘speaks English fluently’ (C12) and ‘uses English in class effectively’ (C8), which are 2 of her most important constructs related with the teaching behaviours of teachers at Time 2, associate highly at 95.5% match level. At a slightly lower level, ‘uses extra materials’ (C7) subordinates this pair (at 93.2% level). This may mean that, to her, effective language teachers can both speak English fluently and use English in class effectively. Such teachers can use extra materials besides course books in class. She rationalises her view regarding the importance of speaking and teaching in English in the following extract.

Extract 1

I have always believed that to be able to speak English fluently and to teach English by speaking in class are “musts” for an ideal language teacher. Personally, I try to speak English fluently and speak English in my classes. As a skill, speaking is my priority and that’s why I encourage my students’ speaking English in my class. I love teaching speaking and listening courses.

In the same cluster, ‘is well organised in teaching’ (C4) and ‘is prepared before lesson’ (C2) are perceived to be similar at 95.5% match level. At a slightly lower level (90.9%) the construct, ‘makes students work harder’, subordinates this pair. To her, teachers who are well organised in teaching are those who are well prepared to their classes. Similarly, such teachers make their students work harder, and do not discourage students in class.

In the second main cluster, ‘motivates students’ (C9) and ‘is active during lesson’ (C15) are construed similarly at 93.2% match level. Giving a high priority to her construct, ‘motivates students’ (C9), she seems to think that teachers who are active during lesson can motivate students. She stated how she perceived constructs 9 and 15, as follows:

Extract 2

To me, passive teachers can not motivate students. For the classroom environment, teachers should be energetic and on the move. That is if teachers are quiet, slow-moving and cold-blooded, then students’ motivation can not be high. Only teachers who are active and energetic can motivate students easily.

Her most related constructs are ‘gives importance to students’ ideas in class’ (C5) and ‘friendly’ (C1). These two constructs (C5 and C1) are matched very tightly at 97.7% level. And ‘gets on well with students’ (C14) is construed similarly at the same level (97.7%). She associates three personal qualities of teachers in the same sub cluster. This might indicate that she is aware of the personal qualities of teachers and makes a clear grouping among constructs. Of her three most related constructs, one is her third most important construct (C14) in the rank order at Time 2. It relates to the teachers’ approach towards students in class. We may assume that teachers who give

importance to students' ideas are friendly towards students. Similarly, these teachers can get on well with their students.

One of the academic quality constructs, 'open to change' (C3), places in the middle of two main clusters. This construct, as an isolate, links all the other constructs in her grid at 86.4%. Thus, open to change seems to be like an umbrella term for construing all her personal theories. She does not associate this directly with any constructs but sees it as a prerequisite for the others. Similarly, she did not necessarily associate construct 'has good pronunciation' (C13) with effectiveness in teaching, but it is construed as a positive academic characteristic that teachers may possess.

Element Links

FOCUS analysis of her Time 2 grid (Figure 2) seems to be chaotic. Similar to her first grid, her element clustering does not indicate a clear pattern at the end of the study. That is, each teacher group (effective, typical and ineffective) does not show separate groups. In the second grid, we see two element clusters, a pair and two isolated elements.

The most closely related (100%) elements are E2 and E3 (her second and third effective teachers). Her most effective teacher (E1) subordinates this element pair at 98.3% match level. Similarly, her ideal self as teacher subordinates this element pair at 98.3% match level. In this cluster, we see that her effective teachers (E1, E2 and E3) and her ideal self as teacher form a clear group and are viewed in a close relationship to each other. When we look at the position of ideal self as teacher (C11) at Time 2 grid, we see that it is highly matched with that of effective teachers. Her ideal self as teacher seems to be very similar to her effective teachers (E1, E2 and E3) with the exception of the construct, 'has good pronunciation' (C13). For that particular construct, she sees her current self as having a better pronunciation than her effective teachers.

Very closely, she construes her current self with her most ineffective teacher (I1) as an element pair at 95% match level. Current self as teacher is positioned as a close pair with her I1. She construes her most ineffective teacher between her ideal self as teacher and her current self. It is very surprising to see that I1 is viewed like one of her effective teachers. When we compare the current self and ideal self, she seems to think that she perceives her current self close to one of her ineffective teachers (I1) at 95% level. There is room for improvement in 9 out of her 15 constructs (11, 10, 12, 8, 7, 4, 2, 9 and 14).

Changes Observed Between Time 1 and Time 2

Content

The comparison of her two grids yields significant changes in regard to content of the constructs. In contrast to her grid at Time 1, she displays a larger repertoire of

constructs at Time 2. When we analyse her second FOCUSed grid, we see five additional constructs. These are; ‘has good English knowledge’ (C11), ‘speaks English fluently’ (C12), ‘has good pronunciation’ (C13), ‘gets on well with students’ (C14), and ‘is active during lesson’ (C15). The reason for the addition of three constructs (C11, C12, and C13) might be due to her action research project topic and her classroom inquiry process focusing on “how to improve students’ speaking English in my classes.” Since she focused more on speaking skill during the program and prepared both herself and her classes on her problem, she did readings on how to improve students’ speaking and encourage them by using English in class.

Kelly (1955) states that

“Whether or not a person will change his or her constructs depends on permeability of constructs, the success or otherwise of predictions entailed by the constructs and the extent of change will depend on the nature of the inter-relationships between constructs and their position within the person’s repertoire” (cited in Pope, 1985: 17).

Particular changes in regard to C11, C12 and C13 might be attributed to the process canalized by the ways in which she anticipates events (Kelly, 1955). The other two newly accommodated constructs (C14 and C15) are related to teachers’ personal qualities and management skills. The reason for new constructs might be due to feedback she got after she was observed. Dealing with students’ speaking problems, encouraging them to speak English in class, and finding some resistance from the students were tiring for her, so she stated as follows:

Extract 3

It is tiring for me to direct them to speak English more I know there are many reasons for their not speaking voluntarily. This resistance in their language learning process may lead them to become people who know grammar, understand written texts but are not able to speak. This is my fear and most language teachers’ fears. I want to overcome this problem because my students are at the very beginning of their language learning process. Because of this resistance, I have difficulties in controlling my voice and my attitudes towards my students. I am trying new techniques and creating new approaches towards my students. I try to be friendlier and more active in class and use my body language more in order to make them speak English in class.

Thus, she might have construed being active during lesson and getting on well with her students for the purpose of being an effective language teacher.

Structure

The discussion about the structural changes in her grids at Time 1 and Time 2 will be mentioned in the exchange grid analysis below.

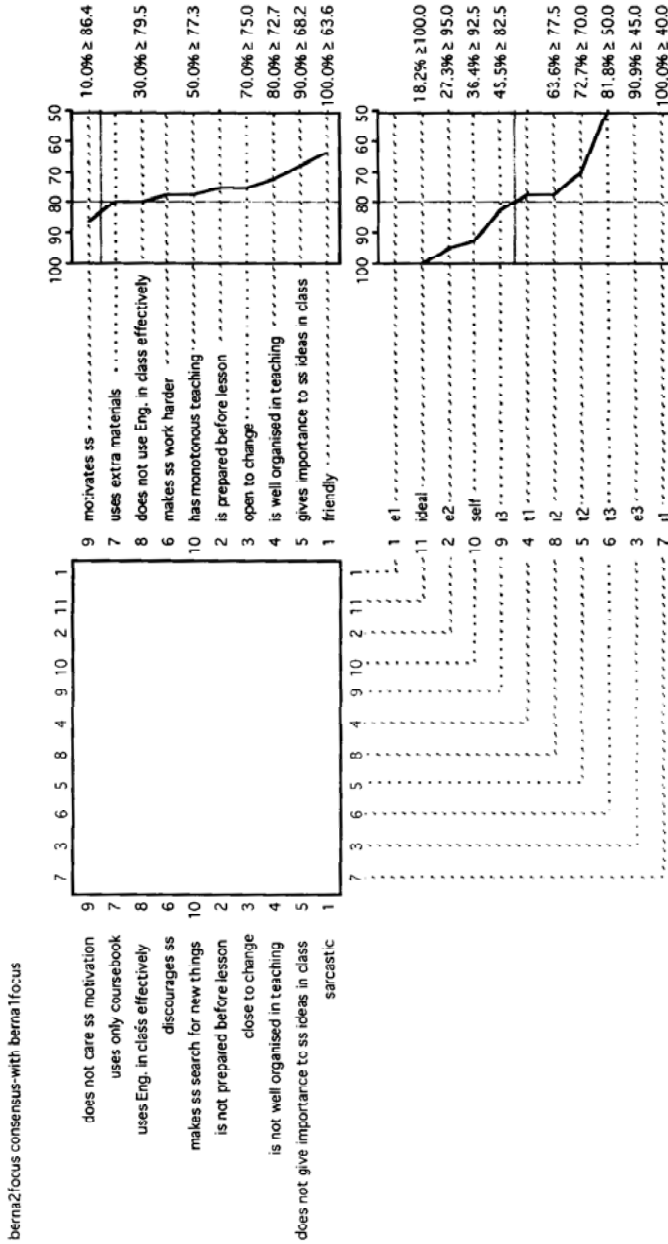


Figure 3. The Exchange Analysis of her FOCUSed 1 and FOCUSed 2 grids

The Exchange Analysis of Her Time 1 and Time 2 Grids

The exchange analysis of her grids at Time 1 and Time 2 display structural changes that took place both in the constructs and the elements. The overall element consensus is 45.5% and construct consensus is 10% over 80% match level (Figure 3).

Construct Changes

The significant changes at 80% cut off point took place in 9 out of 10 constructs. These changes (from the least to the most) are as follows: (C7; 79.5%), ‘uses extra materials’, (C8; 79.5%) ‘uses English in class effectively’, (C6; 77.3%), ‘makes students work harder’, (C10; 77.3%) ‘makes students search for new things’, (C2; 75%) ‘is prepared before lesson’, (C3; 75%) ‘open to change’, (C4; 72.7%) ‘is well organised in teaching’, (C5; 68.2%) ‘gives importance to students ideas in class’, and (C1; 63.6%) ‘friendly’.

At Time 1, ‘uses extra materials’ (C7) associated with ‘is prepared before lesson’ (C2), one of her top priority constructs at Time 1, at a loose match level (86.4%). At Time 2, this construct (C7) subordinated two of the teacher’s top priority constructs (pair of C8 and C12); ‘speaks English fluently’ and ‘uses English in class effectively’ very highly at 93.2% match level. We may suggest that at the beginning of the study. She held the belief that a teacher who used extra materials was always well prepared for their classes. In fact, she mentioned about using the course book and extra materials repeatedly during a follow-up interview. The interview account below may be shed lighter on how she perceived this issue:

Extract 4

Even in the private schools in Mersin, teachers’ preferences on which course book should be taught are not taken into consideration. This is the result of either the publishing companies’ close relationships with the school or the idea that the previous books should be used for economic reasons. I am not happy with the course book. The alternative I put forth here is to use extra materials besides the course book (some parts of which are ignored) and instead I integrate the extra materials into the curriculum for the students’ sake. I don’t say this is the easiest way. On the contrary, using extra material means extra work, extra preparation, extra energy and time for the teachers.

However, the experiences she has gone through served to change her mind. Consequently, at the end of the study, she made new associations and started to believe that a teacher who uses extra materials should teach those materials for the purpose of teaching speaking skill and these extra materials should support students’ speaking language. Therefore such a teacher should speak English fluently and use English, not

Turkish, in class effectively. In this turn, she adopted her previous construct towards her new aim and focus.

The second construct that showed significant structural change, 'uses English in class effectively', (C8) had links with the rest of her constructs (except 4) loosely at Time 1 grid, as her second most important construct in the rank order. However, at Time 2, this construct became her foremost construct in the rank order and formed a tight pair with one of her most important construct, 'speaks English fluently' (C12) at 95.5% match level. On the other hand, 'makes students work harder' (C6) formed a tight pair with 'motivates students' (C9), one of her top priority construct at Time 1, at 93.2% match level. However, at Time 2, this construct (C4) subordinated 'is well organised in teaching' (C4) and 'is prepared before lesson' (C2) at 90.9% match level. She, seeing a direct association with motivation and making students work harder at the beginning of the study, made new associations with making students work harder and being well organised and being well prepared before lessons. At the end of the study, she started to believe that in order to make students work harder, teachers should be prepared for their classes and should be well organised.

Another construct that showed structural change is 'makes students search for new things' (C10). It was considered as one of her top priority constructs and directly linked with another top priority construct (C3) 'open to change' at Time 1. It formed a pair closely with one of her high priority constructs, 'has good English knowledge' (C11) at Time 2.

At Time 1, holding the belief of teachers who are open to change can not have monotonous teaching, she leaned towards the belief of teachers who have got good English knowledge can not have monotonous teaching; such teachers encourage students' research.

One of her top priority constructs at Time 1 'is prepared before lesson' (C2) had a loose link with 'uses extra materials' (C7) at 86.4% match level. However, this construct (C2) formed a tight pair (at 95.5%) with 'is well organised in teaching' (C4) at Time 2. She, at the beginning of the study held the belief that teachers who use extra materials, besides course books, are those who are prepared for their classes. Consequently, at the end of the study, she made new associations and started to believe that well prepared teachers are those who are well organised in their teaching.

One the other hand, her foremost important construct at Time 1, 'open to change' (C3) associated with 'makes students search for new things' (C10) at 90.9% level. However, at the end of the study, this construct (C3) lost its direct link with (C10) and remained in isolation. This may indicate that she construed being open to change as her most important construct and as a significant feature of an effective language teacher. However, she can not associate this feature with the others. With newly formed constructs into her repertoire, she seems to think that a teacher who is open to change has all the features she perceives. Therefore, being open to change, seems to be an

umbrella construct, placed right in the middle of her Time 2 grid and seems to be related to 2 of her clusters.

Another construct, ‘is well organised in teaching’ (C4) was placed in isolation at Time 1 grid. It constituted a tight pair with ‘is prepared before lesson’ (C2) at 95.5% level and subordinated by ‘makes students work harder’ (C6). At Time 1, she had not associated being well organised in teaching with any of the other constructs. However, most probably with the influence of newly arrived construct, this isolated construct formed a sub cluster with her previous constructs (C2 and C6). She started to believe that a teacher who is prepared for his/her classes organises her teaching well and this teacher directs her students to study harder.

‘Gives importance to students’ ideas in class’ (C5) is her other construct that showed a significant structural change. Giving importance to students’ ideas in class (C5) and being friendly (C1) constituted a pair at 88.6% level at Time 1. Similarly, and at the highest match level, these two constructs (C1 and C5) constituted a pair at 97.7% level and were subordinated by another construct which is one of her new and top priority constructs, ‘gets on well with students’ (C14). In fact, she perceived giving importance to students’ ideas and being friendly very similar at Time 1, with the help of a newly formed construct, ‘gets on well with students’ (C14). Her repertoire enlarged and formed a sub cluster (at the highest match level at Time 2). Kelly (1955) notes that “successive revelation of events invites the person to place new constructions upon them whenever something unexpected happens. The constructions one places in events are working hypothesis which are about to be put to the test of experience” (p. 72).

The last construct that showed significant change is ‘friendly’ (C1). It had a loose link with ‘gives importance to students’ ideas in class’ (C5) at Time 1. However, at Time 2, she associated these two constructs (C5 and C1) very closely, at the highest rate at Time 2 grid (mentioned in the previous paragraph).

The exchange analysis of her Times 1 and 2 grids reveals that she seemed to have gone through a process of reorganisation of all the constructs (except construct 9). Therefore we observe major and noteworthy changes between Times 1 and 2 grids of her. Now, we assume that as a result of her new experience of project writing, classroom inquiry process, observed classes and her readings on her problem seemed to have been a valuable opportunity to test and to validate her personal theories which eventually may have led to the refinement and reconstruction of these theories.

Element Changes

Figure 3 also revealed that she had been in the process of reorganising six of her elements in her grids. These elements with structural changes included the following in the order of level of difference from the least to the most: T1 (77.5%), I2 (77.5%), T2

(70%), T3 (50%), E3 (45%) and I1 (40%). Taking her element clustering as a base, we may assume that her main concern seems to be on the distinguishing the features of each teacher group in light of her new experiences.

T1 was viewed as similar to I3. However, it forms a pair with T2 at Time 2 and I3 subordinates the pair as a loosely linked element. While E3, I2 and I1 were isolated elements, E3 forms a tight link with E2 (at 100% match level) and E1 subordinated this pair very highly at 98.3% level. E3, viewed as an isolated element and had a place among her ineffective teachers at Time 1, is viewed in its actual group with her effective and ideal self as teachers at Time 2.

I2 and T3 remain in isolation at Time 2. But the other Time 1 isolated element, I1 is placed between her current self and ideal self as teacher, and is viewed as similar to her current self at 95% match level. We may assume that she either misplaced her I1 (the most ineffective teacher), or her I1 became one of her model teachers. Taking into account the associations she made, we may suggest that throughout the program she had had experiences that led her to reorganise her perceptions. However, regarding her elements, we still do not see a clear cut pattern for the categories and level of similarity of her typical and ineffective teachers which indicates that she needs some more time and experience to build a clearer pattern in her mind. As in this case, Kelly (1955) sees conceptual development as an “evolutionary process” which involves the progressive differentiation of conceptual structures into independently organised substructures and the hierarchic integration of these substructures at progressively higher levels of abstraction. Pope (1985, p. 18) states that “the functional differentiation of structures enhances the ‘range of convenience’ of an individual’s construct system.” She (1985) comments on this notion from Kelly’s “range of convenience” corollary, and states that

Certain features or events can be ruled out of consideration by a construct on the basis that, for them it is an inappropriate or inadequate way of being viewed. The system is neutral towards them –they lie outside its range of convenience (p. 18).

Isolates

In her Time 1 grid, construct 4 was in isolated position, loosely clustered with the rest of the constructs. At Time 2, construct 4 joins the largest cluster and forms a tight construct pair at 95.5% match level with construct 2 (and subordinated by construct 6). This reorganisation of construct associations may be due to an attempt to integrate the 5 new constructs introduced to the existing belief system.

The other isolate, C8 was her second top priority construct at Time 1 and had remained in isolation, having links with the other constructs at the same level. However, at Time 2, this construct became her first most important construct and formed a tight pair with one of Time 2 constructs; speaking English fluently. This new pair involved one of the academic qualities and one of the presentation skills of effective teachers.

New Constructs

At Time 2, she introduced 5 new constructs (11, 12, 13, 14 and 15) and so had to integrate them into her existing belief system. The integration of new constructs is construed as follows:

Construct 11, one of her most important constructs formed a tight pair with one of her Time 1 most important constructs, (C10). Construct 12 formed a tight pair with another top priority construct, 8 at Time 2. This construct was placed in the largest cluster and blended with only Time 1 constructs (8, 7, 6, 4 and 2). Construct 13 remained in isolation, establishing no association between having good pronunciation and the other features of effective language teaching. Construct 14 became one of her most important construct at Time 2 and was rather tightly linked construct, subordinating the tight pair of construct 1 and 5 at 97.7% match level. In the same cluster, construct 15 constituted a pair with 9 which is one of her top priority constructs at both Time 1 and Time 2.

High Priority Constructs

Constructs 8 and 9 have consistently been her high priority constructs between Time 1 and Time 2. Construct 8 had direct links with the rest of the constructs (except 4). It was loosely linked with using extra materials and being prepared before lesson. At Time 2, this construct forms a tight pair with one of Time 2 top priority constructs (C12) at 95.5% match level. Two of her top priority constructs and two of the constructs that represent the problem of her action research project formed a tight pair, placing in a large cluster.

Construct 9, on the other hand, formed a pair with 6 at Time 1. Leaving a larger cluster, it forms a tight pair with construct 15 and is placed in a different cluster. At Time 2, both constructs (8 and 9) were placed in different clusters.

The Teacher's Behavioural Change Between Time 1 and Time 2

Her 9 constructs out of 10 showed significant structural changes in her exchange analysis.

In her both grids, as she stated, being friendly (C1) is an important feature of an effective language teacher. Observations on this construct display that her perceiving herself changed positively (from 2 to 1). However, the rating of the observer's observation remained the same (from Time 1 to Time 2). The observer rated this construct as 2 at both Times. Her perceiving this construct was asked at Time 1 grid and the statement was as follows:

Table 1: *Her Time 1 Observation*

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

Extract 5

One of the characteristics of a good language teacher involves creating a good classroom atmosphere. If the class atmosphere is not flexible but sticking to the rules of grammar, then students get bored. So in order to increase students' attention, teachers should create a flexible atmosphere. One way of doing this is to be friendly, but not sarcastically. I personally teach 7th grade students; this makes me think about how to strike a balance with students. Being friendly can be easily misunderstood by students. I have doubts and am unclear on how to be friendly.

This was noticeable in her classes. Students' misunderstanding of the teacher's approach or becoming spoiled made the teacher hesitant on how to approach them. The classroom atmosphere was not very relaxed and flexible; instead, the teacher forced herself to keep some distance with students by becoming a stricter teacher.

After the first observation, she was given feedback, particularly on her constructs (C2, C4, C5, C6 and C10) because of the observer's ratings on them. We see that she has shown changes on these constructs and has reached the preferred pole at the end of the study.

If we look at the constructs at Time 2, the weaker ratings she got were (C1) and (C14) which are related to attitude of teachers towards students. During the feedback sessions, and when she was asked what she thinks on these constructs at the end of the study, she stated that

Extract 6

Yes, this is my weakness. Because I have not got enough patience and tolerance. I don't like spoiled children and I hate being 'used' by them. When I notice this I can not control myself. Then I behave negatively and

Table 2: Her Time 2 Observation

<i>Construct Number</i>	<i>CONSTRUCT</i>	<i>The teacher's rating for self as teacher</i>	<i>Observer's rating</i>
C1	Friendly	1	2
C2	Is prepared before lesson	2	1
C3	Open to change	1	Not observed
C4	Is well organized in teaching	2	1
C5	Gives importance to ss ideas in class	1	1
C6	Makes ss work harder	1	1
C7	Uses extra materials	2	1
C8	Uses English in class effectively	2	1
C9	Motivates ss	2	1
C10	Makes ss 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 ss	2	2
C15	Is active during lesson	1	1

threaten badly. I know this is not right but I can't control myself. I want to, but how?

On the other hand C7, C8 and C9 were rated as 2 by her and rated as 1 by the observer. Having good English knowledge and speaking English fluently, naturally makes the lesson more interesting. What she came to understand from using extra materials was that

Extract 7

It is not leaving students with grammatical rules on their worksheets, it is not giving them worksheets and let them finish. What it means to me is to bring extra from encyclopaedia, articles, magazines or bringing pictures, using visual aids or talking about different subjects besides that of the course book. Because, if you always use course book, students' motivation can easily be lost.

Using English in class effectively for her means to enter the classroom and start speaking till the end of the lesson without using one word of Turkish. She was successful on this and her students were getting used to it.

The observation of the constructs that she added at Time 1 (C11, 12, 13, 14 and 15) also yields an important point. These constructs (C11, 12, 13) were either related to her project concern or her weakness, she seems to be in need of time to apply what she believes to what she actually does.

Drawing from the above observations, we may say that she has gone through both conceptual and behavioural changes. Her observation and exchange analysis indicate that there is a consistency between her conceptual and behavioural changes.

Her change was more than the communication of knowledge, but absorbing ideas, assimilating them into the pre-existing knowledge, understanding more complex situations, and behaving accordingly. Her behavioural change was not linear; it was complex, and non-linear. Her change was in a process in which she went through a process of determining, contemplating, and revising her personal beliefs. The process of change she was involved in was the result of her experiences and the restructuring and reconstruction of her personal beliefs. It was neither sudden nor completed. The teacher's personal theories developed and this development in her repertoire and hypotheses influenced some of her actual behaviours naturally. Moreover, the change in her content and structure of personal theories contributed to her knowledge. This led her to make practical attempts to try and become aware of her personal theories in her teaching behaviours.

The findings regarding the compatibility of the teacher's conceptual changes with their behavioural changes suggest that there is consistency between her conceptual changes and the behavioural changes in this study. We explored the conceptual changes and its relation to changes in their behaviours. The teacher's conceptual change process was interpreted in her actual behaviours. This was in line with the literature, saying that "conceptions can be inferred from practice (actions) and practice can derive from conceptions" (Gorodetsky, Keiny & Hoz, 1997, p. 425).

Operational Definitions

"Current self" refers to a teacher's perception of him/herself as a teacher. The teacher shows which teacher qualities s/he perceives him/herself as embodying.

"Ideal self" refers to a teacher's perception of the teacher s/he would like to be. The teacher shows which teacher qualities s/he perceives are important for him/her to acquire.

"Elements" are the objects of an individual's thinking and to which they relate their concepts or values. These elements in this study are 11 ELT teachers—categorized three "effective" (E), three "typical" (T) and three "ineffective" (I) ones, their current "self as a teacher" and their "ideal self teacher".

"Cut-off point": This specifies the level to which construct and/or element trees are drawn (RepGrid 2 Manual, 1993).

"Behavioural change": Teachers' teaching behaviours are mostly dominated by routines that are not necessarily an outcome of rational decision making. Korthagen (1993) claims that teachers' actions are "*gestalts*-we want to refer to the personal

conglomerates of needs, concerns, values, meanings, preferences, feelings and behavioral tendencies, united into one inseparable whole” (Korthagen, 2001, p. 6)—that are activated by stimuli without undergoing rational processing.

Similarly, although accepting constructivism as a viable set of beliefs, classroom activities may sometimes be dominated by control, shortage of time and colleagues’ expectations which are implemented without too much effort and thought. As to Kelly (1955), behaviour is seen not as a reaction but as a proposition, not as the answer but as the question. He points out that behaviour is an experiment and in behaving one’s asking a question of our world. Bannister and Fransella (1989) cite Kelly and argue that “construct theory treats scientists as persons and persons as scientists, in the sense that, our behaviour is our continual experiment with life” (p. 8). Allen *et al.*, (2002, p. nil) argues that “behaviour change differs from person to person and the change does not occur in one step. People move through stages of change in their own ways and in their own time”.

One of the key assumptions of constructivism is that people's behaviour may not always appear logical or rational to an outside observer although it will be consistent with the constructs being applied by the person involved. The fragmentation corollary provides some reasoning behind this and indicates that a person may successively employ a variety of construction subsystems which are incompatible with each other. Learning changes the learner, and change requires learning. Clearly having the knowledge of what you want to do involve learning. If a person is changing their behaviour it is because of new learning that requires them to adapt. Naturally, the actions people choose are directed by the way their construction system expects events to occur in the future.

For the above reasons, the researcher in this study noted the teacher’s constructs elicited through the repertory grid and the conceptions she represents in regard to change in practice. By observing the teacher’s teaching, the aim, as stated above, is to see changes in her thinking system. Through observation, the researcher accepts that the positioning of a particular event may be changed with respect to the construct axes or the hierarchical position of constructs may be changed and/or new constructs may be added. The question is to see change/s lead to different practices. Or does the adoption of new learning lead to behavioural change that, in turn, feeds still another different practice?

Conceptual change: Conception is viewed as a mental structure that includes also the person’s beliefs and basic 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. The term conceptual change within learning process was applied to concepts that play important roles in thought and to a situation in which conceptions are replaced by another (Strike & Posner, 1992).

Vosniadou (1994) claims that;

Conceptual change is a continuous process of reinterpreting constraints on the concept. Although we tend to accept the continuous nature of conceptual change in the context of teachers' professional development, we feel that at certain points there are 'quantum leaps' and the new conceptions are of a different nature, namely, of a 'strong' restructuring. Bearing in mind the lack of a clear-cut definition of this phenomenon, particularly with regard to teachers' professional development, we use the term 'conceptual change' to refer to the process of knowledge reconstruction which leads to a different conception than the previous one (cited in Gorodetsky, Keiny & Hoz, 1997, pp. 424-425).

Kaynaklar

- Bannister, D., & Fransella, F. (1989). *Inquiring man. the psychology of personal constructs*. Routledge, 1989. Retrieved on April 10, 2002 from <<http://www.nous.org.uk/Kelly.html>>.
- Gorodetsky, M., Keiny, S., & Hoz, R. (1997). Conceptions, practice and change. Ben Gurion University, Beer Sheva. *Israel Educational Action Research*, 5 (3), 423-433.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Korthagen, F.A.J. (1993). Two modes of reflection. *Teacher and Teacher Education*, 9, 317-326.
- Korthagen, F.A.J. (2001). Linking practice and theory: The pedagogy of realistic teacher education. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, April 2001. Retrieved on January 3, 2002, from <<http://educ.queensu.ca/~ar/aera2001/Korthagen2001.pdf>>
- Pope, M. (1985). Constructivist googles: implications for process in teaching and learning. Paper Presented at BERA Conference Sheffield August, 1985.
- Centre for Person Computer Studies. (1993). *RepGrid2 manual*. 3019 Underhill Drive NW, Calgary, AB, Canada T2N 4E4.
- Sendan, F. (1995). *Patterns of development in EFL student teachers' personal theories: A constructivist approach*. Unpublished Doctoral Dissertation. The University of Reading, UK.
- Strike, K.A & Posner, G.J. (1992). A revisionist theory of conceptual change, In Duschl R.A. and Hamilton, R.J. (Eds.). *Philosophy of science, cognitive psychology and educational theory and practice*. Albany, NY: State University of New York Press.
- Vosniadou, S. (1994). Capturing and modeling the process of conceptual change. *Learning and Instruction*, 4 (1), 45-69.
- Yaman, Ş. (2004). *An action research study on teacher development: A constructivist approach*. Unpublished Doctoral Thesis. The University of Çukurova, Adana
- Yumru, H. (2000). *An ownership approach to teacher development: A constructivist view*. Unpublished Doctoral Thesis. The University of Çukurova, Adana.

Appendix 1: The Repertory Grid Elicitation Sheet

Participant:

Class:

Date:

Category:

No.:

Construct No.	Triads	Emergent Constructs (Similarities)	Rating Scale												Elements Implicit Constructs (Contrasts)
			1	2			3			4			5		
				←			↔						→		
			E1	E2	E3	T1	T2	T3	I1	I2	I3	Self	Ideal		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

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

Source: Sendan, 1995.

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.

Source: Yaman, 2004.

Appendix 3: 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.

Cilt 1, Sayı 1, Haziran 2005