

GAZİ UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES
DEPARTMENT OF FOREIGN LANGUAGE INSTRUCTION
ENGLISH LANGUAGE TEACHING PROGRAM

AN NLP-BASED TEACHER DEVELOPMENT PROGRAM
FOR ENHANCING EFL TEACHERS'
COMMUNICATION SKILLS

M.A. THESIS

By
Asuman ÖKÇÜN

Ankara
May, 2010

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Supervisor: Assist. Prof. Dr. Bena Gül PEKER

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May, 2010**

TEZ ONAY SAYFASI

EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜ'NE,

Asuman ÖKÇÜN'ün “An NLP based Teacher Development Program for Enhancing EFL Teachers' Communication Skills” başlıklı tezi tarihinde jürimiz tarafından İngilizce Öğretmenliği Ana Bilim Dalında Yüksek Lisans Tezi olarak kabul edilmiştir.

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Üye (Tez Danışmanı):	
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ABSTARCT

AN NLP-BASED TEACHER DEVELOPMENT PROGRAM FOR ENHANCING EFL TEACHERS' COMMUNICATION SKILLS

Asuman ÖKÇÜN

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Supervisor: Asst. Prof. Dr. Bena Gül PEKER

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This qualitative study was conducted with the voluntary participation of five non-native EFL teachers at a state secondary school in Adana/Turkey during the second term of 2009-2010 academic year. The NLP-TD program was conducted on weekly basis, amounting to a total of 16 sessions.

The aim of this study is three fold. First it aims to explore in depth the nature of secondary school EFL teachers' personal theories of effective communication. Second, it aims to investigate the impact of Neuro Linguistic Programming based teacher development (NLP-TD) program to see if there are any changes in the development of EFL teachers' personal theories of communication skills. Third, based on the results of the teachers' reflection, this qualitative study attempts to provide EFL teachers with a framework for a new teacher development program based on NLP techniques.

Drawing on Kelly's (1955) Personal Construct Theory, this study used the repertory grid technique as pre and post diagnostic tool. The data elicited from the teachers were analyzed by utilizing the Rep Grid 2 Computer program. In order to find out the structure of participant teachers' constructs, each of the repertory grid data obtained from the teachers was subjected to FOCUS analysis separately. The two grids obtained from the participant teachers at the beginning and end of the study were also subjected to Exchange Grid Analysis to explore the patterns of the changes in the content and structure of teachers' personal theories. The nature of the participant teachers' construction of "self" as teacher and "ideal" teacher were also investigated.

Follow-up interviews were employed to confirm the data taken from the repertory grid constructs.

Throughout the NLP-TD program, reflection sheets were employed for process evaluation. As a third data collection tool, a Course Evaluation Questionnaire (CEQ) was used to triangulate the findings. By means of the CEQ and reflections sheets, participant teachers' views and feedback were obtained to shed light for future implications of the NLP-TD program.

The findings of this study indicate that teachers have their own personal theories in terms of their perception of effective communication. In particular, the findings point to positive responses as regards the effectiveness of the NLP-TD program in terms of enhancing the communication skills of the participant teachers. In the light of the Repertory Grid, findings suggest that participant teachers' personal theories displayed change both in the content and structure.

In conclusion, the NLP-TD program may be suggested as a new framework of a teacher development program for enhancing non-native EFL teachers' communication skills.

Key words: Teacher Development, Personal Theories, Neuro Linguistic Programming (NLP), Personal Construct Theory, Repertory Grid Technique, Constructivism.

ÖZET

İNGİLİZCE ÖĞRETMENLERİNİN İLETİŞİM BECERİLERİNİ GELİŞTİRMEYE YÖNELİK BİR NLP TEMELLİ ÖĞRETMEN GELİŞTİRME PROGRAMI

Asuman ÖKÇÜN

Yüksek Lisans Tezi, İngiliz Dili Öğretimi Anabilim Dalı

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Bu nicelik odaklı çalışma, Adana'daki bir ortaöğretim kurumundan beş İngilizce öğretmeninin gönüllü katılımıyla 2009–2010 eğitim öğretim yılının ikinci semestrinde 2 ay süreyle toplamda 16 ders olarak gerçekleştirilmiştir.

Bu çalışmanın amacı ortaöğretim kurumlarında çalışmakta olan İngilizce öğretmenlerinin etkili iletişim konusundaki kişisel teorilerinin yapılanmasını incelemek ve NLP tekniklerinin öğretmenlerin gelişimleri üzerindeki etkisini ortaya çıkarmak amacıyla NLP öğretmen geliştirme programının önce ve sonrasında (varsa) katılımcı öğretmenlerin kişisel teorilerindeki içeriksel ve yapısal değişimleri araştırmaktır. Bu çalışmada son olarak, öğretmenlerden alınan geri dönütler doğrultusunda NLP teknikleri kullanılarak yeni bir öğretmen geliştirme müfredatı oluşturmaktır.

Bu çalışmada Kelly'nin (1955) Kişisel Konstrükt Kuramı (Yapısalcılık) benimsenerek, Repertory grid tekniği kullanılmıştır. Öğretmenlerden elde edilen veriler Rep Grid 2 bilgisayar programı kullanılarak analiz edilmiştir. Katılımcı öğretmenlerin kişisel teorilerini içeriksel ve yapısal olarak ortaya çıkarmak için elde edilen veriler FOCUS istatistik analizleri ile ortaya konulmuştur. Katılımcı öğretmenlerin kişisel teorilerindeki değişiklikleri araştırmak için öğretmenlerden çalışmanın başında ve sonunda alınan verilerin EXCHANGE istatistik analizleri de yapılmıştır. Ayrıca katılımcı öğretmenlerin “kendi”lerini ve zihinlerindeki “ideal” öğretmeni nasıl algıladıkları da araştırılmıştır. Repertory grid tekniğinden elde edilen veriler birebir görüşmelerle desteklenmiştir.

NLP öğretmen geliştirme programı boyunca süreç değerlendirmesi için eğitimsel raporlar aracılığıyla veri toplanmıştır. Üçüncü bir veri toplama aracı olarak kurs değerlendirme anketi uygulanmıştır. Kurs değerlendirme anketi ve eğitsel raporlarla gelecekte bu gibi programların oluşturulmasına ışık tutması için katılımcı öğretmenlerin NLP öğretmen geliştirme eğitim programı hakkındaki görüş ve geribildirimleri alınmıştır. Bu verilerden elde edilen dönütlerin içerik çözümlemeleri de yapılmıştır.

Bu çalışmanın bulguları katılımcı öğretmenlerin etkili iletişime yönelik algılamalarında kendi kişisel teorilerinin olduğunu göstermektedir. Bu çalışma sonunda katılımcı öğretmenlerden NLP öğretmen geliştirme programının etkisi konusunda olumlu dönütler alınmıştır. Elde edilen veriler, öğretmenlerin etkili iletişim konusuna yönelik görüşlerinde yapısal ve içeriksel değişiklikler olduğunu ortaya çıkarmıştır.

Sonuç olarak, NLP öğretmen geliştirme programı İngilizce öğretmenlerinin iletişim becerilerini geliştirmeye yönelik bir öğretmen geliştirme programının müfredatı olarak önerilebilir.

Anahtar Kelimeler: Öğretmen Gelişimi, Kişisel Teoriler, Neuro Linguistic Programming (NLP), Kişisel Konstrük Kuramı, Repertory Grid Tekniği, (Bilişsel Kavram Toplama Tekniği), Yapılandırmacılık.

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CHAPTER 1

INTRODUCTION

1.0 Background of the Study

Teachers are the schools' greatest asset. They stand at the "interface of the transmission of knowledge, skills and values" (Day, 1997, p.1). If the future of any society can be pinpointed, it is with the teachers who help form the citizens of tomorrow. Sometimes their impact is equal to the parents and sometimes surpasses it by not a small measure. However, how must teachers change to be sure that they move with the times and not lose that role in society? (Villia, 2006, p. vii)

Given the changing conditions and expectations in the field of language education, opportunities for teachers to develop personally and professionally and grow as a language teacher are imperatives. Teachers are expected to be well prepared to be able to satisfy the needs of education. For the challenging standards, they are needed to develop their knowledge and skills for changing conditions and expectations. (Sürmeli, 2004, p. 39)

Teachers can only be able to fulfil their educational purposes if they are both "well prepared for the profession and at the same time able to maintain and improve their contributions to it through career-long learning" (Day, 1997, p.1). Teachers learn naturally over the course of a career. However, "learning from experience alone will ultimately limit development" (Day, 1997, p. 2). Support for their development is, therefore, an integral and essential part of efforts to help teachers fulfil their aims and raise the standards of teaching.

Continuing, career-long development is necessary for all teachers, but perhaps more so for language teachers, in order to “keep pace with change and to review and renew their own knowledge, skills and visions for good teaching” (Day, 1997: p.1). As Roe (1992) puts it “language teaching is a career for life, and career development is a life-long process” (p. 1). If change as lifelong learning is considered very important, then it seems that teacher development (TD) is an important means of enabling input of new ideas, sharing ideas and experiences.

1.1 Statement of the Problem

Teacher development in English Language Teaching (ELT) in Turkey is associated with specific sources of teacher development programs. These programs are either offered by the Ministry of National Education (MONE) or run by foreign agencies like the British Council (Sürmeli, 2004, p.2). At both tertiary and secondary levels, universities overtook important responsibilities in teacher development and aided in training thousands of teachers in collaboration with the Ministry of National Education (Karagözlüoğlu, 1993, p. 131). The MONE is responsible for planning, carrying out, following up and supervising all teacher development initiatives for secondary education. Every year, the department responsible for teacher development of the Ministry of National Education organizes programs held in various cities throughout the country. There seems to be, however, a lack of “organizational structure” in the structure of teacher development (Koç, 1992, p. 47). The training programs appear to be inadequate for meeting the variety of teacher needs.

The available teacher development programs seem to overemphasize professional development and seem to ignore personal development in terms of communication skills. Even the teachers who have strong academic backgrounds may have difficulty communicating their knowledge to their students and maintaining healthy relationships. This study stemmed from a need for an alternative teacher development program considering secondary school English teachers’ personal development. As argued, NLP can be an effective tool in helping teachers improve their command of communication skills and achieve a high level of understanding of verbal

and non-verbal communication. In this sense, NLP seems to hold much potential for education. NLP has since its beginning achieved popularity as a method for communication and personal development.

But despite the promise, there is a question of whether the development of theories is generally feasible in education, specifically in teacher development. How can personal development be implemented? This study aims to answer the question of how ELT teachers' development and their personal theories of effective communication can be. It will shed light on whether an NLP-based teacher development program (NLP-TD) can help teachers to acquire effective communication skills and enhance their ability to communicate better.

1.2 Aims of the Study

As noted, NLP in teacher development seems to have potential for assisting teachers with communication skills. The main concern of this study is to consider how this might be done by means of a teacher development program. Hence, this study is concerned with the nature of and the changes in personal theories of EFL teachers as regards effective communication during an NLP based teacher development program. It aims to see how NLP can enable EFL teachers to enhance their communication skills. In particular, the study tries to seek an answer to whether NLP techniques could be used as a framework within a teacher development program.

Thus, the aim of this study is three fold:

- 1) To explore in depth the nature of secondary school EFL teachers' personal theories of effective communication.
- 2) To investigate the impact of an NLP-TD program to see if there are any changes in the development of EFL teachers' personal theories of communication skills.
- 3) To suggest a framework for an alternative teacher development program based on NLP drawing on the participant teachers' reflections.

In this study, data were collected by means of the following instruments;

- Repertory Grids and subsequent follow-up interviews
- Participant Profile Questionnaire
- Course Evaluation Questionnaire (CEQ)
- Reflection Sheets

In this study, five secondary school EFL teachers' personal theories were elicited by means of the methodological component of personal construct theory, the repertory grid technique. The focus in the content of the repertory grids was good communication strategies of a teacher that lead to effective communication.

1.3 Research Questions

In the light of the aim of the study noted above, this study seeks to answer the following research questions:

- 1) What is the nature of the structure and content of EFL teachers' construct systems regarding good communication strategies at the beginning and the end of the study?
- 2) What is the nature of participant teachers' constructions of "self as teacher" and "ideal teacher" and whether there are any discrepancies between the two?
- 3) What are the changes (if any) in the content and in the structure of EFL teachers' personal theories regarding good communication strategies due to the NLP-TD program?
- 4) What are the participant teachers' reflections regarding their experience of the new NLP-TD program?
- 5) What are the participant teachers' views and suggestions regarding any modifications of the new NLP-TD program?

1.4 Significance of the Study

Firstly, it could be said that although there is growing academic interest in Neuro Linguistic Programming (NLP) in Turkey, further research in education need to be done to provide a theoretic base for NLP. A recent study on NLP was conducted on teaching English (e.g., Şaman, 2006). Some of other studies, however, conducted on academic success of students (Bardak, 2007) and in-class application of NLP (Bingül & Demir, 2007), and another involve NLP on adult learning (Mert, 2006). However, there are not so many studies cited in the field of teacher development in the NLP literature. There are few study of these programs based on NLP or the effects of program implementations. Sürmeli (2004) conducted a study with a group of teachers for the purpose of teacher development based on NLP. Both her study and this study employed the repertory grid to identify degrees of conceptual change in both the content and the structure of participant teachers' personal theories. However, this study was different from the previous study in terms of content. Sürmeli (2004) dealt with all NLP techniques at practitioner level; however, this study only dealt with the communicative aspect of NLP. In addition, the previous study aimed at personal and professional development of teachers, whereas this study only aimed at personal development of teachers. Therefore, this study will shed light upon the use of NLP in teacher development programs. More specifically, the results of the study will add new insights to teacher development program providers and specifically NLP could be incorporated into teacher development programs. Following this, the attempts taken in this study to understand the effects of NLP teacher development (NLP-TD) program on teachers will hopefully result in reconstructed teacher development programs taking into account of teachers' personal theories.

1.5 Limitations of the Study

Five English teachers working in Adana participated in this study. Therefore, the data collected in this study were limited to the five volunteers. Kelly (1963) states; "people can be seen as differing from each other, not only because there might have been differences in the events they sought to anticipate, but also because there have

been different approaches to the anticipation of the same event” (p.55). Hence, despite the fact that the participants join the same ‘teacher development program’, there will be differences in their constructions due to personal differences and backgrounds. Thus, involving more teachers and information about their personal theories would offer more reliable and generalized results.

The findings of the study were also limited to the conceptual changes in the participants of this study. The changes, regarding the changes in the content and structure of the participants’ personal theories of effective communication, were determined using rep grid technique before and after the program. In order to see behavioural changes as well, observing their practice before and after their participation in the study would be necessary.

1.6 Operational Definitions

Teacher Development is “a term used to describe a process of continual intellectual, experiential and attitudinal growth of teachers (Lange, 1990, p. 50).

Personal Theories are defined as “the underlying system that teachers draw upon the ways in which they construe themselves, and about their views and experiences as learners and teachers, and their values” (Yaman, 2004, p.13). This term is used in this study to describe the participant teachers’ beliefs regarding good communication strategies.

Construct System: “A construct is a way in which some things are construed as being alike and yet different from others” (Kelly, 1955, p. 105). Personal constructs are “bipolar dimensions which each person (in this study each teacher) has created and formed into a system through which they interpret their experiences of the world” (Fransella and et al., 2004, p. 16) .While, the positive pole of the constructs represents the basis of the perceived similarity, the other, negative pole, represents the basis of contrast (Ben-Peretz, 1984).

Structure refers to “the ways in which individual constructs are hierarchically organised into a whole system of construction” and “the ways in which the construction systems of different participants within the same cohort are related to one another” (Sendan, 1995, p. 61).

Content refers to “the intended meaning of personal constructs” (i.e., communication skills) proposed by the participants when making semantic distinctions about what constitutes effective communication. Thus, the changes in the content of the personal theories refer to the “identification of thematic patterns in the personal constructs” (Sendan, 1995, p. 60).

Content of Personal Theories refers to “the meanings the teachers attach to the qualities that they identify”. Hence, changes in the content of teachers’ constructs refer to the “identification and analysis of the thematic patterns in the personal constructs elicited from the teachers” (Sendan, 1995, p. 61).

Structure of Personal Theories refers to “the reorganisation of each individual teacher’s system of constructs, as reflected by Exchange grid analyses of grids” (Sendan & Roberts, 1998, p. 61). Thus, investigating the changes in the structure of the teachers’ constructs refers to the “identification and analysis of the structural patterns of the teachers” (Sendan, 1995, p. 61).

Personal Construct Theory: This is the theory of personality on which the Repertory Grid technique is based. Propounded by George Kelly, PCT has as its basic postulate that people try to make sense of their world by forming, testing, and modifying hypotheses about it. These hypotheses are expressed as constructs; PCT is a methodology for modelling people's construct systems.

The Repertory Grid:

“a two-dimensional matrix depicting relationships amongst a person’s personal ‘constructs’ and specific ‘element’, where an ‘element’ denotes the persons (including self), things, and events that together constitute an individual’s environment... ‘constructs’ denotes the dimension or reference axes used by the

individual to discriminate between elements” (Alban-Metcafe, 1988,cited in Yaman, 2004, p. 488).

Self as Teacher: This term refers to a “teacher’s perception of him/herself as a teacher at present” (Yumru, 2000, p. 8). In this study, the participant teachers show which communication strategies s/he perceives him/herself as embodying.

Ideal Teacher: This term refers to a “teacher’s perception of the teacher s/he would like to be in the future” (Yumru, 2000, p. 8). In this study, the participant teachers show which communication strategies s/he perceives are important for him/her to acquire.

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

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature in various areas which are intended to build the theoretical framework for this study. First the different approaches to teacher development are discussed followed by an investigation of teacher change within the content of teacher development. Then, constructivism; specifically, personal construct theory and social constructivism, are discussed. Finally, this chapter aims to review how Neuro Linguistic Programming (NLP) originated, and how NLP can be used to enhance teachers' communication skills as personal development of EFL teachers.

2.1 The Framework for Teacher Development

We are in “the age of communication” (Wallace, 1991, p. 2). The world is constantly changing and becoming globalised. Hence, the need for learning a language is felt even more intensely, perhaps specifically for English language teaching which is seen as international channels of communication. With the explosion in language teaching there has been an increased demand for language teachers and the consequent need to train teachers. (Wallace, 1991, p. 2)

Language teaching is affected by a complex system external to individual teachers, such as language curriculum, resources and internal dimensions, such as the teaching skill, teachers' perceptions and beliefs, relationships with other teachers and sources. Within this language teaching process, language teachers play an important role in language learning.

Within this role, an important part of teachers' role has to do with meeting challenges to their personal development. Teacher development programs are needed to prepare teachers for change and therefore must help them to explore their existing views and practice and provide them with opportunities to construct new meanings and test the adequacies of their own constructs (Diamond, 1993).

In order to meet such challenges with success, first of all, teachers' existing beliefs and knowledge need to be taken into consideration in the planning of teacher development. Opportunities to engage teachers in professional dialogue can be invaluable to share. A supportive environment can be helpful in assisting teachers' reflection of their beliefs and skills. In addition, teachers need to feel a sense of ownership for their own learning and development. Teachers' involvement, participation and taking responsibility for their own learning and development are essential parts of a process that builds on learning and development.

2.1.1 Approaches to Teacher Development

In this study, the term *teacher development* is used to focus on teachers' learning and change. Despite the fact that the discussion is restricted to teacher development, it is hard to find a single definition for it. It has been used interchangeably with staff development, teachers' professional learning, teachers' continuing professional development, and teacher training. The use of the term teacher development seems more preferable since teachers are seen as those who take responsibility for their own learning and development.

When we look at the literature for these terms, the first thing may be to distinguish teacher development from teacher training. The term is frequently contrasted with teacher training and teacher education. Wallace (1991: 3) puts it in a straightforward manner as follows: "The distinction is that training or education is something that can be presented or managed by others whereas development is something that can be done only by or for oneself". Lange (1990) explains this in the context of a model or blueprint for a whole programme of teacher development and offers the following definition: "A term used ... to describe a process of continual

intellectual, experiential and attitudinal growth of teachers ...the intent here is to suggest that teachers continue to evolve in the use, adaptation and application of their art and craft” (p. 250). Teacher development (TD), then, is to be seen as an ongoing process and integral characteristic of a fully professional teacher.

Woodward (1991) summarizes all the associations between TT and TD clearly in a bi-polar scale in Table 1.

Table 1 Teacher Training- Teacher Development Associations

TEACHER TRAINING	TEACHER DEVELOPMENT
Compulsory	Voluntary
Competency based	Holistic
Short term	Long term
One-off	Ongoing
Temporary	Continual
External agenda	Internal agenda
Skill/technique and knowledge based	Awareness based, angled towards personal growth and the development of attitudes/insights
Compulsory for entry to the profession	Non-compulsory
Top-down	Bottom-up
Product/certificate weighted	Process weighted
Means you can get a job	Means you can stay interested in your job
Done with experts	Done with peers

(taken from Woodward, 1991:147)

In short, between TD and TT is that TD is “based on personal experience and personal knowledge construction”, which “stresses personal development”, and so “empowers individual teacher” (Ur, 1997, p. 2). Teacher training essentially concerns knowledge of the topics to be taught, and of the methodology for teaching it is a process that comes from the outside. Teacher development, on the other hand, comes from within the individual and requires a commitment from that individual to move forward

in some way as a teacher. Thus, it is more useful to see training and development as two complementary components.

In reviewing different researchers' approaches to teacher development, the following opinions can be summarized as follows:

Bell and Gilbert (1996) assert that the process of teacher development can be seen as "one in which social, personal, and professional development is occurring, and one in which development in one aspect cannot proceed unless the other aspects develop also" (p. 33-34). Social development involves working with, and relating to other teachers to reconstruct the socially agreed knowledge. Personal development comprises feelings about the change process, and reconstructing one's own knowledge and professional development involves changing concepts and beliefs. These three aspects are seen as interactive and interdependent. Bell and Gilbert (*ibid*) propose that teacher development programmes and activities must address and support all three aspects of development for change to occur.

TD is also seen as "knowledge and skill development" as well as "self-understanding" and "ecological change" (Hargreaves and Fullan, 1992, p. 22). Knowledge and skill development approach is basically based on developing expertise in a subject matter or a skill. This second approach that of ecological change focuses on the context in which teacher development takes place. Teacher development as self-understanding involves changing the teacher as a person, not merely modifying teaching strategies.

Another approach to TD takes its major aim of all teacher development programs as "linking theory and practice" (Wright, in Richards & Nunan, 1990, p. 82). A key feature of research and commentary on teacher development is this active involvement of teachers through the development activity. Recent studies on professional development point to many problems with top-down approaches which focus on the training of teachers in new practices by exposing them to new ideas from an "expert" in a passive mode (Sparks, 1994). A one-shot in-service course can be seen as follows in Figure 1.



Figure 1 A One-Step Linear Approach for Change.

(Hoban, 2002, p. 13)

The beliefs that underpin this approach are that teacher learning is a linear process and that educational change is a natural consequence of receiving well-written and comprehensive instructional materials (Hoban, 2002, p. 13). In his book, *The Meaning of Educational Change*, Fullan (1982) stated that one-dimensional theories of change were doomed to failure and that only chance for planned change to be successful was to have a combination of factors to create supportive conditions. The most important problems that are forefronted in these programs are lack of teachers' ownership. As a result, new approaches to teacher development have emerged to support teachers' reconstruction of knowledge and skills as the foundation for reframing their practice of teaching.

A fourth approach to TD is that of a comprehensive model of teacher development which must take into account four elements (Fullan and Hargreaves (1992); Firstly, "the teacher's purpose", that is, what the teacher is trying to achieve; Secondly, "the teacher as person"; and thirdly, "the social contexts" within which a teacher actually works, both in terms of the neighbourhood and within the school itself; Fourthly, "the culture of teaching within the school" is considered essential (in Bell and Gilbert, 1996, p. 168).

Bell and Gilbert (1994) conclude from their research that teacher development is a social activity which should be theorized in terms of social constructivism, and argues that social interaction promotes learning of socially constructed knowledge and personal construction of meaning. They present their opinion of "teacher development as a form of human development involving social as well as the professional and personal development of teachers" (Bell & Gilbert, *ibid*, p. 37).

As the above approaches to teacher development indicate it can be understood that the term has been described in different ways and each has different concerns. Thus, it seems that teacher development can best be viewed from a constructivist

approach. It seems crucial that there should be conscious involvement and should take account of the personal theories in relation to teacher development.

2.1.2 Teacher Development and Teacher Change

The nature of teaching demands that teachers engage in continuing career long teacher development and change is identified as a key component of teacher development in literature (Lange, 1990; Baily, 1992; Roberts, 1998). Lange (1990) defines teacher development as “a process of continual intellectual, experiential, and attitude growth of teachers” (p. 250). The central focus of teacher development initiatives is the understanding of “change as growth or learning” (Clarke and Hollingsworth, 2002). Thus, within this viewpoint, change is associated with the aim of changing teachers.

However, this change is not viewed as a modification of behaviour but it refers to as teachers’ making coherent sense of personal meaning regarding innovations. That is, change is a learning process (Fullan, 1993). As part of the teaching-learning process, change is desired because the aim in teacher development is the improvement of teacher learning. As change is a central part of the learning process, it is important to understand how teachers’ change occurs.

Fullan (1991) asserts that an individual’s involvement with and commitment to change is motivated largely by an individual’s subjective understanding of the meaning of change. Within this subjective reality, individuals have to decide “what’s in it for them” and how they will deal with this new opportunity. It is the transformation of subjective realities, or the establishment of a new meaning or relationship to the change, that is the essence of any substantive change process (Fullan, 1991).

Whilst Fullan (1991) sees teacher development and change as personal meaning, for Kennedy (1987), it requires “a change in people’s beliefs and behaviours”. Teachers have different personalities, needs, decision making styles, verbal intelligence,

pedagogical beliefs and professional ambitions. Naturally, teachers will go through the change at different rates as they go through the process.

The term “belief” has been defined as “personal theories, personal constructs, implicit theories, perspectives, assumptions and images” (Roberts, 1998). Clark (1992) states that “beliefs and theories that remain unconscious and implicit will not grow or become elaborated, or evolve in response to critical analysis. In order to develop them, we must get them out on the table where we can see them.” (p. 79). Therefore, the study of teachers’ beliefs is important as these will help teachers throughout their development.

Goodson (2001a, in Hoban, 2002) defines segments of the change process as internal, being the change agents within schools; external; and personal, being the individual beliefs and experiences that are brought to the change process. He asserts that change is more likely to occur when these segments are ‘integrated and harmonized’, leading to a new balance to promote a social movement for change (p. 29).

A variety of quantitative and qualitative studies over the years indicate that change, at least as promoted by an external factor such as “teacher development, is a complicated process” (Villia, 2006, p. 23).

- *Change is slow.* Even when professional development extends over several years, with multiple opportunities for learning (Short & Echevarria, 1999), change is a process occurring over time that requires support (Imel, 2000; Joyce, 1983).
- *Change requires support.* Change requires much more intensive learning support than teachers generally receive in the type of professional development they usually experience.
- *Change is not always linear.* Fullan (1990) argues that there is an “implementation dip” as teachers try new actions, before they fully integrated the new idea.
- *Change is not easy.* Bridges (1991) sees it as a three-step psychological transition process with an ending (for old ways), neutral zone (rethinking stage),

and beginning (with a purpose and plan). Change comes about through reflection, and the heart of reflection is first challenging one's assumptions (Garmston, 1997; Lewis, 1992) - a difficult task.

- *Change is not always direct or guaranteed.* Practice may not change just because something new was learned. Rather than to really change their existing beliefs and practices, teachers may also show “little change in overall teaching practice” or no change at all.

Freeman (1989, p. 34) considers “awareness, attitude, transformation of knowledge, and skills as the prerequisites for teacher change”. “Awareness as a constituent integrates and unifies the previous constituents – knowledge, skills, and attitude; therefore, can account why teachers change.” Considering change in teacher development, both from the teachers' and providers' point of view, Freeman's (1989) remarks are worth mentioning;

- Change does not necessarily mean doing something differently; it can mean a change in awareness.
- Change is not necessarily immediate or complete. Indeed some changes occur over time, with the collaborator serving only to initiate the process.
- Some changes are directly accessible by the collaborator and therefore quantifiable, whereas others are not.
- Some types of change can come to closure and others are open-ended (p. 38).

Overall, educationalists seem to agree that, for teacher change to happen, professional development should:

- Be of longer duration.
- Make a strong connection between what is learned in the professional development and the teacher's own work context.
- Include a strong emphasis on analysis and reflection, rather than just demonstrating techniques.
- Focus on helping teachers to study their students' thinking.

- Include a variety of activities
- Encourage teachers from the same workplace to participate together.

(Villia, 2006, p. 25-26)

Through this review of literature, it can be concluded that teacher development could be successful if it took place over time (not one session only), is integrated with the school context, and focused on helping teachers not just acquire new behaviours but change their assumptions and ways of thinking as well. In addition, the study design is based on the overall hypothesis that teachers change in different ways and amounts as a result of participating in professional development, and that multiple factors influence the type and amount of change practitioners experience as a result of teacher development including individual factors such as their experience, background, and motivation as they come into the teacher development program.

In line with the theoretical framework, teachers' change in this study will be discussed from constructivist point of view, and the issues will be considered from this broad perspective.

2.2 Constructivism

Constructivism accepts that each learner has different experiences and prior knowledge; so, they construe different meanings in the same learning context. Salmon (1988, in Yaman, 2004, p. 84) argues that “teachers are indivisible from what they teach.” Teachers, like learners, reshape their ways of understanding, their knowledge structures and the meanings that they attribute to events and ideas as a result of their interaction.

Over the last decade or so, constructivism has increasingly been adopted by researchers, curriculum developers and teachers as a view of learning and knowing by students and teachers. Basically, according to the constructivist view, learners are all individuals who bring a wide range of knowledge and experiences to the learning

process and will make sense of the world and the situations they encounter in ways that are personal to them.

Williams and Burden (1997: 2) define the content of constructivism as follows: The core principle of constructivism is that people “will make their own sense of the ideas and theories with which they are presented in ways that are personal to them ... (and that) each individual constructs his or her reality”.

Similarly, Richardson (1997) points out that constructivism is concerned with how we construct knowledge. “How one constructs knowledge is a function of the prior experiences, mental structures and beliefs that one uses to interpret objects and events” Constructivism does not preclude the existence of an external reality; it merely claims that each of us constructs our own reality through interpreting perceptual experiences of the external world.

When applied to teacher learning and teacher development, constructivism enables us to understand personal change better in that it explains why “each individual...learns different things in very different ways even when provided with what seem to be very similar learning experiences” (William & Burden, 1997:2). It is concerned with learners constructing their knowledge in personal ways. As a result, every learner will learn something different. In teacher learning, we should be concerned with the ways in which teachers organize and change their behaviour and understanding to produce changes in themselves which they value and which have meaning to them. The below cycle implies that, learners actively construct and test their own representations of the world and then fit them into a personal framework. New inputs and experiences may affect the person’s construction of the world in two different ways, either in assimilation or in accommodation. Roberts (1998) summarizes the following learning cycle the constructivist view suggests:

- the person filters new information according to his or her expectations and existing knowledge of the world;
- s/he constructs the meaning of the input;
- this meaning is matched with her prior internal representation relevant to the input;

- matching confirms or disconfirms existing representations;
- if there is a match, then s/he maintains the meaning as presently constructed (assimilation);
- if there is a mismatch, she revises her representation of the world to incorporate the new information (accommodation) (p. 23).

Therefore, in order to achieve its aim within a TD program, providers first have to ‘start where teachers are’ before aiming at bringing about change in teachers’ both personal and professional theories (Roberts, 1998). Thus, the first step is “to uncover teachers’ implicit theories and beliefs in order to make them available for conscious review” as indicated by Roberts (1998, p.26). This will enable the participant teachers to be aware of their previous understandings and test, reflect on them, and build up new ones (accommodate) in line with the input provided during the TD program. Considering teacher development and training input, change can only take place when new information is accommodated usually through interactions with other colleagues. When teachers ‘misinterpret’ training inputs, they often assimilate them into their prior ways of thinking which do not lead to change (Roberts, 1998).

Kennedy (1991) states the points about how teachers learn from constructivist psychology as follows:

- The location of teacher learning is within: it is determined by each person’s developing perception of herself as teacher, the teacher she is now and the teacher she wants to be.
- Input (e.g. models of teaching, theories of language learning) is essential in learning to teach; however, it is filtered and personalized by each learner-teacher.
- Personal theories (about ourselves as teachers and about the nature classrooms) develop in a complex, evolutionary manner in response to incidents and experiences in our working life.
- Our personal theories change as they are either confirmed or challenged by the reactions of others. It is for this reason that individual beliefs are orientated by social norms.

- Self-awareness (uncovering personal theories) is a prerequisite to change in established patterns of perception and behaviour.
- Providers need to understand how teachers and learners perceive their own experiences; the attainment of sociality is a condition for effective provider work (Kennedy, 1991).

In literature there are five major sub-groupings within constructivism: Piaget's (1970) approach; Kelly's (1955) personal construct psychology approach; personal constructivism as exemplified by Osborne and Wittrock (1985); radical constructivism, promoted by von Glasersfeld (1984); and social constructivism (for example, Burger and Luckmann, 1966; Schutz and Luckmann, 1973) in its several forms. A brief exposition of Kelly's personal construct psychology and social constructivism will be given so that the interpretation that informs our view of teacher development is clarified.

2.2.1 Kelly's Personal Construct Psychology

Kelly (1963) suggests that every person develops a unique repertoire of constructs based on his/her experience of the world and assumes that "the events we face today are subject to as a great variety of construction as our wits will enable us to contrive" (Kelly, 1963, p. 1). It uses the metaphor of a knowledgeable individual as a "personal scientist" (Kelly, 1955) who continually puts his/her constructions to the test. He believed that all of us operate like scientists even on a day-to-day basis. Accordingly, a person erects a representational model of the world which enables him or her to perform a related behaviour. This process is subject to change over time since constructions of reality are constantly tested out and modified for the future. These questioning, exploring, revising and replacing resemble processes scientific theorizing; thus the person can be seen as a scientist constantly experimenting with a personal experience (Pope & Denicolo, 2001).

Underlying Kelly's theory are the cognitive structures known as constructs, ways of construing events on "seeing the world" so that the future is anticipated (Allen, 1997). His fundamental postulate is the assumption that a person's psychological

processes are routed through various channels in which he/she anticipates events (Kelly, 1963). Kelly formally elaborated upon the fundamental postulate with eleven corollaries, which define the role of constructs in specific and the skeleton of personal construct theory in general:

1. *Construction Corollary*: A person anticipates events by construing their replications.
2. *Individuality Corollary*: Persons differ from each other in their constructions of events.
3. *Organization Corollary*: Each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs.
4. *Dichotomy Corollary*: A person's construction system is composed of a finite number of dichotomous constructs.
5. *Choice Corollary*: A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system.
6. *Range Corollary*: A construct is convenient for the anticipation of a finite range of events only.
7. *Experience Corollary*: A person's construction system varies as he successively construes the replications of events.
8. *Modulation Corollary*: The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie.
9. *Fragmentation Corollary*: A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other.
10. *Commonality Corollary*: To the extent that one person employs a construction of experience which is similar to that employed by another; his psychological process are similar to those of the other person.
11. *Sociality Corollary*: To the extent that one person construes the construction processes of another; he may play a role in a social process involving the other person.

(Kelly, 1955)

Zuber-Skerritt (1992) summarises Kelly's fundamental postulate and its corollaries raised above as follows:

Kelly's fundamental postulate and his corollaries give a picture of the person/learner as a 'personal scientist', with a hierarchical construction system (organization *corollary*) which is personally unique (*individuality corollary*) and which can be explored by him/herself as well as by others (*sociality corollary*). Apart from their individuality, a group of people may be similar in terms of their construction of experience (*commonality corollary*). The development of intelligence or conceptual change depends on the permeability, i.e. the degree of openness for change, of a person's constructs (*modulation corollary*) and the balance between hierarchical integration and consistency of differing constructs on the one hand and their differentiation and inconsistency (*fragmentation corollary*) on the other. Finally, a person is not predetermined in his/her thinking, but can choose alternatives (*choice corollary*). His/her construing is both cognitive and emotional; the personal construct system is a holistic entity. If any part within the system is changed, this change will have implications for other parts of the total systems (p. 58).

Pervin & John (2001, p. 430 in Sürmeli, 2004, p. 27) point out the strengths of the theory of personal constructs in the following way:

- The theory makes a significant contribution by bringing to the forefront of personality the importance of cognition and construct system;
- It is an approach to personality that attempts to capture both the uniqueness of the individual and the lawfulness of people generally;
- It has developed a new, interesting, and theoretically relevant assessment technique, the REP test. (see Chapter 3)

The limitations of the theory of personal constructs are mentioned as follows:

- The theory shows relative neglect of certain important areas such as emotion and motivation;

- Despite Kelly's view that theories are there to be reformulated and abandoned, no one, since 1955, has formulated any significant new theoretical developments in personal construct theory;
- It has remained outside of mainstream research relating work in cognitive psychology to personality.

Kelly's constructivist theory in the field of education was first used by Pope and Keen. The core assumptions in Pope (1993), of Kelly's theories for teacher learning include that;

- the world is real; however, individuals vary in their perception of it;
- an individual's conception of the real world has integrity for that individuals;
- 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 (p. 20-21).

Thus, it can be argued that researchers need to understand teachers' perceptions before trying to lead them in change. In addition, the importance of teachers' beliefs as a starting point in any teacher development program is gradually being recognized by the researchers. Teacher development as learning by teachers needs to "take into account the existing knowledge, experiences, opinions and values of the teachers" (Bell and Gilbert, 1996, p. 58).

Ben Peretz (1984) notes, (cited in Pope, 1985), as follows:

Investigating personal theories in the framework of personal construct theory may have practical implications. Making people aware of their own construing patterns and processes plays an important part in allowing them to change, i.e., to learn. Thus, participation in the research may become an educative process for teachers (p. 106).

The present study tries to determine the impact of an NLP-TD program on effective communication skills of the participant teachers within the framework of Kelly' PCP with a social dimension. Hereby, in this study it is taken into consideration that "all human experience is ultimately social ... it involves contact and communication" (Dewey 1938) and thus, that "the teacher's social world is the reality, the base from which each teacher will develop" (p. 38).

Similarly, Bell and Gilbert (1996, p. 44) state the following:

The position that the individual has some degree of responsibility and agency in the change process, while at the same time accepting that an individual teacher has limited power to change the culture and socially constructed knowledge.

2.2.2 Social Constructivism

A major limitation of humanistic theory and constructivism is that they tend to focus too much on the individuals and neglect the social aspect of learning (Williams & Burden, 1997; Roberts, 1998).

Learning to teach is not a private journey; however, it involves the adoption of a social role, a process of defining oneself as a teacher informed by our images of others and the traditional views of teaching available to us. For this reason, our social landscape intimately affects the nature of our development as teachers.

(Roberts, 1998, p. 36)

According to social constructivist view, learning does not take place in isolation. Instead, social constructivism focuses on the dynamic nature of the exchange among teachers, and sees learning as arising from interactions with others. Each teacher's development occurs in constant exchange with his/her social environment, working relationships, the climate of the school, and the wider social circumstances. Therefore, social constructivism highlights the significance of interaction as part of learning and the social constructivist perspective recognizes dialogue, talk, to be central to teacher learning.

Knowledge is perceived of as socially constructed, and we make use of language in order to do this. According to social constructivist view in teacher development, teachers construct their own meanings in their own ways, and they do so by interacting socially with other people, such as colleagues. All this takes place within a social context which will influence the personal meanings that individuals do.

At its simplest, as Fullan (1993) puts it,

“a school where teachers talk to each other about teaching and have some sense of collegiality provides positive conditions for teacher learning. A school with a privatist culture offers less favourable conditions for development. Thus, we cannot consider a teacher’s development without considering her interaction with school culture” (p. 39).

“Learners make their own sense of the world, but they do so within a social context, and through social interactions” (Williams & Burden, 1997 p. 28). Similarly, Wallace and Louden (2002) state that teachers change and develop through the influence of their milieu as well. They are in need of exchange between social forces in and out of school and personal values, experiences, expectation for development to occur (Roberts, 1998).

In their study, Bell and Gilbert (1996) propose that a social constructivist view of learning in teacher development which recognizes these components:

- Knowledge is constructed by people.
- The construction and reconstruction of knowledge is both personal and social.
- Personal construction of knowledge is socially mediated. Social construction of knowledge is personally mediated.
- Socially constructed knowledge is both the context for and the outcome of human interaction. The social context is an integral part of the learning activity.
- Social interaction with others is a part of personal and social construction and reconstruction of knowledge (p. 50-51).

Regarding the design of the present TD program, social constructivism (SC) has the following implications:

- Providers and teachers need to assess the relationships between their work and wider social conditions as learning in teacher development programs occurs in wider social and political context which are to be taken into consideration and not ignored.
- Dialogue and talk are central to teacher learning and are for long regarded as an essential part of experiential learning cycle.
- Collaborative dialogue is emphasized
- Task-focused talk is of special value since it offers opportunities to clarify personal meanings and social relationships that support changing views of self as teacher.
- Social Constructivism suggests that teacher learning is best promoted by cycles of related activities that integrate the dimensions of teacher learning.

(Roberts, 1998, p. 44-46)

2.3. Neuro Linguistic Programming (NLP)

NLP has been defined in various ways, often in its literature as ‘the art of communication excellence’, or ‘the study of the structure of subjective experience’ (McWhirter, 1992, in Tosey and Mathison, 2003, p. 2) and as “the art and science of excellence” (O’Connor & Seymour, 1995, p. 1). NLP is the study of how language, both verbal and nonverbal, affects our minds. By consciously directing our minds, we can create resourceful ways of behaving for ourselves (Sayre, 2008). From these definitions we infer that the aim of NLP is to enhance “the quality of people’s lives by helping them to interact more effectively with others” (p. viii).

The ‘Neuro’ part of NLP acknowledges the fundamental idea that all behaviour stems from our neurological processes of sight, hearing, smell, taste, touch and feeling. We experience the world through our five senses; we make sense of the information and then act on it. The ‘Linguistic’ part of NLP indicates that we use language to order our thoughts and behaviour and to communicate with others. The ‘Programming’ refers to ways we can choose to organize our ideas and actions to produce results (O’Connor & Seymour, 1995, p. 3).

2.3.1. A Brief History of NLP

NLP started in the early 1970s with the collaboration of John Grinder, an assistant professor of linguistics at the University of California, Santa Cruz, and Richard Bandler, a mathematician and a graduate student of psychology. Together they studied Fritz Perls, Virginia Satir, Milton Erickson and Gregory Bateson because of their reputation for excellence (see Figure 2). Other practitioners, apparently informed by the same framework, seemed markedly different in effectiveness. Bandler and Grinder asked what was the “difference that made the difference” between the excellent practitioners and the others (Tosey and Mathison, 2003, pp. 2-3). Their work found that they all followed similar patterns in relating to their clients and in the language they used, and that they all held similar beliefs about themselves and about what they were doing. Bandler and Grinder decided to find out what the specific patterns and beliefs

were and to see if they could be learnt by other people. Bandler and Grinder took these patterns, improved them and “built an elegant model which can be used for effective communication, personal change, accelerated learning, and in broader terms for enjoyment of life-long learning” (O’Connor & Seymour, 1995, p. 2). They set down their initial discoveries in four books, published between 1975 and 1977: *The Structure of Magic 1 and 2* and *Patterns 1 and 2*, two books on Erickson’s hypnotherapy. NLP literature has been growing at an increasing rate ever since (O’Connor & Seymour, 1995, p. 2).

The new patterns were called NLP by Bandler and Grinder as they believed it summarized the essence of what they had discovered. They emphasized the fact that we communicate our experiences to ourselves and to others through two means:

1. Our neurology, that is, how we ‘translate’ experiences with our brains into our physiology. (e.g. the way our bodies and facial expressions automatically reflect that we are excited, even though we are trying to act as if we are unaffected).
2. Our language, that is, the specific words and formulate we use to describe something. (e.g. the difference between saying “I don’t want to learn to drive” and “I want to learn to fly”).

(Kamp, 1999, p. 24)

NLP developed in two complementary directions: Firstly, as a process to discover and model the patterns of excellence in any field, and secondly, as an effective way of thinking and communicating. In the second direction, NLP challenges us to become aware of the patterns of communication not only with ourselves but also with others. Since these patterns have originally been learnt unconsciously and further developed through observation and personal experience, it is believed that, with the help of NLP, they can be trained under conscious control (Dilts, 1993; O’Conner & Seymour, 1995; Revell & Norman, 1997; Kamp, 1999). NLP has since achieved popularity as a method for communication and personal development.

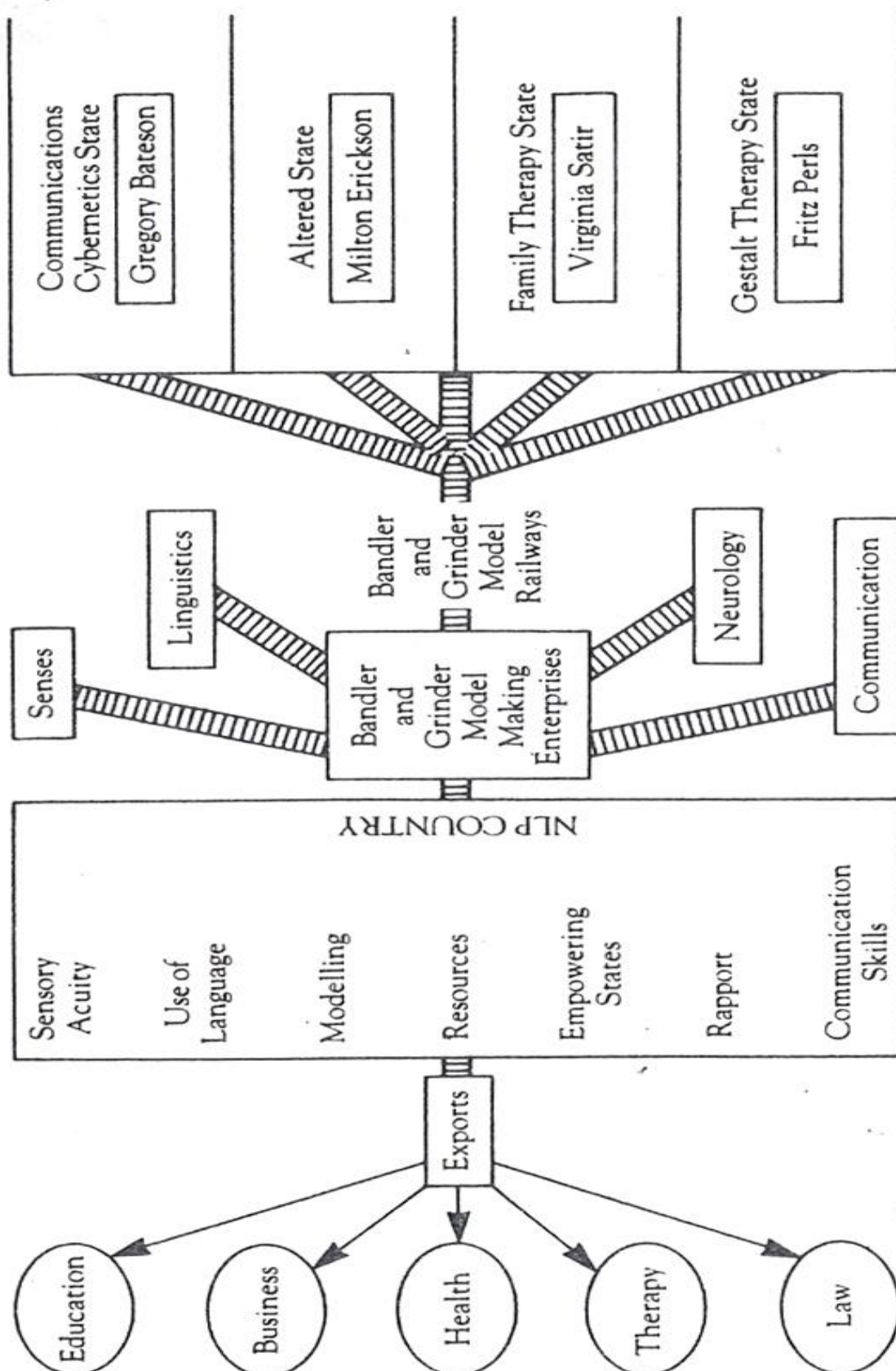


Figure 2 A Light Hearted Map of NLP (adapted from O'Connor and Seymour, 1995)

NLP has the reputation for introducing some powerful tools for learning and personal change, one of which is called neurological levels, which was developed by Robert Dilts from the work of Gregory Bateson. It is a model designed for thinking about personal change, learning and communication that brings together these ideas of context, relationship and levels of learning.

This model includes six different levels, which are aligned hierarchically, starting with environment at the bottom and spirituality at the top. O'Connor and Seymour (1995: 79) have illustrated these six elements within Figure 3:

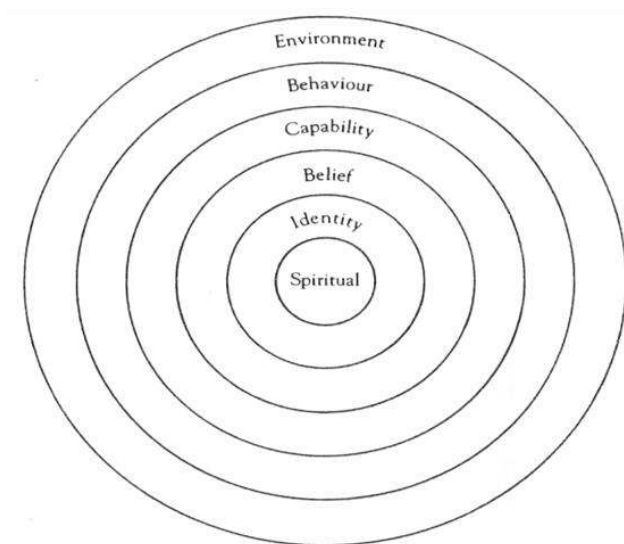


Figure 3 Neurological Levels in NLP (O'Connor and Seymour, 1995, p. 79)

Environment: where and what

The environment is the place, the time and the people involved.

Behaviour: what

Behaviour is what we do. In NLP terms, it includes thoughts as well as actions.

Capability: how

Capability is skill – behaviour that is consistent, automatic and habitual. This level both includes thinking strategies and physical skills.

Beliefs and Values: why

Beliefs give meaning to what we do. Values are why we do what we do. Beliefs and values direct our lives, acting both as permissions and prohibitions on how we act.

Identity: who

Identity is your sense of yourself, the core beliefs and values that define you and your mission in life. We express ourselves through our behaviour, skills, beliefs and values.

Spirit: connection

This is the realm of ethics, religion and spirituality – your place in the world.

(O'Connor, 2001, p.28-29)

This model provides a framework for organizing and gathering information, so makes it easier to know where to best intervene when working with ourselves or with others (Bavister and Vickers, 2004, p. 15). Changes on a lower level will not necessarily cause any change on higher levels. On the other hand, change at a higher level will have a more persuasive and lasting effect on the lower levels. (O'Connor, 2001, p. 81)

2.3.2 Neuro Linguistic Programming as a Communication Model

Neuro Linguistic Programming (NLP) began as a model of how we communicate with ourselves and others which was developed by Richard Bandler and John Grinder. They aimed to explain how we process the information that comes into us from the outside.

It is seen the external events through our internal processing, that is to say, we make an Internal Representation (I/R) of that event. That I/R of the event combines with a physiology and creates a state with referring to the internal emotional state of the individual. Our I/R includes our internal pictures, sounds and dialogue, and our feelings. A given state is the result of the combination of an internal representation and a physiology. Thus, what happens is that an event comes in through our sensory input channels which are: visual (sights), auditory (sounds), kinesthetic (external feelings), olfactory (smell), and gustatory (taste).

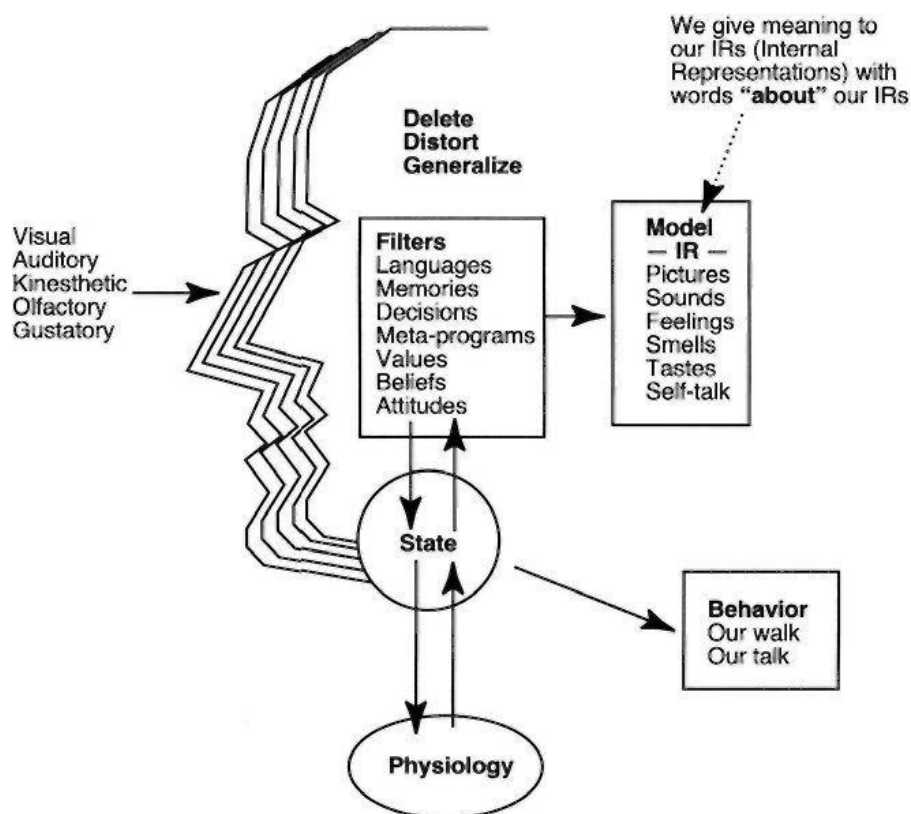


Figure 4 NLP Communication Model (Bodenhamer & Hall, 1999, p. 63)

As can be seen in Figure 4, the external event comes in throughout sensory input channels and it is filtered as we process the event and consequently we delete, distort, and generalize the information that comes in, according to any number of several elements that filter our perception. More specifically, deletion occurs when we “selectively pay attention to certain aspects of our experience and not others”. We then overlook or omit others. Another type of filtering, distortion occurs when we make “shifts in our experience of sensory data by making misrepresentations of reality”. The third type of filtering process is generalization, where we “draw global conclusions based on one or two experiences” (James, 2010, pp. 2-3).

We delete, distort and generalize the information that comes in from our senses based on one of the five filters which are, meta programs, belief systems, values, decisions, and memories.

Meta-Programs can help to predict people's states, and so predict their actions.

Values are how we decide what's important and what's good or bad to us.

Beliefs are generalizations about how the world is.

Memories of past affect our reactions in the present.

Decisions may create beliefs, or may just affect our perceptions through time.

(James, 2010, p. 3-4)

We can conclude that these filters determine the internal representation of an event that occurs. It is the internal representation that puts us in a certain state, and creates a certain physiology and the state which determines our behaviour.

2.3.2.1 Communicative Presuppositions

At the heart of NLP are the presuppositions, which comprise the theoretical framework underpinning many NLP patterns, models, change techniques and perspectives. While each of the presuppositions stands on its own, together they form an interconnected and interdependent matrix of thinking (Bavister and Vickers, 2004, p. 19). The presuppositions which underlie the thoughts and suggestions throughout this study are mostly the communicative ones. The presuppositions have been defined as follows:

1. *We cannot not communicate.*

Since communication involves the sending of signals to another—even when we attempt not to send a message to another—that comprises "a message" and the indicators or signals of that message will leak out. Even when we don't put our thoughts,

feelings, ideas, beliefs, understandings, decisions into words and express them to another—such internal phenomena get communicated non-verbally in a multitude of ways (Bodenhamer & Hall, p. 79).

2. The meaning of my communication is the response I get.

The response of the person with whom we communicate reflects the effectiveness or ineffectiveness of our communication. Regardless of your intent in communication, the response you get indicates what you communicated to the other person—in spite of what you intended (Bodenhamer & Hall, p. 79). The great value of this presupposition is that we are obliged to take responsibility for our communication, which means we have the option to make changes in our communicating. Keeping this presupposition in mind, you are much more likely to have successful relationships with people/others.

3. Communication is non-verbal as well as verbal.

In a study of communication at the University of Pennsylvania in 1970 (Kinesics and Communication, R. Birdwhistle), the researchers found out that in communication, 7% of what we communicate is the result of the words that we use, or the content of our communication. 38% of our communication to others is a result of our verbal behaviour, which includes tone of voice, timbre, tempo, and volume. 55% of our communication to others is a result of our nonverbal communication, our body posture, breathing, skin color and our movement. NLP suggests that the match between our verbal and non-verbal communication indicates the level of congruency. However, there can be a mismatch between verbal and non-verbal communication, which is known as incongruency; for instance, when somebody says ‘yes’ when you know they really mean ‘no’.

4. *Communication is non-conscious as well as conscious.*

This NLP presupposition suggests that we retrieve information non-consciously too. According to Dr. Emile Donchin at the University of Illinois, more than 99% of our learning is non-conscious. (cited in Revell and Norman, 1997, p. 95) People are usually good at communicating with conscious but less successful when it comes to communicating with the non-conscious because we are not taught to communicate with instinct, intuition, non-conscious feeling and the like. (Revell and Norman, 1997, p. 95) What does seem to be true is that learning is more effective when it is multi-sensory and when it appeals to the non-conscious as well as the conscious mind.

5. *There is no failure only feedback.*

If you communicate with someone and fail to get the response you want, *you alter your communication*—the stimuli that you present —until you get the response you want. In this way, you turn failure into feedback (Bodenhamer & Hall, p 80). So, every personal experience, even which we might call “failure” offers us a new challenge to develop our skills and encourage us for future outcomes (Kamp, 1999).

6. *The map is not the territory.*

Just as a “map” does not actually consist of *the “territory”* it represents, the words we use do not comprise the event or item they represent. We do not operate directly on the world, but on our individual perceptions *of the* world. Regardless of the external event, as subjects, we each construct our own internal subjective reality *of* it and that internal construct determines us—our thoughts, emotions, response (Bodenhamer & Hall, p 66). Therefore, everyone operates from their own map of the world. With the map/territory distinction, our “map”, as our perception of the territory, determines or controls both our perceptions and our responses. We respond to the world, not *as* the world exists—but *according to our “map” of it*. Recognizing the map/territory difference, people can recognize other people’s mapping reality out in different ways.

7. *Mind and body are interconnected.*

Mind and body are parts of the same system and each affects one another. That life, mind and body are one system is one of the central presuppositions of NLP because it is important to understand that it is not possible to isolate just one aspect of a system. Equally, when we change one aspect of a system, we will have in some way changed the rest (Bavister and Vickers, 2004: 20).

2.3.2.2 Representational Systems

People rely on their five senses to gather information about the external world. All of our experiences, in fact, result as a product of what we see, hear, feel, touch, and smell. In NLP we refer to these senses as the rep system. These *representational systems* helps us to explain how we code information in our minds in one or more of our sensory systems: Visual, Auditory, Kinaesthetic, Olfactory (smell) and Gustatory (taste) - shortly VAKOG (O'Connor and Seymour, 1995).

V	Visual	→	we look and see
A	Auditory	→	we hear and listen
K	Kinaesthetic	→	we feel externally (=tactile)
			we feel internally (=visceral or emotional)
			we feel movement (=psycho-motor)
O	Olfactory	→	we smell things
G	Gustatory	→	we taste

(Revell and Norman, 1997, p. 31)

Unless there are physical or psychological problems, we all use all five systems, although most people predominantly use primarily the three senses of visual, auditory and kinaesthetic (VAK) while storing and coding most information. However these two senses of olfactory and gustatory play a lesser role.

In NLP, the five senses do far more than just take in information. As we receive information from our senses, our brain codes them in the same manner. For instance, when we receive information visually, our brain codes this information as a picture. The brain codes information received auditorily as sounds and words. We refer to the internal words we form from sounds as auditory digital. Our mind codes our learnings in the way we learned them. When we recall these memories, we recall them in the same rep system (see Figure 5). If we hear something and store it as a memory of sounds, we will recall and express that experience using auditory language. Speak, hear, sound and loud serve as examples of auditory words.

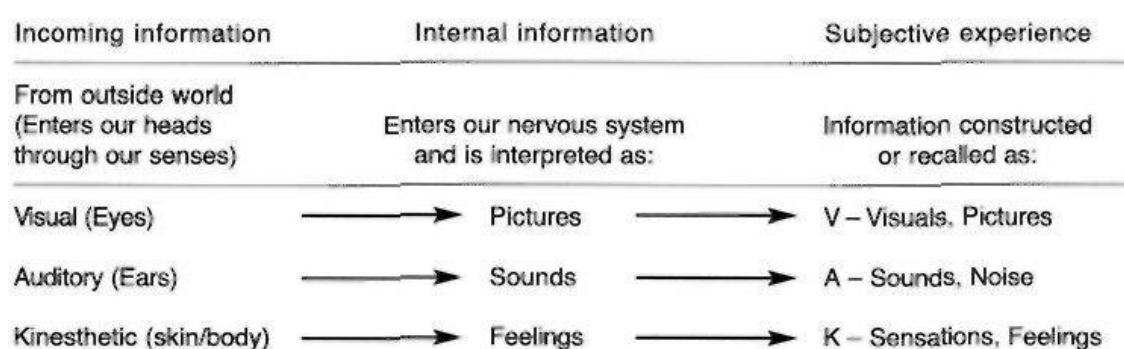


Figure 5 Making Sense of the World (Bodenhamer & Hall, 1999, p. 5)

Depending to some extent upon the subject and context at hand, most people tend to favour one system more than the other two, or one system sooner than the others. In NLP, this is called the preferred primary representational system. The term representational system arises from the fact that we re-present information primarily visually, auditorily and kinaesthetically.

The representational system that a person is using shows itself through body language in posture, breathing patterns, voice tone and eye movements. These are known as ‘accessing cues’ – they are associated with using the representational systems and make them easier to access. They give clues about how we think; however, these are also generalizations and may not be true in all cases. The main accessing cues, or the main ways we tune our bodies to the different ways of thinking (representational systems) are shown in Figure 6 (O’Connor, 2001, p 51).

	VISUAL	AUDITORY	KINESTHETIC
EYE MOVEMENTS	Defocused, or up to the right or left.	In the midline.	Below the midline usually to the right.
VOICE TONE AND TEMPO	Generally rapid speech, high, clear voice tone.	Melodious tone, resonant, at a medium pace. Often has an underlying rhythm.	Low and deeper tonality, often slow and soft, with many pauses.
BREATHING	High, shallow breathing in the top part of the chest.	Even breathing in the middle part of the chest cavity.	Deeper breathing from the abdomen.
POSTURE AND GESTURES	More tension in the body, often with the neck extended. Often thinner (ectomorphic) body type.	Often medium (mesomorphic) body type. There may be rhythmic movements of the body as if listening to music. Head may be tilted to the side in thought in the 'telephone position'.	Rounded shoulders, head down, relaxed muscle tone, may gesture to abdomen and midline.

Figure 6 Main Accessing Cues for Representational Systems (O'Connor, 2001, p. 50)

Some people think in language and abstract symbols. This way of thinking is often called 'digital'. A person thinking this way typically has a straight posture, often with the arms folded. Their breathing is shallow and restricted, speech is a monotone and they talk typically in terms of facts, statistics and logical arguments (O'Connor, 2001, p.51).

Eye Accessing Cues

While communicating, people move their eyes in different directions in a systematic way depending on how they are thinking. Neurological studies have put forward that eye movement both laterally and vertically seem to be in parallel with activating different parts of the brain. These movements are called lateral eye movements (LEM) in neurological literature. In NLP they are called eye accessing cues as shown in Figure 7.

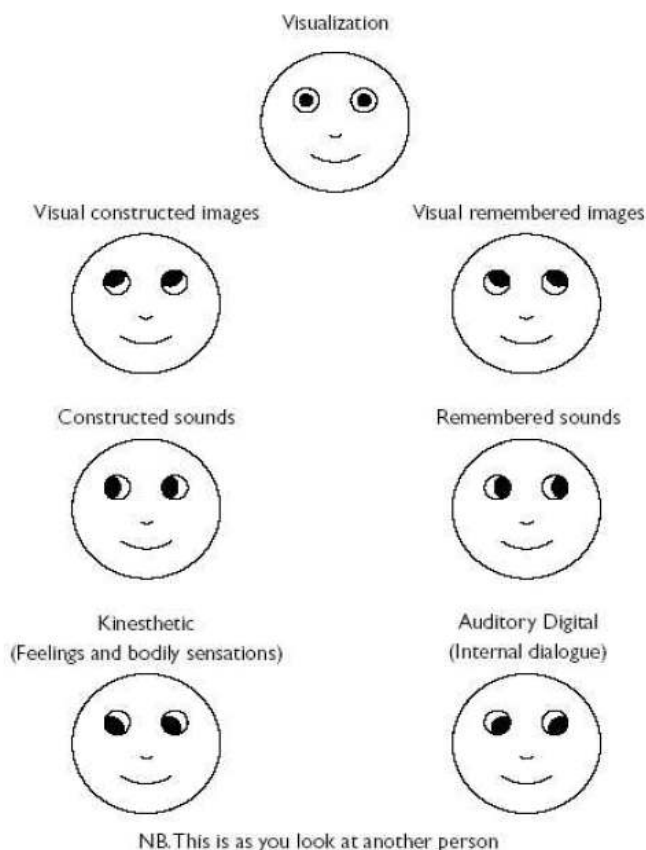


Figure 7 Eye Accessing Cues (O'Connor, 2001, p. 51)

There is a correlation between the representational system a person is using and their eye movements. The basic model is usually explained as follows:

- If a person's eyes look to their left, they are remembering something (recall). It is often related to the past.
- If they go to their right, the person is imagining or inventing something (construct). This might be related to the future.
- If they go up, the person is visualizing, making pictures.
- If they go left or right towards the ears, they are listening to sounds or words.
- If they look down, they are feeling kinaesthetically (emotionally or physically).

(Revell and Norman, 1997, p. 39)

Beyond eye accessing cues, we can utilize other indicators about a person's ongoing representing. We can notice their other *accessing cues* such as *Sensory Language*.

2.3.2.3 Sensory Language

The language people use, like their eye movements, also offers clues to which representational system they are using at a particular moment. For example, while people are experiencing or representing visually, they tend to use visual language-literally. They say things like: *'I see what you mean'* or *'I get the picture'* or *'I need a different perspective on that'*. While people are experiencing or representing auditorily, they tend to use auditory language such as: *'That doesn't sound right'* or *'I hear what you are saying but...'* While people are experiencing or representing kinaesthetically, they might say something like: *'I feel it's wrong'* or *'I can't quite grasp that idea.'* There is olfactory and gustatory language too: *'That's a bit fishy'*, *'I don't like the smell of this'*, *'It's left a bad taste in my mouth'* (Revell and Norman, p. 42).

These sensory-based words that link to a particular representational system are known as 'predicates' in NLP literature. Predicates are the result of thinking with a particular representational system. They are like verbal accessing cues (O'Connor, 2001, p. 64). The choice of predicate use shows how people describe events in different ways. Being receptive to these predicates, a person can become more aware of his/her own language, how it matches (or mismatches) other people's thinking as shown by their predicates.

NLP asserts that the descriptions people use to describe an event provide what a person does to code and represent information. This means that the way people represent information (using rep system) will come out in their words. By giving people back their words (using their language), we "speak their language". To a person saying "I see your point", in order to establish rapport and communicate with that person, we must paint a picture of our meaning. Should somebody say "I don't feel right about

this”, responding in feelings terms enables us to establish rapport and enables them to understand our communication.

Mutual understanding can be increased as a result of the common system shared by both sides (listener and the speaker) in communication. Using a different representation, however, means the listeners having to ‘translate’ what is said. And it can lead to misunderstanding (Alder and Heather, 1999: 88). Knowing the (primary) representation system of others thus becomes an important piece for effectively communicating with them. (users manual one not)

Predicates and Predicate Phrases

Visual Predicates and Phrases

Look, picture, focus, imagination, insight, scene, blank, visualize, perspective, shine, reflect, clarify, examine, eye, focus, foresee, illusion, illustrate, notice, outlook, reveal, preview, see, show, survey, vision, watch, reveal, hazy, dark, appearance, brilliant, colourful, dim, glimpse, highlight, insight, obscure, overshadow, overview, sparkle, spotlight, vivid, mirror...

I see what you mean. I am looking closely at the idea. We see eye to eye. I have a hazy notion. He has a blind spot. Show me what you mean. You will look back on this and laugh.

Auditory Predicates and Phrases

Say, accent, rhythm, loud, tone, resonate, sound, monotonous, deaf, ask, audible, pitch, clear, discuss, proclaim, cry, remark, listen, ring, shout, sigh, squeak, speechless, click, croak, vocal, whisper, tell, silence, dissonant, hum, hush, mute, harmonious, shrill, quiet, dumb, question, rumble, comment, call, melodious, whine, harmony, musical, acoustic, buzz, cackle, dialogue, echo, growl...

We are on the same wavelength. That’s all Greek to me. That rings a bell. It’s music to my ears. They were living in harmony. The place was humming with activity. Turn a deaf ear. It ended not with a bang, but with a whimper.

Kinaesthetic Predicates and Phrases

Touch, handle, balance, break, cold, feel, firm, grab, contact, grasp, push, rub, hard, hit, tickle, tight, solid, hot, jump, pressure, run, warm, rough, tackle, seize, sharp, sensitive, stress, soft, sticky, stuck, tap, tangible, vibrate, walk, concrete, gentle, hold, scrape, suffer, heavy, smooth...

I will get in touch with you. I feel it in my bones. There was tension in the air. He is a warm-hearted man. The pressure was tremendous. I'm surfing the Internet. He got the sharp end of her tongue. The project is up and running.

Olfactory Predicates and Phrases

Scented, smelly, stale, fishy, nosy, fragrant, smoky, fresh, musky...

I smell a rat. It is a fishy situation. He had a nose for the business.

Gustatory Predicates and Phrases

Sour, bitter, salty, juicy, spicy, toothsome, mouth-watering, minty, nausea, sugary, gall, succulent, chewy...

That's a bitter pill. She is a sweet person. He made an acid comment.

Non Sensory-Specific Words and Phrases

Decide, believe, understand, remember, know, mediate, recognize, understand, evaluate, process, decide, learn, motivate, change, conscious, consider, assume, choose, outcome, programme, resource, thing, theory, idea, sequence, result, logic, memory, future, past, present, connection, competence, consequence...

(O'Connor, 2001, p. 65-67)

2.3.2.4 Sub modalities

A key element of the rep system concerns that of the elements or qualities of the rep system. These qualities are known in NLP as ‘sub modalities’. Sub modalities essentially function as “the building blocks of the representational systems”. (Bodenhamer & Hall, 1999, p. 34) – How/the way we code and make up the structure of our subjective experience. The senses are the ‘modalities’ that we use to think, so the qualities of the sense experience, whether it is a memory or a vision of the future, are structured/composed by fine distinctions of pictures, sounds, feelings, tastes and smells.

In looking at the sub modalities, there is a distinction even within the sub modalities. As an illustration, a picture is as *either* black-and-white *or* in colour. We can code it one way or the other, but nowhere in-between. We can code a picture as a movie or a still shot, but not both. We refer to this as *a digital sub modality*. However, a picture can be far off or close or *anywhere in-between*. A sub modality that we can vary over a continuum we refer to as *an analogue sub modality* (Bodenhamer & Hall, 1999, p. 37). Location operates as an analogue sub modality. Most sub-modalities are analogue rather than digital. They have a scale which varies continuously; like temperature, brightness or volume.

Being able to make a fine distinction in the sub modalities, we can re-experience these distinctions via changing them. In other words, although we cannot change what happened however, we can change our memory of that event (Bodenhamer & Hall, 1999, p. 58). Changing some sub modalities has little or no effect. Others, however, can make a big difference in the way how we feel about the experience (O’Connor, 2001, p. 98). In NLP terms, we can be the director of our own mental film and we can direct our own mental film by playing with its sub modalities.

Predicate phrases and metaphors not only give clues about the representational system that person is using, but also clues about the sub modalities involved. For instance, ‘I take a dim view of that’ not only tells you the speaker is using the visual system, but also that brightness is critical to that picture. The sub modality of brightness influences how a person judges the idea (O’Connor, 2001, p. 98). To pace a person’s thinking process, the sub modality distinction as well as the representational system is important.

2.3.2.5 Body language

Body language is a key aspect of non-verbal communication. Body language involves cues and signals such as facial expression, gestures, body posture and eye movements. There are both ‘macro’ and ‘micro’ level aspects of body language. On the macro level, our bodies can reflect a great deal about our internal states. Body posture, for example, is a good indicator of a person’s degree of attention, anxiety and other emotional states. On the micro level, body language can indicate subtle cognitive processes, such as those identified by the NLP notion of accessing cues (Dilts, 2000, p. 128).

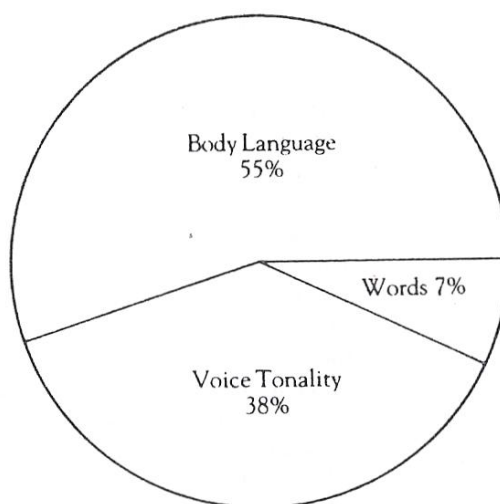


Figure 8 NLP Presupposition: Communication is Non-verbal as well as Verbal

(O’Connor & Seymour, 1990, p. 18)

In a study of communication at the University of Pennsylvania, Birdwhistle (1970) found out that in communication, 7% of what we communicate is the result of the words that we say, or the content of our communication. 38% of our communication to others is a result of our verbal behaviour, which includes tone of voice, timbre, tempo, and volume. 55% of our communication to others is a result of our nonverbal communication, our body posture, breathing, skin colour and our movement (see Figure 8). According to Mehrabian (1971), 93 percent of the information communicated in an interaction through non-verbal cues such as body language. Most NLP techniques and interventions involve the ability to attend to and interpret body language (Dilts, 2000, p. 129).

2.3.2.6 Sensory Acuity and Calibration

Sensory acuity refers to the ability to notice, to monitor, and to make sense of the external cues from other people (Bodenhamer & Hall, 1999, p. 43). It is concerned / with seeing and listening more effectively and consciously in reading non-verbal communications. Developing our sensory acuity enables us “to recognize the quality of another's signals in terms of their congruency and incongruency” (Bodenhamer & Hall, 1999, p. 43). When a person says ‘Yes’ in a certain tone of voice, with a certain intonation, a certain facial expression and a certain shrug of their shoulders, what s/he infact means is ‘No’ (Revell and Norman, 1997, p. 108). In reading another person's state by non-verbal signals, NLP offers a technique called calibration (O'Connor, 2001, p. 275). *Calibration* can be described as “the process of using sensory acuity to pay precise attention to changes in another person's state by detecting patterns in the nuances of their behaviour-the way they breathe, their voice tone or volume, skin colour, micro muscle movement, posture and gestures”

In order to establish effective communication, we can make use of both verbal and non-verbal clues. Much of the communication messages come to us non-verbally, and these non-verbal areas of communication comprise the fuller picture of communication.

In order to become an accomplished communicator, we should observe other people's posture, gestures, breathing, voice tone/volume/rhythm/pitch, skin colour, facial expression and eye movements. Sensory acuity of these non-verbals further provides us external signals coming from the other people. By using and developing our sensory acuity skills, we make available to ourselves a great deal of the non-verbal aspects of communication (Bodenhamer & Hall, 1999, p. 63).

2.3.2.7 Language in NLP

Language allows us to share a world of experience and, to understand and be understood. In this sense, Neuro-Linguistic Programming explores "how our thoughts (neuro) are affected by words (linguistic) leading to action (programming)" (O'Connor, 2001, p. 131). Language allows us to communicate with others. It makes our world visible, audible and tangible to others. Although it does not necessarily limit our thoughts, it limits the expressions of these thoughts and this can lead to misunderstandings in three ways:

- ❖ We translate our experience into language and mistake the language for the experience when it is only an incomplete reflection. We may think our experience is constructed in the same way as the language we use to talk about it and act inside those limits. We allow the words to limit us. The words bar us from wider choice, action and understanding.
- ❖ We may mistakenly assume that others share our assumptions and so we leave out vital parts of our message. This will confuse other people, even though we do not mean to mislead them.
- ❖ We misunderstand others because we fill in the gaps in their words from our map of reality, rather than finding out their map. We wrongly think that because we share the same language, we also share the same experience. We may then draw the wrong conclusions.

(O'Connor, 2001, p.132)

Basically, we *distort* experience by adding our emotions, values and beliefs, thus emphasize some elements and minimize other. We *delete* part of our experiences. It is impossible to give each detail of our experiences, hence we may assume that the other person knows what we are talking about and are selective in language leaving our many aspects. We *generalize* by taking one example as a representative of all events (Revell and Norman, 1999).

2.3.2.8 Meta Model of Language

Communication with others can be qualified by changing the language we use. Changing the language can change our thinking and thus gives us more thought about how to act (Revell and Norman, 1999). The Meta Model is a tool inspired by Chomsky's Transformational Grammar and adopted by Bandler and Grinder (1975) to challenge linguistic imprecision. It contains a list of different distortions, deletions and generalisations, which are also called violations and a parallel list of suggestions for challenging them called challenges (Revell and Norman, 1997, p. 65). These language challenging questions inquire about the ill-formedness that shows up in the Surface Structures and this enables the speaker to restore the material deleted, distorted, and generalized. Meta-model questions *reverse* the process of going from Deep Structure to Surface Structure (Bodenhamer & Hall, 1999, p. 139).

Surface Structure

Generalization



Distortion



Deletion



Deep Structure

Figure 9 Meta model process

In using language, the processes of distortion, deletion and generalization occur during the translation of deep structure (the mental images, sounds, feelings and other sensory representations that are stored in our nervous systems) to surface structure (the

words, signs and symbols we choose to describe or represent our primary sensory experience (Dilts, 2000). The Meta-model thus uncovers missing information in the speaker's communication and model of the world by making the speaker more precise and clear in the surface structure and by gaining insights into the deep structure.

2.3.2.9 Use of Metaphor in NLP

The word 'metaphor' does not mean the same as it is used in the study of literature. It is a language-related concept and defined as "an indirect communication by a word, expression or story which implies similarities between things or events" (Revell & Norman, 1997, p. 101). It is also defined as "a figure of speech in which something is spoken of as if it were another" (Dilts, 1983, p. 74).

The use of metaphor in NLP "by-passes the conscious mind" and gives us "direct access to the non-conscious mind" (Revell & Norman, 1997, p. 101). A metaphor is, by its very nature, ambiguous and open to interpretation. Accordingly, the listener interprets the framework or structure of the metaphor and interprets it in the framework of their own experience(s) (Bodenhamer & Hall, 1999, p. 217). Since the listener must go inside their own experience in order to make sense, metaphors activate an unconscious search for meaning in the deep structure.

As a communication device, metaphor and narratives like stories also present a far less threatening style than does direct advice (Bodenhamer & Hall, 1999, p. 217). The ability to use metaphors in NLP enables you to transfer a message to another person's mind. The attractiveness of metaphors can be classified as follows:

- Metaphors speak to the unconscious mind.
- People identify themselves in the metaphor.
- Metaphor descriptions stimulate much more interest than most forms of communication. They immediately garner focus.
- Metaphors provide much less threat than do directives.
- Metaphors provide opportunity for flexibility.

- Metaphors provide an exceptional tool for building rapport.
- Metaphors provide a non-manipulative form of communication.

(Bodenhamer & Hall, 1999, p. 230)

Regarding the power of metaphors to bring about changes, Revell and Norman (1999, p. 72) indicate the following:

Language is intrinsically metaphorical, and the way we speak reflects the way we experience, think and talk about the world. Conversely, metaphors shape the way that we think about the world and therefore the way we behave in relation to it. Exploring new metaphors enables us to understand and appreciate things in new ways, and if we change our metaphors, we can change the way we think and behave.

2.3.3 NLP and Teacher Development

Neuro-Linguistic Programming (NLP) is a tool that can be used to enhance processes of communication, including those between teachers and students.

Obviously, there is much more to teaching—especially the communicative aspect of teaching. The complexity and difficulty of interpersonal communication as individuals attempt to achieve a meeting of the minds, makes it imperative that teachers constantly seek to improve their skills as communicators. Inability to appropriately and effectively convey one's thoughts and, perhaps more importantly, to discern how students are perceiving and processing the content provided by the teacher, can marginalize both a teacher's effectiveness and a student's opportunities for success. Such a complete, systemic approach to the communication process lies at the heart of Neuro-Linguistic Programming.

Briefly, we might characterise an NLP approach to teaching and learning as follows:

- The teacher- learner relationship is a cybernetic loop, a dynamic process in which meaning is constructed through reciprocal feedback; not a transmission of information from one individual to another, separate, individual.
- People act according to the way they understand and represent the world, not according to the way the world 'is' (i.e. 'the map is not the territory').
- Of prime interest in NLP are the ways in which people represent the world internally, through sensory imagery (principally visual, auditory and kinaesthetic) and language. NLP is particularly interested in the way internal representations are structured. NLP assumes that the structure of internal representation shows regularities for, and is unique to, each individual.
- NLP also assumes that there are systematic relationships between this structuring and that individual's language and behaviour. A learner's internal representations and processing are reflected, both in their language and external behaviour. NLP train participants to observe and utilise these aspects.
- Skills, beliefs and behaviours are all learnt; for example, skills have corresponding sequences of internal representation, often referred to as 'strategies'. Learning is a process through which such representations and sequences are acquired and modified.
- An individual's capacity to learn is influenced strongly by their neuro-physiological 'state' (e.g. a state of curiosity rather than a state of boredom), and by their beliefs about learning and about themselves as learners (rather obviously, beliefs that one is capable of learning and that learning is worthwhile and fun are considered more useful than their opposites). Such states and beliefs are also learnt and susceptible to change.
- Such modification happens through communication between teacher and learner, which takes place through verbal and non-verbal channels, both consciously and unconsciously. The functioning of which human beings are

conscious, and which can be controlled consciously, represents only a small proportion of total functioning.

- All communication potentially influences learning. Crucially, teachers' language and behaviour influence learners on at least two levels simultaneously; both their understanding of the topic in question (e.g. the dynamic structure of their internal representations), and their beliefs about the world, including about learning.
- It follows that the awareness of choice about one's own language patterns and behaviour as a teacher, and sensitivity to and curiosity about their influence on and interaction with a learner's internal representations, are crucial to effective teaching and learning.

(Tosey and Mathison, 2003, p.3-4)

NLP offers a particularly appropriate and different approach to teacher development and teacher training from the provider's point of view. Considering training as a way of helping people learn to improve, the trainer's fundamental job is to demonstrate that change is possible (O'Connor & Seymour, 1994). This process can be facilitated through the application of the principles of NLP since NLP believes that every person has preferred modes of acquiring and processing information (Dastoor, 1993).

In light of the above literature review, the NLP-TD program was developed. The activities were adapted from different sources in order to achieve the aims of this study. The provider of the designed NLP teacher development program was aware of the contributions of NLP and had an NLP certificate (see Appendix 1) before the design and the implementation of the program.

It is not within the scope of this study to apply all the techniques and skills at Practitioner Level. For this reason, certain NLP skills and techniques were chosen to be used in the NLP-TD program as in Table 2.

Table 2 Categories of NLP Skills and Techniques Dealt During the NLP-TD Program

Training	Explanation
Behavioral integration of the basic presuppositions of NLP and Neurological Levels	Beliefs useful to an NLP Practitioner for accomplishing desired results.
Rapport Establishment	Creating the presence of trust, harmony, and cooperation in a relationship.
Verbal & Nonverbal Pacing & Leading	A method used by communicators to quickly establish rapport by matching certain aspects of their behavior to those of the person with whom they are communicating – matching or mirroring of behavior and then leading it.
Calibration and Sensory Acuity	The process of learning to read another person's unconscious, nonverbal responses in an ongoing interaction by pairing observable behavioral cues with a specific internal response.
Representational Systems (Sensory Predicates and Accessing Cues)	The five senses: seeing, hearing, touching (feeling), smelling and tasting. Recognizing and utilizing another person's representations. Subtle behaviors that indicate which representational system a person is using to think with. Typical types of accessing cues include eye movements, voice tone, tempo, body posture, gestures, and breathing patterns.
Meta Model	A model that identifies categories of language patterns that can be problematic or ambiguous. Used to assist in gathering and processing incoming information.
Elicitation of Well-formed Goals, Directions	In NLP, a particular outcome is well-formed when it is: (1) stated in positives, (2) initiated and maintained by the individual, (3) ecological – maintains the quality of all rapport systems, and (4) testable in experience – sensory based.
Overlapping and Translating Representational Systems	Connecting the meaning of one representation to the same meaning in another representation.
Sub-modalities	The special sensory qualities perceived by each of the five senses. For example visual sub-modalities include color, shape, brightness, etc., auditory sub-modalities include volume, pitch tempo, etc., and kinesthetic sub-modalities include pressure, temperature, location, etc.
Ability to shift Perceptions	Varying points of views from which a person is acting.
Using Metaphors	Stories, parables and analogies that contain information.
Flexibility of Behavior and Attitude.	The ability to vary one's behavior in order to elicit or secure a response from another person.

(taken from http://www.nlpmind.com/nlp/nlp_training.htm#description)

Regarding the design of the study, the general framework is based on constructivism and Kelly's (1955) personal construct theory. Teachers are seen as constructivists constantly engaged in constructing and re-constructing new meanings while making changes and developments in their personal theories (Kelly, 1955). Hence, formerly this study aimed to uncover teachers' implicit personal theories (William & Burden, 1997). Next, the present study aimed to achieve change via reviewing their construct system in light of the NLP-TD program.

Neuro Linguistic Programming (NLP) is a considerably attention drawn tool in recent years especially for personal development and change and it is applied in various fields including education. NLP seems to us to hold much potential for education, yet it also needs research and critical evaluation. This study aims to reveal the changes (if any) of teachers' personal theories before and after the NLP-TD program.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter presents the methodological considerations and the research procedure of the study. Following a discussion of the research design, the aims and research questions of the study are presented. Next, information about the participant teachers is given. Following this, general aims and the syllabus of the NLP-TD program are presented. The procedures employed during the application of the NLP-TD program are reported session by session. Finally, the data collection tools are introduced followed by a discussion of data analysis.

3.1 Research Design

The aim of this study was to explore secondary school English teachers' personal theories regarding their perceptions of effective communication to assist them in extending their communication skills through a new NLP-TD program. Considering its scope and aim, the study was designed as a case study. Following Yin (1984), the term 'case study' used in this study is defined as stated below:

"A case study is an empirical inquiry that: investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13).

Based on this definition, this study investigated the impact of NLP-TD program in enhancing the English teachers' communication skills. Five teachers working at a secondary school participated in this study. The sample was chosen on the basis of purposeful random sampling in which "a small sample size is chosen for in-depth qualitative study" (Patton, 1990, p. 179). Within a period of two months, the study was conducted with the participant teachers with a view to specifying the effect of the NLP-TD program. During this period, several qualitative data collection tools were employed.

First of all, Kelly's personal construct theory's methodological component, repertory grid technique was used as pre and post diagnostic tool (Pope & Keen, 1981) in order to collect data from the participant teachers. Next, follow-up interviews were used to confirm or triangulate the data from the repertory grid constructs. In addition, data from reflection sheets were taken. Finally, a Course Evaluation Questionnaire (CEQ) was employed in order to elicit the participant teachers' views and suggestions for the modification of the NLP-TD program.

3.2 Research Questions

In order to achieve the aims of the study, a new teacher development program was designed by the researcher. In the light of the relevant literature research, a need for a new teacher development program emphasising teachers' personal development was identified. In this sense, NLP seemed to be promising for enhancing EFL teachers' communication skills.

This study initially aims to explore the participant EFL teachers' personal theories of effective communication. Secondly, this study aims to investigate the impact of the NLP-TD program on EFL teachers' personal theories of communication skills to see the changes (if any) in the content and structure of the participant teachers' personal theories regarding their perceptions of communication skills. Finally, based on the teachers' reflections, the present study attempts to provide EFL teachers with a framework for a new (alternative) teacher development program based on NLP.

In order to achieve the aims of the study, this study sets out to answer the following research questions:

- 1) What is the nature of the structure and content of EFL teachers' construct systems regarding good communication strategies at the beginning and the end of the study?
- 2) What is the nature of participant teachers' constructions of "self as teacher" and "ideal teacher" and whether there are any discrepancies between the two?
- 3) What are the changes (if any) in the content and in the structure of EFL teachers' personal theories regarding good communication strategies due to the NLP-TD program?
- 4) What are the participant teachers' reflections regarding their experience of the new NLP-TD program?
- 5) What are the participant teachers' views and suggestions regarding any modifications of the new NLP-TD program?

3.3 Participants of the Study

This study was conducted with 5 non-native EFL teachers; one male and four females who are teaching English as a foreign language in the same state school in Adana. After getting the official permission from the District National Education Directorate (see Appendix 2), the researcher introduced the NLP-TD program at İncirlik High School in Adana to teachers who volunteered to participate in the NLP TD program.

The researcher held a meeting with the teachers and the school principals to explain to them the fundamental principles of the course. As became clear from the meeting, the program was considered to be beneficial from the school's perspective since it could enable the English language teaching staff to develop within the school context. The ultimate aim of the school principals was to enhance their teachers' development and bring about change through the NLP-TD program to be implemented.

3.4 Procedure

The NLP TD program was conducted for 8 weeks. The participant teachers and the researcher met at İncirlik High School at an appointed time every week. Each session lasted two and a half hours. The design and implementation of the NLP TD program went through the following stages:

Table 3 Stages of the NLP-TD program

Prior to the NLP-TD program	1. Designing a syllabus for the NLP TD program. 2. Giving information about the general characteristics of the sessions and eliciting participating teachers' expectations, views and suggestions for the forthcoming sessions. 3. Eliciting participant teachers' views of effective communication regarding his/her personal theories at the beginning of the NLP TD program.
During the NLP-TD program	4. Conducting weekly sessions at dates previously agreed upon. 5. Applying process evaluation throughout the NLP TD program.
On Completion of the NLP-TD program	6. Re-eliciting participant teachers' views of effective communication regarding his/her personal theories at the end of the NLP TD program. 7. Measuring the changes (if any) in teachers' personal theories before and after the NLP TD program. 8. Eliciting participant teachers' views and suggestions for the modification of the NLP-TD program.

In the following sections, general aims and the syllabus of the NLP-TD program is presented. Next, every session of NLP-TD program will be described in detail.

3.4.1 GENERAL AIMS OF THE NLP-TD PROGRAM

Having attended and participated in the 16-session NLP-TD program, the participant teachers will be able to:

SELF

- Establish well-formed outcomes that will maximise the way to get the desired results
- Enhance and utilize conscious-unconscious relationship
- Recognize and usefully handle own verbal and non-verbal language
- Fine tune senses to better understand the reactions of self
- Learn how to use sensory specific language
- Establish and maintain an appropriate level of rapport
- Understand situations from different points of view and be able to empathize
- Gain new understanding through seeing things from different perspectives while relating to others
- Enhance the use of metaphor and storytelling

OTHERS

- Build quality relationships based on trust and confidence through rapport
- Act in accordance with the NLP presuppositions
- Recognize and usefully handle others' verbal and non-verbal language
- Fine tune senses to better understand the reactions of others
- Take responsibility in any interaction
- Listen attentively and empathise with others
- Be aware of others' use of language violations and challenge these patterns to prevent misunderstanding and clarify meaning
- To help others establish and achieve well-formed outcomes
- Be able to see other points of views

3.4.2 Syllabus of the NLP-TD Program

Table 4 Syllabus of the NLP-TD Program

Session 1: NLP: What is NLP all about? <i>Definition, Origins, NLP Presuppositions, Four Pillars of NLP(Outcomes, Rapport, Sensory Acuity, Flexibility), The Action Model</i> Aim: To give a sense of what NLP is all about. Activity 1: Personal Questionnaire	Session 2: Life Levels:Line up Your Life <i>Environment, Behaviour, Ability, Values and Beliefs, Identity, Spirit</i> Aims: To think about skills and behaviour in different contexts, to become aware of own behaviour and skills in different roles played in live. Activity 1: Life Level Alignment
Session 3: Outcomes: Knowing Where You are Going <i>Well-formed Outcomes</i> Aims: To set well-formed outcomes, to overcome their negative perceptions Activity 1: Doodle a Dream Activity 2: Play Dough: Activity 3:Clarify your Goals Activity 4: Achieving Goals	Session 4: Rapport: The Key to Communication <i>Matching, Pacing and Leading, Influence</i> Aim: To relate better with other people Activity 1: Body Match Activity 2: Voice Match Activity 3: Match or Mismatch Activity 4: Pace and Lead Body Posture Activity 5: Influence
Session 5: Relating with Rapport <i>Empathy, Listening Skills</i> Aims: To build quality relationships based on trust through rapport; to be able to empathize Activity 1: Matching Predicates Activity 2: Be a Mirror Activity 3: Empathetic Responses	Session 6: VAKOG: How We Experience and Represent the World Aim: To know oneself and others better Activity 1: Rep System Preference Test Activity 2: Think about What You Do in Your Head Activity 3: The Lead Vak Test Activity 4: Rep System Translation
Session 7: Sub-Modalities <i>Main Visual/ Auditory/ Kinaesthetic Sub-Modalities</i> Aim: To determine more precisely how a person represents their world Activity 1: Play with your Sub-modalities	Session 8: Eye Movements <i>Remembering and Imagining</i> Aims: To use eye accessing cues in order to explore three different types of thinking Activity 1: How Do I Look?

Session 9: Sensory Acuity & Calibration <i>Reading Non-Verbal Communications</i> Aims: <i>To make sense of non-verbal messages, to become a better observer, to highlight the importance of intonation and voice quality in conveying emotion.</i> Activity 1: <i>Numbers That Show Your Mood</i> Activity 2: <i>Catch the Bill</i>	Session 10: Sensory Language Aims: <i>To learn how to use sensory specific language, to learn different ways of saying something.</i> Activity 1: <i>Sort and Odd</i> Activity 2: <i>Sensible Sam</i>
Session 11: Perceptual Positions: Seeing Things from Different Angles <i>Position 1 (Me), Position 2 (You), Position 3 (Neutral Observer)</i> Aim: <i>To see things from different perspectives while relating to others</i> Activity 1: <i>Guided Fantasy: Looking from Different Angles</i> Activity 2: <i>Someone Else's Shoes</i>	Session 12: How language relates to experience The Meta Model: Challenging the Imprecise Language Aims: <i>To highlight the importance of language-experience relationship, to be more precise and to clarify meaning.</i> Activity 1: <i>Drawing</i> Activity 2: <i>Challenges</i>
Session 13: Verb Power Accentuate the Positive Aims: <i>To highlight the power of positive choice of words</i> Activity 1: <i>From Noun to Verb</i> Activity 2: <i>Positive-Negative Transfer</i>	Session 14: Communicative Presuppositions of NLP: Aim: <i>To internalize presuppositions</i> Activity 1: <i>What Did You Really Mean?</i> Activity 2: <i>Change Your Response</i> Activity 3: <i>Look at the Mandala</i> Activity 4: <i>It is not All Just Words</i> Activity 5: <i>Show with Your Body</i>
Session 15: Use of Metaphor & Story Metaphorical Language Aim: <i>To enhance skills of metaphor and storytelling</i> Activity 1: <i>Choose a Metaphor</i> Activity 2: <i>If I were</i> Activity 3: <i>Metaphorical Language</i>	Session 16: The NLP-TD Recap Aim: <i>To revise what has been done so far</i> Teachers' reflections and feedback at the end of the NLP-TD program

3.4.3 Sessions Applied in the NLP-TD Program

3.4.3.1 SESSION 1: What is NLP all about?

Definitions of NLP

What is NLP? What do you know about NLP?

The name ‘Neuro-Linguistic Programming’ comes from the three areas it brings together:

N	Neurology	The mind and how we think.
L	Linguistics	How we use language and how it affects us.
P	Programming	How we sequence our actions to achieve our goals.

(O’Connor, 2001, p. 1)

Here are some definitions of NLP. Put them all together and they give a good idea of the field:

- ❖ ‘NLP is the study of the structure of subjective experience.’
- ❖ ‘NLP is an accelerated learning strategy for the detection and utilization of patterns in the world.’ (John Grinder)
- ❖ ‘NLP is the epistemology of returning to what we have lost- a state of grace.’ (John Grinder)
- ❖ ‘NLP is whatever works.’ (Robert Dilts)
- ❖ ‘NLP is an attitude and a methodology, which leave behind a trail of techniques.’ (Richard Bandler)
- ❖ ‘NLP is the influence of language on our mind and subsequent behaviour.’
- ❖ ‘NLP is the systemic study of human communication.’ (Alix Von Uhde)
- ❖ ‘NLP is the method for modelling excellence so it can be duplicated.’

(O’Connor, 2001, p. 2)

THINK

- What do these definitions have in common?
- How would you define NLP in your own words?

Origins of NLP

NLP started in the early 1970s from the collaboration of John Grinder, an Assistant Professor of linguistics at the University of California, Santa Cruz, and Richard Bandler, a mathematician and a graduate student of psychology. Together they studied Fritz Perls, Virginia Satir, Milton Erickson and Gregory Bateson because of their reputation for excellence.

The NLP Presuppositions

At the heart of NLP are the presuppositions, which guide the whole approach. They do not need to be accepted as the absolute truth; however, acting as if they were true can make a world of difference in your life and in your communications.

- ❖ Mind and body are interconnected: they are parts of the same system.
- ❖ The map is not the territory: we all have different maps of the world.
- ❖ There is no failure, only feedback.
- ❖ The map becomes the territory.
- ❖ Knowing what you want helps you to get it.
- ❖ The resources we need are within us.
- ❖ Communication is non-verbal as well as verbal.
- ❖ The non-conscious mind is benevolent.
- ❖ Communication is non-conscious as well as conscious.
- ❖ All behaviour has a positive intention.
- ❖ The meaning of my communication is the response I get.
- ❖ Modelling excellent behaviour leads to excellence.
- ❖ In any system, the element with the greatest flexibility will have the most influence on that system.

(Revell and Norman, 1997, p. 15)

THINK

- What does each presupposition mean for you?
- What are the implications of each presupposition for you
 - a) personally?
 - b) as a teacher?

Activity 1: Personal Profile Questionnaire

Aim: To help the participant teachers gain awareness of their priorities and goals in their lives.

Now, you are going to produce a 'personal profile' of each of you. Identify one thing you have learnt about yourself answering these questions. You can decide whether or not to share your answers with others.

PERSONAL PROFILE QUESTIONNAIRE

What is your idea of perfect happiness?

What objects do you always carry with you?

Who or what is the greatest love of your life?

What is your greatest extravagance?

What is your greatest fear?

What personality trait do you most dislike in yourself?

What personality trait do you most dislike in other people?

What do you most dislike about your appearance?

What do you most like about yourself?

What is your favourite smell?

When and where were you happiest?

What is your motto?

What keeps you awake at night?

How would you like to be remembered?

What is the most important lesson life has taught you?

The Four Pillars of NLP

NLP rests on four pillars:

- *Rapport* – *the quality of your relationship* affects mutual trust and responsiveness. You establish rapport by understanding and respecting the way another person sees the world. Rapport is essential for successful communication.
- *Outcome* – *knowing what you want* and being able to elicit from others what they want is the basic skill in NLP. NLP is based on always thinking of outcomes in every situation; so, you are always acting in a purposeful way.
- *Flexibility* – *if what you are doing is not working, then do something else*. When you know what you are doing is not getting you what you want, the more choices of communication and perspective brings you better results.
- *Sensory acuity* – *noticing non-conscious and non-verbal communication*. It is to do with observing other people and noticing what they are communicating often non-consciously and non-verbally.

(O'Connor, 2001, p. 4)

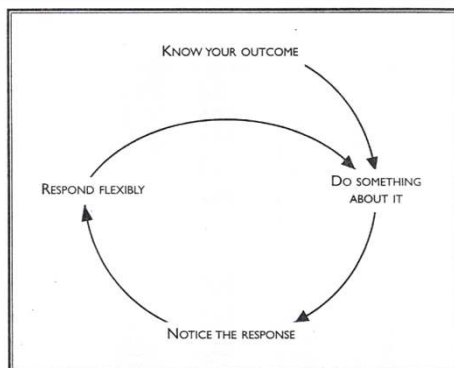


Figure 10 Basic Action Model

(Revell & Norman, 1997, p.17)

Each step of this model shown in Figure 9 refers to one of the four pillars. The first step, *know your outcome*, is to do with being clear about what you want, either in the personal or the professional sense. The second step, *do something about it*, is related to rapport since it involves other people. The third step, *notice the response*, links with sensory acuity. And the fourth step, *respond flexibly*, is having options of what to do next. If it does not work, do something different until you get there.

3.4.3.2 SESSION II: LIFE LEVELS

Aim: To help participant teachers think about their skills and behaviour in different contexts.

- Think of all the **environments** you operate in, all the places you habitually frequent, e.g. kitchen, classroom, friends' houses, dentist, etc. (home, classroom, staffroom, social events)
- Think of your **behaviour** in all these places, all your roles, e.g. cook, teacher, friend, patient, etc. (mother/father, teacher, colleague, friend)
- Think of all your different **abilities** (both professional skills and personal qualities), the things you are able to do which you allow you to behave in particular ways in one or more of the environments, e.g. efficiency, sense of humour, kindness, etc.

The researcher hands out each participant teacher fifteen cards in each of three colours. Next, each participant teacher creates his/her own life level cards: writing key environments on one colour, behaviours on another colour, and abilities on the third.

This activity helps teachers become aware of their own behaviour and skills in different roles they play in their lives.

Next, the researcher points out to participant teachers the other three 'life levels':

- **Belief** What are all the things that you believe about yourself, about the world is?
- **Identity** Taking into account everything you know about yourself, what is it that makes you 'you'? Who are you?
- **Spirit** What is there beyond yourself that you believe in? It may be a spiritual belief, or a cause that you would work for, or it may be a driving force beyond yourself.

Life Levels: Line up your life

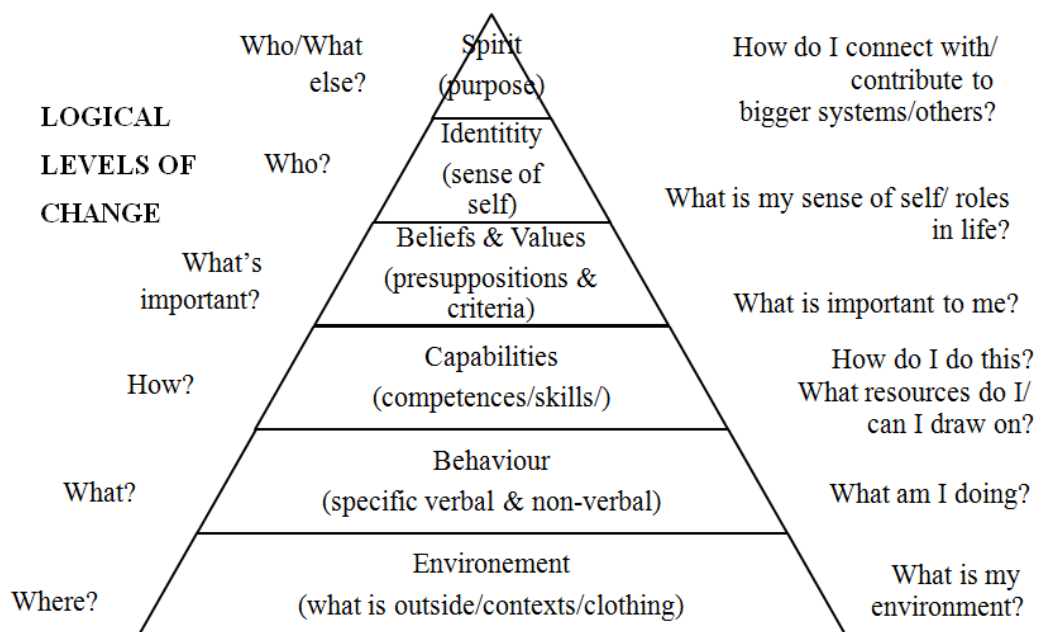


Figure 11 Logical Levels of Change

(Knight, 1995)

Pair work: The researcher asks the participant teachers to have pairs of two and build a pyramid with someone who they do not think they have a lot in common.

Group work: The researcher asks the participant teachers to have groups of two and make a common pyramid for the NLP-TD group. Next run, the researcher asks the participant teachers to find a name and a symbol for the pyramid.

What can the life levels model do?

One thing it can help with is pinpointing where you need to focus your attention and perhaps make changes in your life. Another thing it can do is assist you in lining everything up so you can be centred, connected and congruent. Another way in which it is useful is in working on an outcome.

Activity 1: Life Level Alignment

1. Write the name of each level on a separate piece of paper (in different colours) and place them in a line on the floor, leaving some space between each one:
ENVIRONMENT BEHAVIOUR ABILITY BELIEF IDENTITY SPIRIT
2. Think of an outcome you have or a particular situation or context you wish to explore.
3. You are going to step into each level, starting with the environment you are exploring. Every time you step into a different level, experience what it is like and associate into it. Pick a specific moment and see it, hear it and feel it.
4. From your position in **Spirit**, turn around and look back down the levels. You are going to step back down into different levels, taking with you all the experience from this and each subsequent level.
5. When you are ready, step back into **Identity**, taking with you your sense of spirit. Re-experience who you are, this time enriched with your spirit.
4. Step into **Belief**, taking with you your sense of spirit and identity. Re-access those beliefs once more, this time strengthened by your spirit, identity and belief.
3. Step into **Ability**, taking everything else with you. Re-experience those skills and resources once more, supported by your spirit, identity and belief.
2. Step into **Behaviour**. Experience doing those things once more, this time having with you your spirit, identity, belief and abilities.
1. When you are ready, step into **Environment**, taking everything else with you. Be in that place once again, this time connected to your spirit, identity, belief, abilities and behaviour.

When you are ready, step out. How was it?

(adapted from Revell and Norman, 1997, p. 80-81)

Demonstration: Through a list of questions the researcher guides a volunteer teacher through the levels.

Pair work: Getting the general idea of the alignment, the participant teachers do the activity with a partner, taking their turns and talking each other through the levels.

3.4.3.3 SESSION 3: OUTCOMES

Activity I: Doodle a dream

Sit quietly and comfortably, close your eyes and go inside.

“Just let your mind relax, and think forward ten or twenty years to imagine yourself in the future. What do you want your life to be like? How do you want to feel? What sort of things do you want to be doing? What sort of things will you see around you? What sounds will you be hearing? Just let your mind roam over your professional life, your job, your career, your work. And your personal life, your relationships, your parents, maybe children. Your home. Travel. Holidays. Anything you would like to have in your future. And then keeping those thoughts, pictures, sounds and feelings in your mind, come back to the classroom, pick up your pen and doodle. Just draw any shapes that seem to represent your future.”

(Revell and Norman, 1999, p. 16)

Activity II: Play dough: what is in mind put it in your hands

Now, take your time and make your dreams come alive in your hands using the colourful dough.

Outcomes: knowing where you are going

It is not so easy to get your goals until you have defined them clearly, whether they are personal or professional, short or long term. Setting well-formed outcomes- one of the four pillars of NLP- is the crucial first step in the Basic Action Model. Once you know what it is you would like, you can begin to imagine what it would be like, to visualise it in your mind and to think about the steps you need to take. Then you can begin to get it.

Criteria for well-formed outcomes

Write down an outcome you would like to realise. Match your outcome against the well-formed conditions. Make notes and changes as you revise and at the end write your clearly-defined outcome.

The well-formed conditions

1 *Positive: What do you want?*

‘What do I want?’

not ‘What do I not want, or want to avoid?’

2 *Evidence: How will you know you are succeeding/have succeeded?*

‘How will I know that I am on course towards my outcome? What am I going to measure?’

‘How will I know when I have achieved this outcome? What will I see, hear or feel?’

3 *Specifics: Where, when and with whom?*

‘Where specifically do I want this?’

‘When specifically do I want this?’

‘In what context do I want this?’

4 *Resources: What resources do you have?*

List your resources. They will fall into five categories, some more relevant than others, depending on your outcome: *Objects, people, role models, personal qualities, money.*

5 *Control: Can you start and maintain this outcome?*

‘What can I do directly to get this outcome?’

‘How can I persuade others to help me?’

6 *Ecology: What are the wider consequences?*

‘What time and effort will this outcome need?’

‘Who else is affected and how will they feel?’

‘What will you have to give up when you achieve this outcome?’

‘What is good about the present situation? What do you want to keep?’

(O’Connor, 2001, pp. 13-14)

Activity III: Clarify Your Goals

Aim: to help oneself and others set more achievable goals.

- Look at these goals. Which ones are well formed (expressed in such a way as to help the person achieve that goal)? Restate the goals which are not well formed.
1. I want to leave home.....
 2. I want a lot of money.....
 3. I want to live near my parents.....
 4. I like singing.....
 5. I want my parents to stop hassling me.....
 6. I want to be earning 60,000TL per year.....
by the time I am 40.
 7. I want to get a job.....
 8. I want people to like me.....
 9. I want to understand English.....
 10. I want my pronunciation to be easily.....
understood by native speakers.

(Revell and Norman, 1999, p. 14)

Activity IV: Achieving goals

Aim: To help participant teachers overcome their negative perceptions

- Take a new, clean piece of paper and write down your well-formed goal.
- Below the goal, write the word ‘OBSTACLES’ and then list as many things as possible which make the goal difficult to achieve. Write all sorts of objections to do with material and physical materials as well as personal qualities which you feel are lacking.
- Working alone, look at the obstacles and think of ways to overcome them.

(Revell and Norman, 1999, p. 15)

Whole class activity: One of the participant teachers leaves the room and the other teachers hide his/her play dough. The rest of the teachers represent the ‘OBSTACLES’ and the owner of the goal has to negotiate with the teachers to overcome each obstacle, beginning, *I could ...* to get his/her goal.

3.4.3.4 SESSION 4: Rapport: The Key to Communication

Rapport is one of the four pillars of NLP and, according to one of the NLP presuppositions, ‘Rapport is the key to successful communication’. What exactly is rapport? In terms of Revell and Norman (1997), we could say it is maximizing similarities and minimizing differences between people at the non-conscious level (p. 110).

THINK

How do we establish rapport with one another?

- Think about someone you really like and feel comfortable with. What’s going on? Why do you feel comfortable? What are you both doing?
- Now ask yourself the same questions about someone you don’t like and/or don’t feel comfortable with. How does it show to other people?

Matching is doing the same thing with the same part of the body as the other person i.e. crossing your right leg over your left leg to match them crossing their right leg over their left leg. This **body matching** is something we can do consciously with anyone, in order to facilitate communication.

Activity 1: Body Match

Aim: To practice body matching and attentive listening.

- Participant teachers prepare to tell their partner a short anecdote for about two minutes.
- A is the speaker, B the listener.
- While A talks, B body matches A and shows interest in what A is saying with
 - gestures and head nods
 - supportive noises (*Mm, Oh*, etc) – with reason
 - repetition of key words (sparingly and only if appropriately)
 - questions to check information or get more information (if appropriate)

Pair work: A tells B their short anecdote and then swap roles.

Group work: Participant teachers discuss their experience in light of the following questions: How did it feel to listen like that? How did it feel to be listened to in that way?

There are other ways we can match too. We can match a person's **voice**, for example, which can be very useful for putting someone at ease on the phone. Approximating to their speed, tone and pitch will help in matching one's voice.

Activity 2: Voice Match

Aim: To practice attentive listening and voice matching.

- Participant teachers prepare to tell their partner a short anecdote (maximum of two minutes) – preferably something which happened to them.
- **B** concentrates on noticing very precisely what is said, and how it is said.
- **B** sits **A**'s chair and pretends to be **A**. **B** retells **A**'s story back to **A**, matching **A**'s voice in terms of speed, tone and pitch.

Pair work: **A** tells **B** their short anecdote.

Group work: Participant teachers discuss their reactions from the point of view of the talker and the listener.

Activity 3: Match or Mismatch

Aim: to explore the effects of matching and mismatching body language.

- Have groups of two, **As** and **Bs**.

As' instruction which reads:

Prepare a short anecdote to tell to a partner in the other group. Decide how to use your body and voice to make the story as interesting as possible to your listener.

Bs' instruction which reads:

Your partner will tell you a story. In the beginning, listen attentively and with full rapport. After a minute, I will drop a book on the floor as if by accident. At this point, stop listening with rapport and start acting as if you are bored and uninterested.

Pair work: Having found a partner, **As** start telling their story.

Group work: **Bs** tell **As** what their task was- and apologise. Participant teachers share their opinions on how listeners show a lack of interest and how speakers react.

Activity 4: Pace and Lead Body Posture

Aim: To practice pacing and leading someone's body posture.

- Have groups of two, **As** and **Bs**.

As' instruction which reads:

Prepare a short anecdote to tell to a partner in the other group. Decide how to use your body and voice to make the story as interesting as possible to your listener.

Bs' instruction which reads:

Your partner will tell you a story. Listen with full attention and with as much physical rapport as possible. After a few moments, change your body position while continuing to give **A** your full attention. Notice if – after a moment – **A** follows your change.

Pair work: Having found a partner, **As** start telling their story.

Group work: Bs lead the feedback in their pairs by asking As what they noticed. They then tell As what their task was.

Activity 5: Influence

Aim: To practice verbal pacing and leading.

- Participant teachers read a dialogue which illustrates verbal pacing and leading:

MOVE THOSE MUDDY BOOTS!

On a train, passenger **B**, sitting facing passenger **A**, is reading the newspaper with their muddy boots up on the seat next to **A**.

A *Excuse me!*

B *Yes?*

A *I'm sorry to interrupt your reading ...*

B *That's OK.*

A *I know you're probably very tired and need to relax, but could I ask if you could possibly put your feet down?*

B *Eh? They're very comfortable up there.*

A *I'm sure they're. The problem is that your boots are muddy, and they're making the seat dirty.*

B *Are they? Oh well, in that case ... (taking them down).*

A *Thank you very much.*

Group work: Participant teachers discuss how **B** managed to be successful and state their opinions to the question 'What kind of language did **B** use?'

(taken from Revell and Norman, 1999, pp. 122-125)

Pair work: Participant teachers brainstorm other situations where someone is doing something we would like them to stop. In pairs, participant teachers role-play a situation of their choosing.

Assignment: *Observation:* watch people who are in rapport and those who aren't.

Body match a person you're with. What effect does it have?

Voice match someone on the phone. What effect does it have?

And try *mismatching* too in either situation. What effect does that have?

3.4.3.5 SESSION 5: Relating with Rapport

People who relate well to other people are said to be *in rapport* and communicate well with them. All of us relate well to some people, and when we are in rapport with them we do certain things non-consciously. NLP techniques will help you become aware of what these things are, so that you can do them *consciously* to improve your ability to communicate. These techniques are helpful in fostering healthy relationships.

Another way to get into rapport with someone is to listen carefully to their sensory-specific language ... and to use language from the same representational system back to them. NLP calls this ‘matching predicates’. So is, for example, you notice that another person is using a lot of visual language, then by using visual language yourself, you are maximizing similarities and minimizing differences with them on yet another level. Conversely, mismatching predicates can lead to less effective communication.

Activity 1: Matching Predicates

What systems are A and B using in the following? Which predicates tell you this?

- A *I’m under a lot of pressure. I feel really smashed down.*
- B *Can’t you see any light at the end of the tunnel at all?*
- A *No, it’s all on top of my shoulders at the moment.*

Mirroring is using the opposite side of your body as you see yourself in a mirror, e.g. putting your right hand on their legs when they put their left hand on their legs.

Activity 2: Be a Mirror

Aim: To help participant teachers notice and practice mirroring body movements

- Participant teachers stand up and face each other.
- A is the ‘leader’; B is the ‘follower’ or ‘mirror’.
- They put their hands in front of them with the palms close to each other but not touching.

- **A** moves slowly, **B** mirrors exactly, while maintaining eye contact (and therefore relying solely on peripheral vision).

(Revell and Norman, 1999, p. 126)

Pair work: Participant teachers swap roles, so B is the leader and A the follower. Finally, participant teachers do the activity with no designated leader and follower.

It is also possible to match one's speed and depth of **breathing** and his/her general level of alertness. If someone is dynamic and moving a lot, look ready to act and interested. If they are calm and still, too much moving about may not be welcomed.

Activity 3: Empathetic Responses

Aim: To practice empathy and rapport building

- The researcher elicits the language of empathy.

Mm, Oh, Uh huh.

Oh dear! Really? Poor you! Hard luck! Well done! Congratulations! Wow!

How terrible/awful...! How wonderful/amazing...! What shame/pity...to happen!

- Each participant teacher takes one of the statement cards.

I've just had six fillings at the dentist!

I came top of the class in English.

I failed my driving test – again!

Our new English teacher is brilliant.

I came second in the tennis competition.

The cat's just been sick all over the floor!

I've got a new baby sister.

I'm so fed up and depressed.

I've got the 'most terrible indigestion!

I've passed my driving test.

I had a queue for hours at the post office.

I got a new car for my birthday.

We're going to Mauritius for our holiday.

I've got this terrible pain in my big toe.

I went to a fantastic concert yesterday.

They were awful to me at the interview.

(Revell and Norman, 1999, p. 121)

Group work: Participant teachers mingle and say different sentences (with feeling) to others who respond appropriately.

Listening skills

Perhaps the most basic component of rapport is the ability to listen. Most of the people are very good at talking. Many of us are not so good at listening. The next time you are having conversation, practice your listening skills. Listen attentively what the other person is telling you.

THINK

- What qualities make a person a good listener?
- Write down notes the things a good listener does ... and the things a good listener doesn't do.*

*SUGGESTED ANSWERS

- Make eye contact; encouraging facial expression; head nods; full attention;
- Body matching; cross matching; body position (alert, leaning slightly forwards, etc);
- Empathetic noises such as 'Mm', 'Oh', 'Ah', etc;
- Interjections such as 'Really?', 'Oh dear', 'How awful' etc;
- Repetition of key words;
- Questions to check you've really understood what they mean or to elicit further information: 'So what you're saying is ...', 'Do you mean that ...?', 'Tell me more ...' etc.

(Revell and Norman, 1997, p. 111)

Assignment: *Observation:* watch people who are obviously in rapport and those who aren't.

Mirror a person's body movements. What effect does it have?

Match predicates of a person you talk to. What effect does it have?

3.4.3.6 SESSION 6: VAKOG: How We Experience the World

NLP is based on how we use our senses. We experience the world and gather information using our five senses or '*Representational Systems*'. In NLP the five systems are called 'VAKOG' for short:

V	visual	seeing
A	auditory	hearing
K	kinaesthetic	feeling
O	olfactory	smelling
G	gustatory	tasting

(O'Connor, 2001, p. 46)

Activity 1: The Representational System Preference Test

Aim: To help participant teachers become aware of their rep system preferences.

- Participant teachers take the representational preference test (see Appendix 11).

Activity 2: Think About what you do in Your Head!

- Take a sheet of paper and make five columns, like this:

SEE HEAR FEEL SMELL TASTE

- Read each word in the box below and identify how you first represent it in your mind:

RAIN * SILK * ONION * COMPUTER * TELEPHONE * GARLIC * STORY BOOK * MOON * RIVER * GRASS * BUS * SAND * ROSE * CHURCH * LEATHER * COFFEE * FISH * CAT * TRAIN * BABY * FRIEND * YOURSELF * YOUR COUNTRY * LONDON * POLITICS * LEARNING ENGLISH * MATHS * LOVE * THE FUTURE

Do you SEE the thing or SEE the word?

Do you HEAR the sound the thing makes or HEAR the word spoken?

Do you FEEL the thing, either physically or emotionally?

Do you SMELL it?

Do you TASTE it?

- Write the word in the appropriate column.

(Revell and Norman, 1997, p. 37)

Follow-up discussion: How did you get on? Did you have more words in one or two columns than in the others?

As well as experiencing the external world through our senses (our primary system), we also use our senses to access information internally when we remember or imagine things. In NLP, this is called the **lead system**.

Activity 3: The Lead Vak Test: Read and Imagine

Aim: To realize which lead system we prefer to use

- Follow each instruction in your mind and give yourself a mark:

0 = impossible 1 = difficult 2 = OK 3 = easy

- ___ SEE a kangaroo
- ___ SEE your front door
- ___ SEE your toothbrush
- ___ SEE a friend's face
- ___ SEE a plate of food
- ___ SEE a TV show
- ___ WATCH the TV scene change

- ___ HEAR a song
- ___ HEAR rain
- ___ HEAR a fire alarm
- ___ HEAR a friend's voice
- ___ HEAR your own voice
- ___ HEAR birds singing
- ___ HEAR the birdsong change to a call of alarm

- ___ FEEL excited
- ___ FEEL yourself swimming
- ___ FEEL grass under your feet
- ___ FEEL a cat on your lap
- ___ FEEL hot
- ___ FEEL your fingers on a piano keyboard
- ___ FEEL your fingers playing a few notes

When you have done the test:

- Add up your scores for each sense : SEE _____ HEAR _____ FEEL _____
- Does the highest score correspond with what you think your preferred lead systems?
- Think of ways to enhance the systems you do not find so easy.

(Revell and Norman, 1997, p. 36)

Translating Representational Systems

Here are some common phrases with translations between representational systems as shown in Figure 12.

GENERAL	VISUAL	AUDITORY	KINESTHETIC
I don't understand it.	I'm in the dark.	That's all Greek to me.	I can't make head of it.
I don't know. handle on it.	It's not clear yet.	I can't tell if that's right.	I don't have a
I understand.	I see what you mean.	That rings a bell.	That feels right.
I think.	I get the picture.		I get your drift.
I understand.	My view is...	Something tells me...	I hold these
I think. views...			
I'm confused.	This is a mess.	There is no rhyme for it.	I can't get a grip.
	It's too obscure.	It sounds crazy.	None of this fits.

Figure 12 Translating Representational Systems

(O'Connor, 2001, p. 61)

Translating across representational systems means taking an idea and expressing it in different representational systems. Translation changes the form but preserves the meaning.

Activity 4: Representational System Practice

Aim: to increase teachers' awareness of rep systems; to reflect on the least used system.

Example 1. My future looks hazy.

Match: *Visual:* When I look to the future, it doesn't seem clear.

Translate: *Auditory:* I can't tune in to my future.

Kinaesthetic: I can't get a feel for what seems to be going to happen.

Example 2. Sarah doesn't listen to me.

Match: *Auditory:* Sarah goes deaf when I talk.

Translate: *Visual:* Sarah never sees me, even when I'm present.

Kinaesthetic: I get the feeling Sarah doesn't know I'm alive.

(Bodenhamer and Hall, 1999, p. 9)

Complete the following for increased awareness of rep systems. This model offers good practice for future use. This exercise will wire your mind to match predicates when you next hear one of these.

1. I get the feeling I'm unappreciated.

Match:

Translate:

Translate

2. I have trouble looking back to that problem.

Match:

Translate:

Translate:

3. I can imagine what she's like.

Match:

Translate:

Translate:

4. Something tells me I'm making a mistake.

Match:

Translate:

Translate:

5. Joe paints a clear picture of disaster ahead.

Match:

Translate:

Translate:

(Bodenhamer & Hall, 1999, p. 10-11)

3.4.3.7 SESSION 7: Sub-Modalities

Sub-modalities are finer distinctions within each representational system (VAKOG). They are the smallest building blocks of our thoughts yet discovered. Combinations of sub-modalities allow us to distinguish whether we like something or not, whether it is in the past or the future, whether we are confused or we understand etc. Some sub-modality distinctions are digital. This means they are either on or off, discontinuous: there is no in between. A picture either has colour or it doesn't; you either see yourself in the picture or you don't. Most sub-modalities are analogue. They have a scale which varies continuously; like temperature, brightness or volume.

Eliciting Sub-Modalities

Main visual sub-modalities

Location	Where is your picture? Point to it. Is it up? Down? In front? Behind?
Distance	How close or far away is it?
Size	How big or small is it?
Colour	Is it in colour or black and white?
Movement	Is it moving (like a film or video) or still (like a photo)?
Brightness	How bright or dull is it?
Definition	How clear or hazy is it?
Association	Can you see yourself in the picture or are you looking through your eyes?
Edging	Does the picture have a frame or does it merge into its surroundings?
Quantity	Is there just one picture or are there two or more?

Main auditory sub-modalities

Nature	Are there sounds or voice or voices? Or a mix?
Quantity	Is there one voice or sound or are there more?
Location	Where are the voices and/or sounds coming from? Are they mono/stereo?
Distance	How close or far away are they?
Volume	How loud or quiet?
Tempo/speed	How fast or slow?
Tonality	Is there a variety of tones or a monotone?
Pitch	How high or low?
Ownership (of voice)	Your voice or someone else's?

Main kinaesthetic sub-modalities

Quantity	Is there just one feeling or more than one?
Location	Where is the feeling?
Size	How big or small is it?
Shape	Is it a definite or indefinite shape? If definite, what shape?
Temperature	How hot, warm, cool or cold?
Colour	Does it have a particular colour?
Intensity	How strong or slight?
Movement	Does it move around or is it still?
Direction	If it moves, which way does it go?
Duration	How short or long-lived is it?

(Revell and Norman, 1997, p. 74-76)

Activity 1: Play with your Sub-modalities

Aim: To be able to change the memories in the desired way.

- **A** thinks of a really pleasant memory of a time they felt very positive and resourceful.
 - Think of a time when you felt very positive and resourceful.
 - Take your time to establish a clear memory.
- Whether they have a picture, sounds or feelings, or a mixture of different things, **B** asks **A** to notice the sub-modalities involved.
 - Where is your picture? How bright or dull is it?
 - Are there sounds and voices? How loud or quiet?
 - Where is the feeling? How strong or slight?
- **B** helps **A** to play with their sub-modalities by making suggestions and asking “What happens if ...?” questions such as:
 - “What happens if you make the picture brighter? Does it make the memory even better?”
 - “What happens if you make the sounds louder? Does it make the memory even better?”
 - “What happens if you make the feeling stronger? Does it make the memory even better?”

Pair work: Participant teachers explore different sub-modalities.

3.4.3.8 SESSION 8: Eye Movements

When people are remembering or imagining, they tend to use three different types of thinking, in various sequences (see Figure 13):

- Visual – thinking in pictures and images
- Auditory – thinking in words, voices or sounds
- Kinaesthetic – thinking in actions, movements and feelings

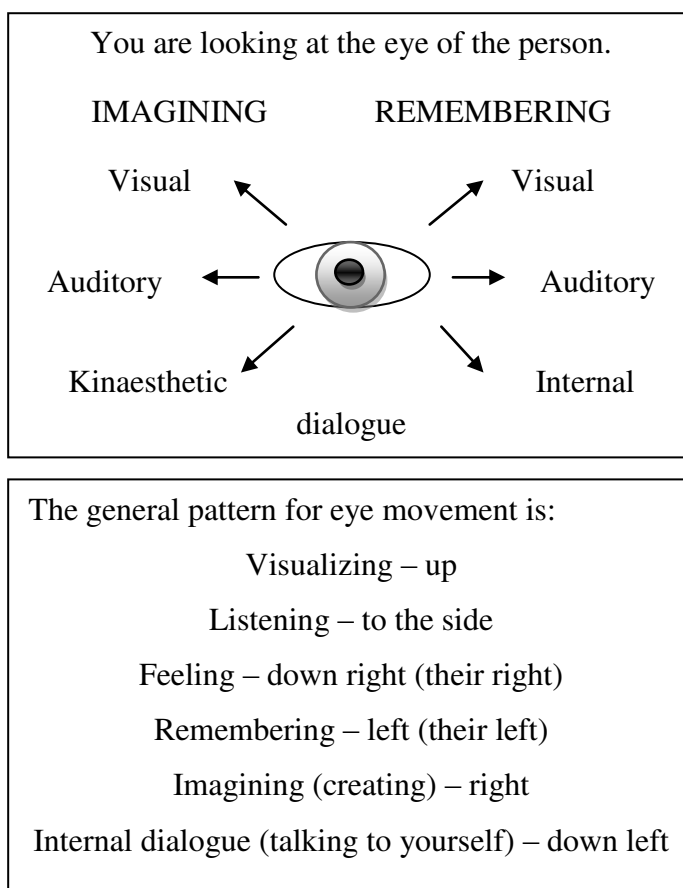


Figure 13 Eye Movements (Wingate, 2000, p. 36)

Activity 1: How Do I Look?

Aim: To explore how we use our ‘inner senses’ when we remember or imagine things.

- Work with a partner.
- Sit where you can see your partner’s eyes but not facing him/her.
- Your partner doesn’t look directly at you. Ask the questions.
- As your partner thinks about the answers, watch and draw the sequence of his/her eye movements.
- Write down what he/she says and say how his/her eyes moved.

Pair work: Participant teachers exchange roles and **Bs** ask **As** the second set of questions and note their eye movements.

As' instruction which reads:

Questions for A to ask B	Eye movements	Answer/Comment
1 What's your favourite colour?	○○ ○○○○ ○○	_____
2 What's your favourite music group?	○○ ○○○○ ○○	_____
3 What's your favourite sport to play?	○○ ○○○○ ○○	_____
4 How would you look with green ears?	○○ ○○○○ ○○	_____
5 Can you picture a beautiful sunset?	○○ ○○○○ ○○	_____
6 Can you hear some beautiful music?	○○ ○○○○ ○○	_____
7 Can you feel yourself swimming?	○○ ○○○○ ○○	_____
8 What is the worst noise?	○○ ○○○○ ○○	_____
9 When do you feel very good?	○○ ○○○○ ○○	_____
10 How does it feel to be relaxed?	○○ ○○○○ ○○	_____

Bs' instruction which reads:

Questions for B to ask A	Eye movements	Answer/Comment
1 What colour is your front door?	○○ ○○○○ ○○	_____
2 What's your favourite song?	○○ ○○○○ ○○	_____
3 What's your favourite weather?	○○ ○○○○ ○○	_____
4 How would you look with blue hair?	○○ ○○○○ ○○	_____
5 Can you picture a mountain?	○○ ○○○○ ○○	_____
6 Can you hear birds singing?	○○ ○○○○ ○○	_____
7 How does it feel to take a shower?	○○ ○○○○ ○○	_____
8 What is the most beautiful sound?	○○ ○○○○ ○○	_____
9 When do you feel happiest?	○○ ○○○○ ○○	_____
10 How does it feel to be asleep?	○○ ○○○○ ○○	_____

(taken from Wingate, 2000, p. 37)

Assignment: With the eye accessing chart before you and some blank paper, watch talk TV interview shows to track both the eye movements and people's use of language.

3.4.3.9 SESSION 9: Sensory Acuity & Calibration

In NLP we use the concept of sensory acuity for training our ability to see and listen more effectively and consciously in reading non-verbal communications. Sensory acuity refers to the ability to notice, to monitor, and to make sense of the external cues from other people. If so much of the communication messages come to us non-verbally, then developing our sensory acuity skills becomes essential to becoming truly an accomplished communicator.

By developing and using our sensory acuity we make available to ourselves a great deal of the non-verbal aspects of communication. Bodenhamer and Hall (1999) state that these non-verbal areas of communication comprise the fuller picture of communication (p. 43). As you become a better observer of people, you will develop your sensory acuity so that you can learn how people respond to various communications.

Activity 1: Numbers That Show Your Mood

Aim: To highlight the importance of intonation and voice quality in conveying emotion.

- A and B sits back to back. B concentrates on A's voice.
- A thinks about somebody he/she likes and then counts aloud to 10.
- B notices as much as possible about the way A is counting.
- A counts to 10, while thinking about somebody he/she dislikes.
- B listens carefully the voice until he/she can recognize the difference between the counting for the liked person and for the disliked person.
- A counts to 10, thinking of the either the liked or disliked person, without saying which.
- B has to guess which person it is, based on A's voice alone.

(Baker and Rinvulcri, 2006, p. 17)

Pair work: Partners discuss what they observed and which strategies they used to differentiate between the two tones of voice.

Activity 2: Catch the Bill

Aim: To develop the skill of calibration and observation.

- Form groups of two.
- "A" begins by holding a bill at waist level.
- "B" encircles the bill with their hand about mid-way up.
- "B" stands ready to catch the bill when "A" drops it.
- "B" calibrates each time "A" drops the bill until "B" figures out "A's" unconscious movements, etc., prior to "A's" dropping the bill.
- "A" will give off unconscious signals before dropping the bill.
- When "B" catches the bill three times in a row, then you know you have determined "A's" pattern.
- "B" notices what they calibrate to catch the bill.

Pair work: "B" gives back to "A" sensory-based descriptions of their unconscious movements.

(Bodenhamer and Hall, 1999, p. 47)

Assignment: Observe people around you at home and at work.

Things to look for:

- 1. Breathing*
- 2. Colour changes*
- 3. Minute muscle changes*
- 4. Lower lip changes*
- 5. Voice sounds/ton*

3.4.3.10 SESSION 10: SENSORY LANGUAGE

These sensory-specific words are often referred to in NLP as **predicates**. Predicates are also important ways of recognizing what kind of representational system a person uses. Even though there are lists of equivalent words and phrases for each of the senses, in some cases there may be no direct equivalent. The whole area of VAKOG gives rise to a great deal of interesting language based on the senses. Revell and Norman (1999) consider the following framework in relation to this (p. 43):

- The five senses: sight (seeing) , hearing, touch (feeling), smell, taste
- The corresponding parts of the body: eyes, ears, skin, fingers, nose, tongue
- The corresponding verbs: see (watch / look at), hear (listen to), touch / feel, smell, taste
- The corresponding descriptive phrases: looks + adjective, looks like + noun, looks as if verb phrase (and similar constructions with sounds, feels, tastes, and smells)
- Adjectives to describe sights, sounds, feelings (tactile and emotional), smells and tastes
- Associated expressions and idioms: Certain idioms and expressions

THINK

- Brainstorm words and phrases to add to each of the six categories.
- Which category do you find easiest? Why?

Participant teachers are given a list of predicates of neutral, visual, auditory, kinaesthetic, and olfactory/gustatory (see Section 3.4.3.10).

Activity 1: Sort and Odd

Aim: To differentiate between sensory-specific words and expressions

- Are these words and expressions visual, auditory, kinaesthetic, olfactory, gustatory or neutral (unspecified representational system)?
- Write **V, A, K, O, G** or **N** next to each of them.
- Remember you are considering the literal meaning of the words, not your interpretation.

See ____	hear ____	feel ____	think ____	smell ____
Taste ____	sound ____	grasp ____	picture ____	focus ____
Heavy ____	fit ____	tone ____	handle ____	believe ____
Experience ____	grab ____	odour ____	describe ____	harmony ____
Look at ____	tune in ____	understand ____	point of view ____	

That rings a bell! ____	I'm getting cold feet about this. ____
It's a piece of cake! ____	See it from my perspective. ____
My mind's gone blank! ____	She knows how to push the buttons. ____
Give them the cold shoulder. ____	It's not just a bit fishy; it stinks! ____
Cool! ____ Brilliant! ____ It's OK. ____	Wonderful! ____ Smashing! ____

(Revell and Norman, 1997, p. 42)

Activity 2: Sensible Sam

Aim: To highlight sensory language.

Participant teachers take a copy of Sensible Sam's Problem Page (see Appendix 3) which illustrates sensory language:

- Identify which person is experiencing the problem in a visual, auditory or kinaesthetic way.
- Identify the specific words and expressions relating to the sensory experience.
- Respond to letters trying to match the sensory language.

(Revell and Norman, 1999, p. 25)

3.4.3.11 SESSION 11: Perceptual positions

Activity I: Guided fantasy: Looking from different angles

Aim: To make participant teachers aware of the usefulness of experiencing a situation from different angles.

Sit comfortably in a balanced position. Take a deep breath and as you breathe out, let all the tension drain out of your toes and say to yourself the word RELAX. One more time. Breathe in, let the tension drain away, and RELAX. Imagine you are holding a rare and beautiful casket that archaeologists have just brought out of an ancient tomb. Keep the casket closed for the moment and look down on its lid. What can you see? Look at it very carefully. It really is very precious. Handle it gently. Now feel the surface of it with your fingers. Move your fingers slowly over the lid. How does it feel? You might even like to smell it. Does it have a particular smell? Look at it from the front. How is it different from the lid? Take a moment to look at it very carefully. Feel the front surface with your fingers. Slowly and carefully. How does that feel? Look at it and feel it from the side. How is it different from the front? Now to the other side. Are both sides the same or are they different? Turn it around and look at it from the behind. Touch it too. What do you notice? Now, being particularly careful, hold it up to see and feel underneath. What is it like? Bring the casket down again. In a moment you are going to open it, but before you do, imagine what you will see inside. Imagine it very clearly. And when you're ready, hearing the sound that it makes as you do so, slowly open the lid of the casket ... and ... see whatever you see. And remember that whatever it is, it too will change as you look at it from the different angles. In a moment, you're going to close the lid and gently come back to the room bringing with you a feeling of wonder and pleasure. When you are ready, open your eyes.

(Revell and Norman, 1997, p. 119)

First position	Second position	Third position
ME	YOU	NEUTRAL OBSERVER
How I experience something.	How you experience it - or how I imagine you experience it.	How a third person might experience it.

THINK

- What do you think the strengths of each position are?
- Which position is most useful for teachers?
- What do you think the problem might be for people who can only operate from one of the positions?

NLP offers a clear technique for viewing things from three different points of view, called **perceptual positions**. Different positions give us different information. If you look at things from different angles, they do not change, rather your perception of

them changes. And this can be very constructive when we are trying to solve a problem or get on better with other people. Good communicators seem to have the flexibility to shift easily from one position to another as appropriate. All three positions are important. The ability to second-position another person or people is a crucial element of *rapport*.

Activity II: Someone Else's Shoes

Aim: To give participant teachers the opportunity to put themselves in someone else's shoes and see things from their point of view.

- Think of a relationship you wish to explore in which there is conflict or difficulty in relating to another person.
- Write 'your name', 'the other person's name' and 'observer' on different coloured papers.
- Find a place for every piece of paper. As an 'observer' you should see them from the same distance.
- Be yourself, looking at the other person whom you imagine to be in the other position. Tell that person – aloud – how you experience the situation from your point of view. (Break state).
- Go and be in the second position and put yourself in his/her shoes ... be him/her. Look at yourself being in the first position. Tell the 'you' how you experience the situation from this other point of view, using 'I' for him/her and 'you' for you. (Break state).
- Move away to 'observer' position and look at both of them and the space between them. Tell them how you experience the situation now from a neutral observer position. (Break state).
- With the insights gained from the observer position, go once more in other person's position and be in his/her shoes. (Break state).
- Go once more in your first position and find out how your experience of the situation is different and whether you have some insights into what you might usefully do to bring about changes.
- Finally, be clear about how each position relates to the communication.

(Revell and Norman, 1999, p. 127)

Assignment: Write a letter to yourself... as if you were someone else.

3.4.3.12 SESSION 12: The Meta-Model

How language relates to experience

Activity: Drawing

Aim: To provoke PTS' thoughts of the importance of language-experience relationship.

- PTS are given a description of a rare animal and asked to reflect how they understood it in their own imaginations by drawing.

Group work: PTS discuss on their drawing.

The world, our experience of the world and the language we use to describe our experience of the world are different from each other. When we speak about our experience and attempt to convey it with words, the experience is transformed in three ways. We leave out some aspects (*Deletion*). We take one example to be representative of a class of experiences (*Generalization*). We give more weight to some aspects than others (*Distortion*) (O'Connor, 2001, p. 133). Hence, the language may limit us to describe our experience or may be inadequate to match the understanding of both sides in conversation.

In order to put our experience into language – our meanings into words – we become imprecise. Similarly, other people can speak very imprecisely.

THINK

What do you think the writers of these sentences really meant to say when they wrote the following?

- *This is to let you know that there is a smell coming from the man next door.*
- *My toilet is blocked and we can't bathe the children until it is cleared?*
- *Will you please send someone to mend our broken path? Yesterday my wife tripped and fell on it and is now pregnant.*

(Revell and Norman, 1997, p. 65)

We can improve communication with others by challenging the imprecise language they use. The *Meta-Model* is a list of different distortions, deletions and generalizations (*Meta-Model Violations*) and a list of suggestions for challenging them (*challenges*). The aim of the challenges is get speakers to be more precise, to express themselves more clearly and to clarify meaning.

THE PRECISION MODEL

VIOLATIONS

CHALLENGES

Simple deletions (where crucial information is not given)

I don't understand.

What exactly don't you understand?

I'm hopeless.

At what? / In what way?

I'm depressed.

How exactly are you depressed?

Universal quantifiers (always, never, every-, no-, any-, all)

Nobody loves me.

Doesn't anyone love you?

or Nobody? Not one person?

I'm always a mess.

Always? Hasn't there ever been an exception?

or Yes, you're always a mess. Every single time I see you, without exception!

Comparative deletions (where the other half of the comparison is not specified)

I want to be a better teacher.

Better than what? Better in what way?

or On a scale of 1 to 10, where are you now?

How much better do you want to be?

Model operators of necessity (must, need, ought to, should, have to)

I must get home to get dinner.

What makes that necessary?

or What would happen if you didn't?

Model operators of impossibility (can't, it's impossible ...)

I can't relax.

What stops you relaxing?

or Do you mean 'I can't' or 'I don't want to'?

It's impossible for me to go.

What would happen if you did?

or What would you need in order to be able to go?

(Revell and Norman, 1997, p. 66)

Activity: Challenges

- What challenges can you think of for these statements?

1 *I don't understand anything.*

2 *I want to be better.*

3 *I can't do this on my own.*

4 *It is impossible for me to give up.*

5 *I'm not making any progress.*

Group work: The participant teachers all together suggest their challenges.

Assignment: Listen out for these violations when spoken to you. Challenge them 'rapport fully'.

3.4.3.13 SESSION 13: Verb Power

What we say and how we say it can affect how we perceive the experience itself. A nominalization is the result when a progression has been turned into an abstract noun. Nouns are rather fixed. Verbs, on the other hand, are much more flowing. We do things, and this implies movement, process and change. So, as Revell and Norman (1997, p. 126) suggests if we or other people are getting stuck in ‘relationships’ which aren’t going anywhere, or having problems with ‘behaviour’ or ‘management’, you can reintroduce the idea of a possible change by turning a noun into a verb.

THINK

- Which do you think are the key words in these examples?
 - 1 *I’ve got a terrible relationship with my colleague.*
How could you relate differently, do you think?
 - 2 *He’s useless at management.*
Could you do something to help him manage better?
 - 3 *I don’t get any respect around here.*
What do you see people doing when they are respecting you?

(Revell and Norman, 1997, p. 126)

Activity 1: Form Noun to Verb

Aim: To turn expressions into fluid processes

- What might you say to help these people think differently about their problems?
 - *I’m desperate at administration.*
 - *Beauty is so indescribable!*
 - *I just don’t seem to have the ability.*
 - *They are fighting for a bit more freedom.*
 - *I’m such a bloody failure!*

Accentuate the positive

THINK

- Whatever you do, do not think about the pink elephant.
- What are you doing? You are thinking about a pink elephant, aren't you?

That is the problem with language. It brings things to our attention – and that word 'not' is looked down. Once we have heard the words, we cannot un-hear them.

THINK

- At a more everyday level, what is likely to happen in the following situations?
 Me to myself: *I mustn't forget my umbrella.*
 You to your friend: *Don't forget your key!*
 Mother to child: *Don't go near the water. I said, don't go near ... don't fall in! Now look what you've done. I told you not to go near the water!*
- What positive outcomes were the speakers trying to achieve?
- Rephrase the instructions to give the speakers a better chance of achieving the desired effect.

(Revell and Norman, 1997, p.55)

According to Noam Chomsky's Transformational Grammar, the negative is not present in the *deep structure* meaning, but only in the transformations which change it into *surface structure* communications. When you are talking to yourself or to others, a positive message will be much more effective than a negative one.

Activity 2: Positive – Negative Transfer

Aim: To be able to utter what we want in a positive way.

- With students, how could you rephrase these instructions so that they have the desired effect?

Don't fidget. Don't make noise. Don't talk. Don't be late. Don't cheat.

Assignment: Make a list of other instructions that are relevant to the classroom and make sure they are written positively.

NLP Sandwich Feedback

Providing constructive feedback helps you to maintain successful relationships with others. All of us want to know how well we are doing, and have opportunities to learn and grow. Serving an individual with feedback, it makes him or her feel valued and will help you retain the relationships of yours with them for a long time. By providing a "feedback sandwich", it is possible to let others know what you like and dislike about their way of behaviour in a constructive way.

You can utilize this "feedback sandwich" technique for providing a more palatable feedback. Initially, tell a quality or characteristic that you appreciate, then give one area for improvement, and finish with some positive words of encouragement or appreciation.

- **Bread:** Start with a positive statement.
- **Meat:** Put an area that need improvement in the middle.
- **Bread:** End with a positive statement of encouragement.

1. Praise and Acknowledgment

Begin with acknowledgment and praise.

Let the individual know how well they are doing.

Be specific and descriptive.

2. Area for Improvement

Be constructive.

Focus on one area at a time.

Focus on concrete behaviour that needs to be reinforced or corrected.

3. Encouragement

Acknowledge areas of strength.

Build on areas of strength.

Explain how strengths will contribute towards further progress.

Communicate belief in individual's abilities to achieve the goal.

(taken from <http://ezinearticles.com/Effective-Communication1909546.html>)

3.4.3.14 SESSION 14: NLP COMMUNICATIVE PRESUPPOSITIONS

The Meaning of My Communication is the Response I Get

THINK

Do you agree or disagree with the following sayings?

- *What we say is what we mean.*
- *There is many a true word spoken in jest.*

Activity 1: What Did You Really Mean?

Aim: To reconsider what we meant to say and actually what we said

- Think of the last time someone reacted badly to something you said?
 - a) What was the person's frame of mind and focus of attention before you spoke?
 - b) What words did you say?
 - c) What was your posture?
 - d) What gesture did you use?
 - e) What were you really saying to them?

Overall, what was the message you were sending to them?

- State precisely the outcome you wanted. Assuming that you didn't want to pick a fight, what exactly did you want? A change in behaviour? What?
- How could you have got across your message more successfully? Rephrase and answer the questions a-f.

Activity 2: Change Your Response

Aim: To try new strategies to improve a poor relationship.

- Think of a person with whom you have some kind of conflict and who you would like to relate better.
- Write down all the things that you might be doing to exacerbate the situation.
- Write down at least three things you might do differently which you might improve the situation.
- Try your strategies out with the person. Enjoy your new relationship.

(Revell and Norman, 1997, p.129-130)

Communication is non-conscious as well as conscious

THINK

- Have you ever been in a situation when you've surprised yourself by knowing something being unaware of how you knew it?
- Have you ever been in a situation when you tried hard to remember something and you couldn't? Then, it flashed back to you sometime later?

We tend to believe that unless we learn something consciously, we don't learn it. Unless we know something consciously, we don't know it. However, we retrieve information non-consciously too (Revell and Norman, 1997, p.95). We communicate with ourselves both consciously and non-consciously.

THINK

- Put these levels of learning in order:

a) Conscious incompetence	= You practise the skill but you aren't good.
b) Non-conscious competence	= Your skill is habitual and automatic.
c) Conscious competence	= You have skill, but not consistent yet.
d) Non-conscious incompetence	= You don't know you don't know

(O'Connor, 2001, p. 24)

Activity 3: Look at the Mandala

Aim: To increase the ability of PTS to concentrate and to help them access ideas from their non-conscious mind.

- Look at the mandala (see Appendix 4).
- Hold it or place it on a table a comfortable distance away and fix your eyes on the very centre of it.
- Stare at the centre of the mandala for 3 minutes. As you do so, just be aware of your own breathing.
- If a conscious thought comes into your mind, acknowledge it and let it float away.
- Do this for daily, gradually increasing the amount of time up to six minutes.

(Revell and Norman, 1997, p.99)

Communication is non-verbal as well as verbal

THINK

- Can you tell whether someone is in a good mood or bad mood before they utter a word?
- Have you ever heard someone say ‘Yes’ when you know they really mean ‘No’?

In NLP, this mismatch between verbal and non-verbal is known as *incongruency*. Aim to be as ‘*congruent*’ as you can – make sure your verbal and non-verbal message is the same.

- Brainstorm physical signs that tell you how another person is feeling-except the person’s words.

Activity 4: It is not All Just Words

Aim: To be able to notice non-verbal language

- A shuts his/her eyes and re-experience some different memories.
- A first re-experience an exciting memory.
- After a minute in the excited state, A stops and then begins to re-experience a memory of being bored.
- B observes A and note the physical changes that happen as A passes from excited to bored.

Pair work: A and B change the roles. A and B tell each other what they noticed about the changes in their ‘body language’.

(Baker and Rinvolduceri, 2006, p. 37)

Activity 5: Show with Your Body

Aim: To express meaning through non-verbal communication.

- Act out the following adjectives.

<i>happy</i>	<i>sad</i>	<i>angry</i>	<i>frightened</i>
<i>bored</i>	<i>tired</i>	<i>impressed</i>	<i>unimpressed</i>
<i>embarrassed</i>	<i>confident</i>	<i>patient</i>	<i>amused</i>
<i>doubtful</i>	<i>proud</i>	<i>alert</i>	<i>interested</i>

Group work: PTS practice with the emotions and try to guess which one is described through mimes and gestures.

(Revell and Norman, 1997, p. 91)

3.4.3.15 SESSION 15: METAPHOR & STORY TELLING

In NLP, the word ‘metaphor’ is not used in quite the same way as it is used in the study of Literature. Revell & Norman (1997) define it as ‘an indirect communication by a word, expression or story which implies similarities between things or events’. Or, put more simply, ‘X is like Y’ (p. 101).

Activity I: Choose a metaphor

Complete the following sentences:

Communication is like ...

Effective communication is like ...

Healthy relationships are like ...

THINK

- What are your metaphors?
- How do they change your point of view on communication?

Activity II: If I were

Aim: To gain awareness of self; awareness of metaphor

If you were a/an ... , what kind of ... would you be?

vegetable animal plant water house transport

- Choose a category
- Think about yourself about the answer
- Write a paragraph.

Group work: The participant teachers discuss the answers, offering alternative (preferably positive) suggestions about how they see the person.

(Revell & Norman, 1999, p. 81)

The way we speak reflects the way we experience, think and talk about the world. Conversely, metaphors shape the way we think about the world and therefore the way we behave in relation to it. Positive metaphors can greatly enhance our experience.

Activity III: Metaphorical Language

Aim: To help participant teachers become aware of the metaphorical use of everyday language.

Consider the following groups of idioms. Which concept is being described? What is the concept being compared to?

- 1 I am feeling up, in high spirits, on top of the world.
That's really boosted my morale; I've reached the height of ecstasy; I'm on cloud nine.
Concept UP = HAPPINESS
- 2 She's feeling down, depressed, low. She's sinking into a depression. In fact she's hit rock bottom.
Concept _____ = _____
- 3 Could you spare me a moment? I know it's a waste of time, but it will be well spent. You've earned some time off and this is a real time saver. Last month's mistake cost us three weeks.
Concept _____ = _____
- 4 It came to me in a flash. I saw the light and my eyes were opened. It was blindingly obvious. Now let's shed some light on the subject and clear up this misunderstanding.
Concept _____ = _____
- 5 She had many conquests and was besieged by suitors. She was fending off admirers. He pursued her relentlessly. She fled from his advances. He made an ally of her mother and began to feel he was gaining ground. Eventually she was overpowered by love and he won her hand in marriage.
Concept _____ = _____
- 6 I am a voracious reader, and I can devour a book at one sitting. This book has given me food for thought. It's something I can really get my teeth into. It's going to take me a while to digest it all, but it's really meaty. I need to chew it over a bit, but at least I'm not being spoon fed with half-baked ideas that I can't swallow.
Concept _____ = _____
- 7 You've got a good framework, but now you need to construct a strong argument to support your theory. You haven't got enough solid facts. Your proof is very shaky and it will fall apart under criticism. I'm afraid it's all going to collapse.
Concept _____ = _____

(Revell & Norman, 1999, p. 73)

STORY TELLING

Stories are vehicles for conveying meaning for different kinds of things:

- They are **vehicles for information and ideas** which can be presented in a more interesting and memorable way through a story.
- They are **vehicles for messages**: rather than a direct communication, a story can convey a message in a more palatable way.
- They are **vehicles for embedded suggestions** to the non-conscious mind of your listeners.
- They are **vehicles for arousing emotions**.
- They are **vehicles for multi-sensory imaginary experience**.

(Revell & Norman, 1999, p. 83)

Any direct suggestion that one character makes to another character within one story can serve as an embedded suggestion. The words ‘you’ ‘your’ and so on in the story address two receivers: one is the character in the story, and the other is the storyteller’s audience. During the process of storytelling, the embedded suggestions should be given emphasis through tone of voice.

‘And the wise old man smiled and said, “*My dears, it’s in your hands.*”

‘The traveller thanked the villagers. “*Thank you for everything you’re teaching me,*” he said.

(Revell and Norman 1999)

Activity: Create a Story

Aim: To express the desired message in an indirect way.

- Participant teachers agree on a situation.
- Participant teachers decide on what message to give.
- and create a story accordingly to give the message indirectly.

Assignment: Prepare a story for next session and share it with the group.

3.4.3.16 SESSION 16: NLP-TD RECAP

Below is a list of things we covered on the NLP-TD program. As you read through the list:

- Check that you recollect what each item is about
- If you have any doubts, feel free to ask it/them.

THE NLP PRESUPPOSITIONS
 THE FOUR PILLARS OF NLP
 THE BASIC ACTION MODEL
 LIFE LEVELS
 OUTCOMES
 RAPPORT
 REPRESENTATIONAL SYSTEMS
 (VAKOG)
 EYE MOVEMENTS
 SENSORY ACUITY & CLAIBRATION
 NON-VERBAL COMMUNICATION
 SENSORY LANGUAGE
 SUB-MODALITIES
 PERCEPTUAL POSITIONS
 THE META MODEL
 (THE PRECISION MODEL)
 METAPHOR & STORYTELLING
 FEEDBACK

How has what you learned on the NLP-TD program made a difference to you:

- Personally?
- As a teacher?

Share your experience with the people you are working with.

3.5 Data Collection

This study is a case study in which the aim was to explore EFL teachers' personal theories regarding good communication skills through NLP. The main aim is to investigate if there are any changes before and after the NLP-TD program and additionally whether NLP techniques can be used as an alternative teacher development program for enhancing EFL teachers' communication skills.

The data for this study were collected from the teachers at the beginning, during, and at the end of the program. First repertory grids were filled out at the beginning of the program. After the administration of repertory grids, follow-up interviews were conducted. The teachers' reflection sheets were kept throughout the program for data collection. At the end of the program, the second grids were administered and followed by interviews. These data collection tools (see Table 4) were chosen because their rationale is based on the theoretical framework and methodology of the present study.

In short, in the light of the theories discussed so far and the design of the study, detailed information was obtained from the repertory grids, reflection sheets, and course evaluation questionnaire as the main instruments. The follow up interviews were used for triangulation and to support the findings. Table 4 gives a summary of instruments.

Table 5 Data Collection Instruments Utilized During the Study

Time	Instrument	Aim(s)
At the beginning of the NLP-TD program	RepGrid I Follow-up Interviews Questionnaire I	-to explore the structure and content of EFL teachers' personal theories -participant teachers' constructions of "self as teacher" and "ideal self"

During the NLP-TD program	Reflection Sheets	-to explore the participant teachers' reflections regarding the NLP-TD program
At the end of the NLP-TD program	RepGrid II Follow-up Interviews Course Evaluation Questionnaire (CEQ)	-to explore the changes (if any) in the content and structure in the participant teachers' personal theories after the NLP- TD program

3.5.1 Repertory Grid

The first type of data collection instrument was the repertory grid technique which is a method based on Personal Construct Theory (Kelly, 1955) (see Chapter 2). One of the fundamental assumptions made by George Kelly when developing the Role construct Repertory Test (Kelly, 1955) is what he called constructive alternativism. By this, he meant that different people have different ways of construing the same thing; also that a single person always has the option of construing the same thing differently on two separate occasions. (Jankowicz, 2004, p.15).

With this method, the individual's world of meaning can be examined by analyzing the organization of constructs of the individual in any particular context (Bannister and Fransella, 1971). An individual's perceptions on the subject of inquiry can be collected by means of a repertory grid form (see Appendix 5). The form consists of elements, constructs and a rating scale.

The aim of using this technique was to identify the degrees of conceptual change both in the content and structure of the participant teachers' constructs regarding the features of good communication strategies. For this reason, a conference was held with the teachers at the beginning of the study to inform them about the aim and procedures involved in the repertory grid elicitation. Additionally, participant teachers were provided with the elicitation procedures of the Rep-Grid in written forms both in English (see Appendix 6) and Turkish (see Appendix 7).

3.5.1.1 Elicitation of Elements

An element is defined as “an individual’s personal observations or experience of the world which are used to define the area of topic.” (Rep Grid2 Manual, 1993, p. 6). Or in other words, an element is an exemplar of, sampling of, or occurrence within, a particular topic (Jankowicz, 2004, p.13). The elements in this study referred to the EFL teachers who were known to be personally meaningful to the participant teachers. The researcher elicited the elements from each of the teachers. In order to make meaningful and in-depth comparisons, the teachers were asked to think of nine teachers- three of which they believed to be Effective, three Typical and three Ineffective. For this study, the teachers they considered was only important as a means of eliciting participant teachers’ views; therefore, the teachers were asked not to provide the researcher with the identity of the teachers, but rather to use codes for their names. (e.g., E1, E2, E3...)

3.5.1.2 Elicitation of Constructs

Constructs are defined as a person’s “classification of his personal observation or experience of the world” (Rep Grid 2 Manual, 1993, p. 6). The way in which two of the elements were alike constitutes the *Emergent* construct, while the other feature which differed from the emergent pole stood for the *Implicit* construct.

The constructs in this study, referred to some specific features of the coded teachers which lead to effective communication. The teachers’ constructs were elicited using the triadic elicitation technique (Sendan, 1995). In other words, the teachers selected three cards randomly from the nine teachers’ codes written on nine pieces of cards. Then, the participant teachers were asked to articulate “in what ways the two teachers were similar to each other (Emergent Construct) and thereby different from the third (Implicit Construct) (see Appendix 5) regarding their effectiveness in communication skills. The elicited constructs were recorded on the related pole of the rep-grid form. The same elicitation procedures were followed until the participant teachers pointed out that they were not able to propose any other constructs.

3.5.1.3 Rating and Ranking Order Elicitation

In the present study, a 5-point rating scale was used for the constructs in the grids. In this scale, “1” represented the closest value to the emergent (similarity) pole, “3” the mid value, and “5” the closest value to the Implicit (contrast) pole. Following the element and construct elicitations, the teachers were asked to rate each of their elements according to the constructs.

Having completed the ratings, the participants teachers were asked to rate themselves as “self as teacher” and “ideal teacher” on the same constructs, that were elicited from them through triadic comparisons of the nine teachers. “Self as teacher” meant self as teacher at present while “Ideal teacher” meant the teacher they would like to be in the future or having the ideal features of effective communication. As Sendan (1995) puts it, the purpose for including these two additional elements was to explore the teachers’ construction of “self” and “ideal teacher” in relation to other teachers they classified in terms of being open to teacher development (p.97).

Finally, the participant teachers were asked to choose and rank order five constructs in terms of their importance in being effective in communication. This procedure was employed to elicit participant teachers’ most important constructs and see whether there were any changes before and after the NLP-TD program.

At the end of the study, the participant teachers were given their completed grids without their original ratings and ranking. Subsequently, they were asked to look over their original constructs and make any necessary additions, deletions, or modifications (Sendan, 1995; Yumru, 2000; Pope and Denicolo, 2001; Sürmeli, 2004). Then, participant teachers re-rated the elements on each of the constructs identified at the beginning of the study. As a final step, they reviewed and rank ordered five of the constructs they thought were the most important regarding the features of an effective teacher in respect to his/her communication skills.

3.5.1.4 Follow-up Interviews for the Repertory Grid

The researcher conducted three interviews with the teachers after they completed their repertory grids. The focus of the interviews, both at the beginning and end of the study, was specifically on the participant teachers' reasons for preferring the constructs, for choosing five of the constructs as the most important, and the ways in which they regard themselves in order to check as well as clarify any unclear points for the researcher. In the third interview, the focus was mainly on getting comments from teachers as to the changes highlighted by the Exchange Grid analysis (see Section 3.6.1.2). The aim of doing this was to learn to what extent the teachers could relate the changes to the experiences they have been involved in, after the NLP-TD program.

3.5.2 Questionnaires

In this study, two questionnaires were employed; a participant profile questionnaire and a course evaluation questionnaire.

3.5.2.1 Participant Profile Questionnaire

Participant Profile Questionnaire (PPQ) (see Appendix 8) was given at the very beginning of the NLP-TD program to be filled out by the participant teachers in their own time. The researcher asked the participant teachers to take some time for themselves and provide sincere responses. The questionnaire consisted of 8 open-ended questions. The main aim of the PPQ was mainly to obtain demographic information about the participants. Question 1 was asked to elicit participant teachers' feelings and beliefs about being a teacher. Questions 2 helped the researcher to gain insight of teachers' views about their teacher education programs. Questions 3 and 4 aimed at eliciting teachers' opinions about teacher development. Question 5 was asked to find out whether they attended any teacher development program before. Questions 6 and 7 were asked to elicit how much they know about NLP and whether they attended any NLP program before. Question 8 attempted to explore whether the participant teachers

had a good communication with themselves, their family, students, colleagues and administration.

3.5.2.2 Course Evaluation Questionnaire

The third type of data collection instrument was a course evaluation questionnaire (CEQ). At the end of the study, the researcher gave the participant teachers a questionnaire and asked them to answer the questions by trying to be as reflective as possible. The aim of the CEQ was to give the participant teachers an opportunity to state their opinions on the experience of the NLP TD program in general.

The CEQ consisted of three sections (see Appendix 9). In Section A, the teachers rated the course components by using a 5-point scale. They were also asked to comment on the reasons for their ratings. The main aim of this section was to elicit the teachers' opinion about the main procedure followed during the course of this study. In Section B, teachers were required to assess the strengths and weaknesses of the NLP TD program they had participated in. In Section C, the teachers were asked two open-ended questions eliciting their comments on the NLP-TD program as a whole and its effectiveness. The aim of this section was to get the participant teachers' perspective on the program in order to utilize the feedback as implication for future NLP programs.

3.5.3 Reflection Sheets

The third type of data collection instrument was reflection sheets. Participant teachers were provided with reflection sheets after two-week sessions. They were asked to comment on the previous two-week sessions in their own time to let them integrate and combine the session inputs. Thus, there was a total of 20 reflection sheets (see Appendix 10) at the end of the NLP TD program. The rationales for using reflection sheets of the participant teachers in the present study stemmed from the following reasons:

- To give the participant teachers the opportunity to go over the sessions once more and relate their personal theories,

- To raise awareness and monitor their understanding and learning on personal basis via reflection,
- To analyze and synthesize the course components within two weeks and reflect upon,
- To provide feedback for the researcher to monitor participant teachers' uptake of implementation of the course component,
- To enable process evaluation of the program for future modifications,
- To support the findings obtained.

(Sürmeli, 2004, p. 88)

3.6 Data Analysis

The data analysis of this study included the data obtained from the repertory grids (see Section 4.1), questionnaires (see Section 4.4.2) and reflection sheets (see Section 4.4.1) and the follow-up interviews were used to triangulate the findings obtained through repertory grid data.

3.6.1 Computer Analysis of the Repertory Grid Data

The repertory grid data obtained from the teachers were analysed by means of a Rep Grid 2 Computer program used both at the beginning and end of the NLP-TD program. In this study, two different analysis programs were used to analyse the grid data obtained: Focus and Exchange Analysis.

3.6.1.1 Focus Analysis

In order to find out the structure of participant teachers' constructs, each of the repertory grid data obtained from the teachers were subjected to FOCUS analysis separately. Focus analysis of the grids presented the matches between the constructs and elements. The cut-off point used was 80%, which is an accepted significance level in

repertory grid research (Rep Grid 2 Manual, 1993). This procedure enabled the researcher to explore:

- i. The structure and content of participant teachers' personal theories.
- ii. The nature of participant teachers' perceptions of "self as teacher" and "ideal teacher"

3.6.1.2 Exchange Grid Analysis

The two grids obtained from the participant teachers at the beginning and end of the study were also subjected to Exchange Grid Analysis. This kind of analysis compares two grids and thus maps the extent of overlap of the agreement between the two grids. In this study, constructs and elements falling below 80% were viewed as revealing patterns of structural changes (Rep Grid Manual, 1993). Hence, this procedure helped the researcher to explore:

- i. The patterns of changes in the structure of the teachers' personal theories regarding the features of effective communication.
- ii. The patterns of changes in the content of the teachers' personal theories regarding the features of effective communication.

3.6.1.3 Analysis of Participant Profile Questionnaire

The responses given to the Participant Profile Questionnaire (see Appendix 8) were analysed by content analysis. Each participant teachers' responses to the open-ended questions were given as description of participant teachers before presenting their findings of Rep Grid analysis.

3.6.1.4 Analysis of Course Evaluation Questionnaire

The responses given to the Course Evaluation Questionnaire (see Appendix 9) was subjected to content analysis. CEQ consisted of three sections. In Section A, responses of participant teachers on a 5-point scale was used to identify their ratings of the following:

- the atmosphere created during the sessions.
- the procedures employed during the sessions.
- the materials used during the sessions
- the activities done/employed during the sessions and their comments regarding each component of the program

In Section B, the responses of the participant teachers on the strengths and weaknesses of the NLP-TD program they have participated in were discussed. Section C consisted of two open-ended questions which participant teachers were asked to express their opinions of the NLP-TD program as a whole.

3.6.1.5 Analysis of Follow-up Interviews

After the repertory grid sessions, participant teachers were interviewed. Each teacher was interviewed three times; twice after the repertory grid sessions and once at the end of the study. The data obtained during the interviews subsequent to the grid analysis was used to clarify unclear points and the data obtained from the interviews at the end of the NLP-TD program was used to gain more insight into the teachers' comments regarding the change/s they revealed.

3.6.1.6 Analysis of Reflection Sheets

The data obtained from the teachers' reflection sheets was subjected to content analysis. The content of the teachers' reflections after dual sessions will be given as extracts in the Findings Section (see Chapter 4).

CHAPTER 4

RESULTS AND DISCUSSIONS

4.0 Introduction

This study aimed to explore the following three issues; the content and structure of and the changes in personal theories of EFL teachers as regards to effective communication during an NLP based teacher development program, the impact of NLP-TD program in the development of EFL teachers' personal theories of effective communication skills, participant teachers' reflections of the NLP-TD program. The data in the present study were collected by means of;

- Repertory Grids and subsequent follow-up interviews
- Participant Profile Questionnaire
- Course Evaluation Questionnaire (CEQ)
- Reflection Sheets

This chapter presents the discussion of the results under the following subsections:

- a. The content and structure of personal theories
- b. Overall view of the content of personal theories
- c. Overall view of the structure of personal theories
- d. Evaluation of the NLP-TD program

4.1 Content and Structure of Personal Theories

This section presents the analyses and discussions of the participating teachers' personal theories regarding effective communication. However, before the presentation of the personal theories of the participant teachers, first brief background information on each participant will be given. Secondly, figures elicited from the rep-grid data will reveal the content and structure of each participant's personal theories. These figures show the construct and element links (i.e. participating teachers' categorization of Effective, Typical, and Ineffective teachers, well known to them) (see section 3.5.1.1) of each participant established both at the beginning and at the end of the study. For the texts of the Focus analysis calculations, see Appendix 12. Finally, the exchange analyses will indicate the significant changes observed in the content and structure of the participating teachers' constructs. Quotations from the semi structured follow up interviews will support the repertory grid findings. The participants' personal constructs are expressed in italics.

4.1.1 Teacher 1's Participant Profile

Teacher 1 is a graduate of the English Language Teaching Department of Hacettepe University. She has been teaching English for 10 years. During these years, she has worked at various state schools and colleges and is now working at a state school in Adana/Turkey. She states that teacher education programs on its own are not sufficient for a teacher's whole career. As for the opportunities to develop herself she highlighted that she is keen on reading self development books and she has read a few books on NLP although she has not attended any NLP program. Teacher 1 is aware of the system that NLP induces in a person's life and has some knowledge on the basic principles of it. Similarly, she has not attended any teacher development program yet. Among her personal and professional goals for the future are enjoying life more, being happy and giving happiness to people around her, developing her skills of communication and finding original ways of teaching English. Regarding her ratings of

her communication with her family, students, and administration she rates herself as good; and with herself and colleagues she rates her communication as satisfactory.

4.1.1.1 The Content and Structure of Teacher 1's Personal Theories at the Beginning of the Study

Teacher 1's grid data consists of 15 constructs and 11 elements. Teacher 1's FOCUSED grid shown in Figure 14 below illustrates the construct and element trees drawn at 80% cut-off point.

- **Construct Links**

The FOCUS analysis of Teacher 1's grid produced one big cluster consisting of three sub-clusters (see Figure 14). In the first sub-cluster, her most related constructs are *has a good sense of humour* (C6) and *comforts the others* (C9) at a high match level of 97.7%. Similarly, *able to empathize with others* (C2) and *looks at the person with whom s/he is conversing* (C7) are associated at 95.5% match level. In fact, the constructs C2, C6 and C9 were rank ordered among her most important five constructs. These two sub-clusters are subordinated by the constructs *smiles and has a positive facial expression* (C10) and *has self confidence* (C3) at the match level of 93.2%. For Teacher 1, a teacher who has a good sense of humour comforts the others. We may also infer that Teacher 1 construes empathizing with others and looking at the person with whom being conversed as the important strategies of good communication.

In the second sub-cluster, *flexible with the situations* (C5) and *open minded to opinions and views* (C12) are linked to each other at a match level of 93.2%. In fact, the construct *flexible with the situations* (C5) was rank ordered among her most important five constructs. Hence, we may assume that Teacher 1 perceives the above mentioned two constructs as important strategies of good communication.

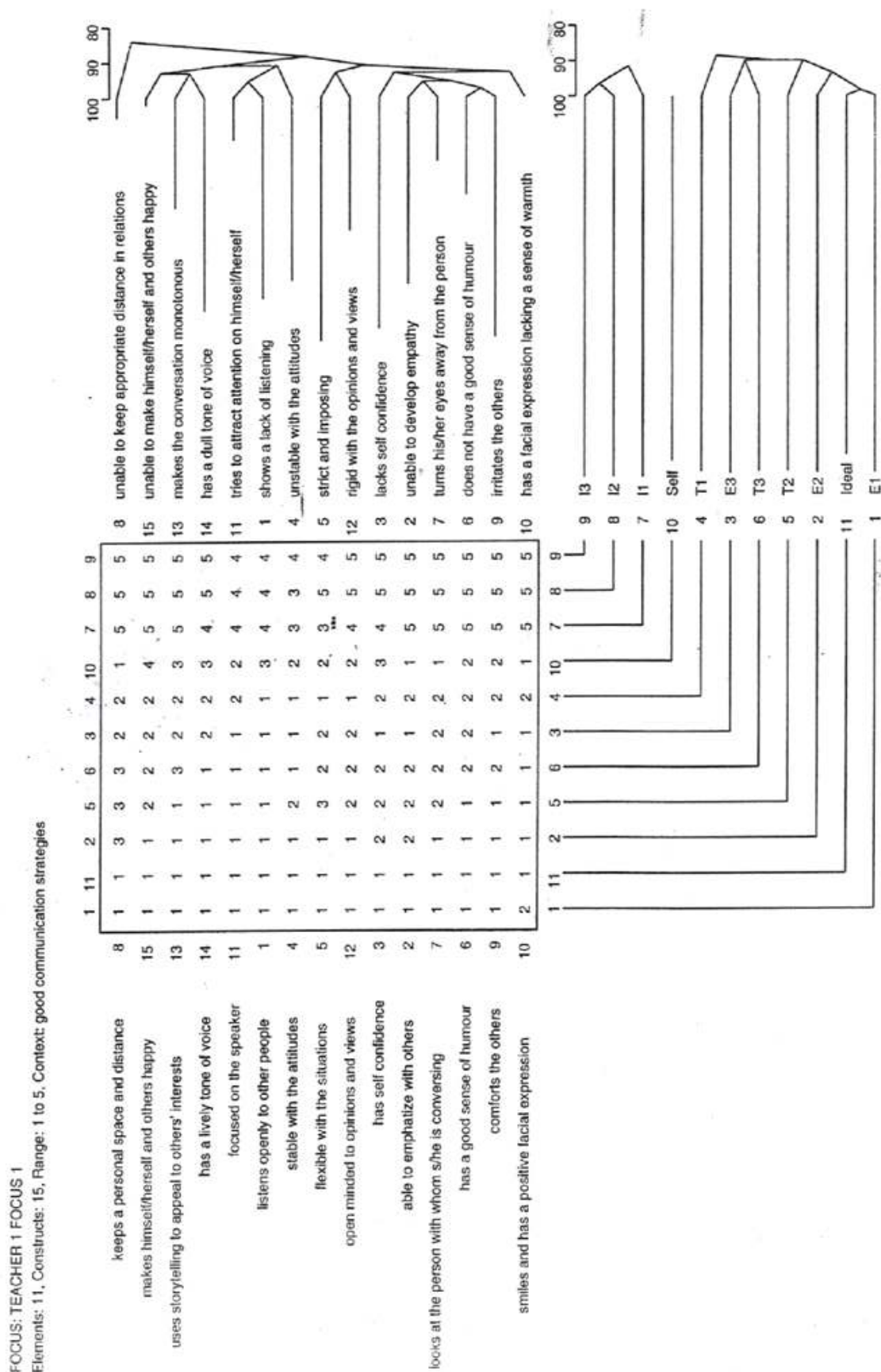


Figure 14 Teacher 1's FOCUSED Grid at the Beginning of the Study

That is, Teacher 1 assumes, if a teacher is open minded to opinions and views, then s/he is likely to be flexible with the situations.

In the third sub-cluster at the top of the grid, the constructs *uses storytelling to appeal to others' interests* (C13), *has a lively tone of voice* (C14) and *makes himself/herself and others happy* (C15) are perceived to be similar at 93.2% match level. Parallel to these three constructs, *focused on the speaker* (C11) and *listens openly to other people* (C1) are associated at a match level of 95.5%, subordinated by the construct *stable with the attitudes* (C4) at 90.9% match level. Interestingly, the construct *listens openly to other people* (C1) was rank ordered as one of Teacher 1's most important five constructs. All six constructs are linked at the match level of 90.9%. Thus, in Teacher 1's view, a teacher who has a dull tone of voice makes the conversation monotonous. Similarly, if a teacher is not focused on the speaker, he/she shows a lack of interest in listening. In addition, Teacher 1 perceives storytelling as an important communication strategy. The construct *keeps a personal space and distance* (C8) stands as a superordinate to all the other constructs. During the follow-up interview, Teacher 1 rationalised her choice of construct 8 as stated in the following:

Quotation 1:

The distance in a relationship depends on the context and the situation in which it takes place. For example, when someone wants to be too close and interfering in a relation, it is a good thing to have a space between.

• Element Links

Teacher 1's element trees consist of three main clusters (see Figure 14). In the first cluster, I3 and I2 are associated at a high match level of 96.7%, and linked to I1 at 91.7% match level. Drawing on these associations, we may assume that Teacher 1 has a clear view about ineffective teachers regarding their characteristics of communication strategies.

In the second cluster, E3 is associated with T3 at the match level of 90.0%, which are subordinated by T1 at 88.3% match level. Within this cluster, Teacher 1

perceives self as teacher similar to teachers from the most related to the least: E3 at 78.0%, T1 77.0% and T3 76.0% match level. It may be assumed that even though Teacher 1 perceives herself as already having some features of E3, she indicates that she still has some features of her typical teachers (T1 and T2). Hence, it may be stated that she is ready for change.

In the third element cluster, the most related elements are E1 and Ideal at 98.3% match level. E2 subordinates these two elements (E1 and Ideal) at 93.3% match level. Moreover, T2 has a direct link to her effective teachers (E1 and E2) and Ideal teacher at 90.0% match level. Therefore, we may assume that her belief regarding the distinguishing features of typical and effective teachers is not as clear as her belief about ineffective teachers.

4.1.1.2 The Content and Structure of Teacher 1's Personal Theories at the End of the Study

Teacher 1's grid at the end of the NLP-TD program comprises 15 constructs and 11 elements. The FOCUS analysis illustrated in Figure 15 displays the construct and element trees drawn at 80 % cut-off point.

- **Construct Links**

At the end of the study, Teacher 1's FOCUS analysis produced one big cluster consisting of three sub-clusters (see Figure 15). In the first sub-cluster there are six constructs which are highly matched to each other. The constructs *has a good sense of humour* (C6), *comforts the others* (C9), *has a lively tone of voice* (C14), *uses storytelling to appeal to others' interests* (C13), *keeps a personal space and distance* (C8), *makes himself/herself and others happy* (C15) are associated at 97.7% match level. In fact, the constructs *has a good sense of humour* (C6) and *makes himself/herself and others happy* (C15) were rank ordered as two of her 5 most important constructs. Drawing on these, Teacher 1 views that a teacher who is unable to make himself/herself and others happy, is not an effective communicator.

FOCUS: TEACHER 1 FOCUS 2

Elements: 11, Constructs: 15, Range: 1 to 5, Context: good communication strategies

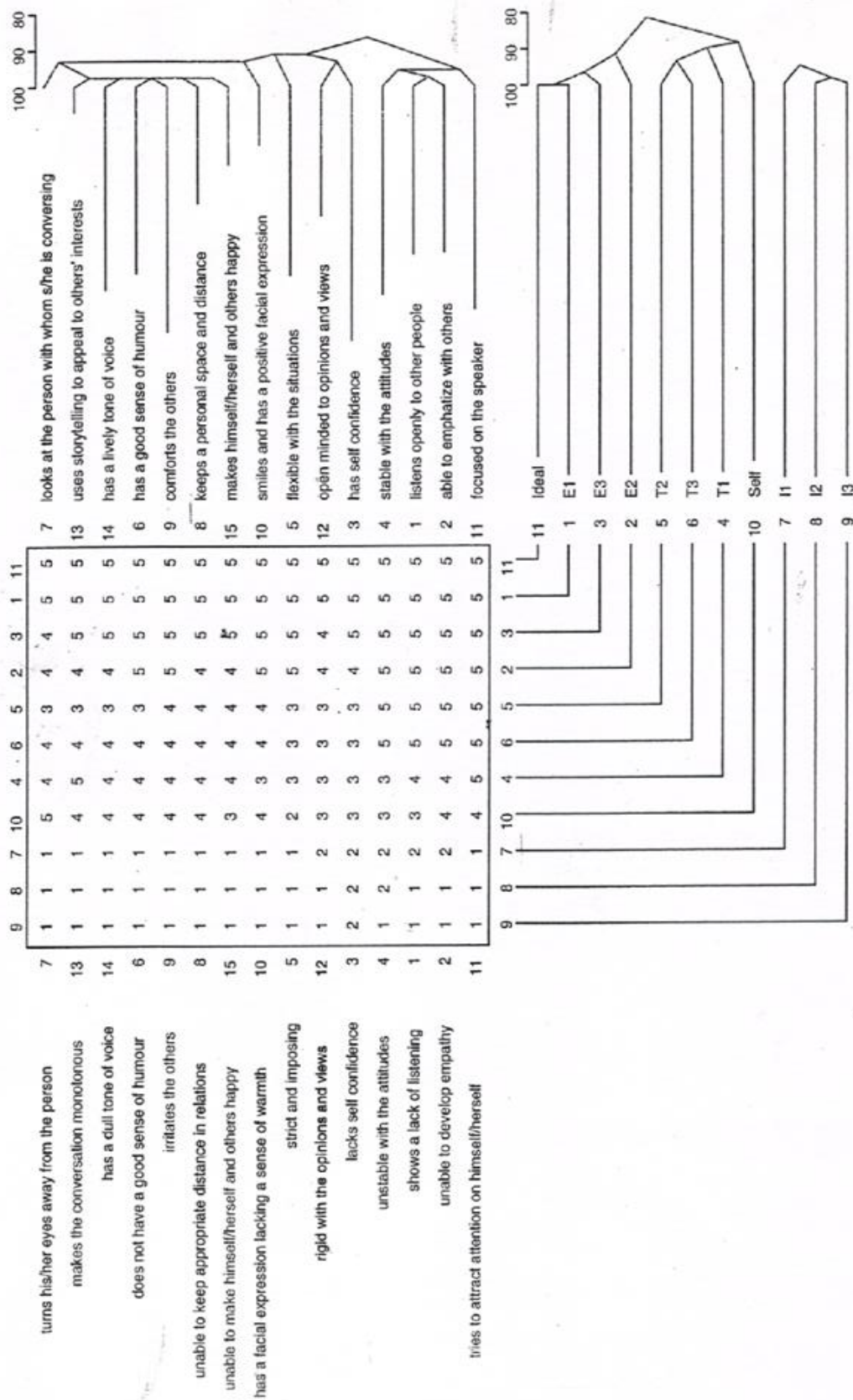


Figure 15 Teacher 1's FOCUSED Grid at the End of the Study

Moreover, an effective communicator should keep appropriate distance in relations; s/he should have a good sense of humour to comfort the others, and use storytelling if necessary. For Teacher 1, avoiding a dull tone of voice is another essential feature among a teacher's good communication strategies.

These five constructs are subordinated by the constructs *looks at the person with whom s/he is conversing* (C7) and *smiles and has a positive facial expression* (C10) at 93.2% match level. We may assume that Teacher 1 sees these two constructs as a prerequisite for the other constructs. According to Teacher 1, turning eyes away from the person and having a facial expression lacking a sense of warmth may hinder the communication.

The second sub-cluster consists of four constructs. The most closely associated constructs within this cluster are *listens openly to other people* (C1) and *able to empathize with others* (C2) at 97.7% match level. In fact, the constructs C1 and C2 were rank ordered as two of her five most important constructs. These constructs are subordinated by the constructs *stable with the attitudes* (C4) and *focused on the speaker* (C11) at the match level of 95.5%. Hence, for Teacher 1 an ineffective communicator tries to attract attention on herself/himself and therefore shows a lack of listening and is unable to develop empathy. Likewise, an ineffective communicator is unstable with the attitudes.

In the third sub-cluster there is a pair consisting of two constructs *open minded to opinions and views* (C12) and *has self confidence* (C3) at 93.2% match level. *Flexible with the situations* (C5) is linked to this pair at the match level of 90.9%. In fact, the construct *flexible with the situations* (C5) was rank ordered as one of her most important construct. Drawing on these associations above, Teacher 1 seems to construe that a teacher who has self confidence may not be rigid with the opinions and views and is likely to be flexible with the situations.

- **Element Links**

Teacher 1's FOCUSed grid of element cluster at the end of the study consists of three main clusters and reveals a clear understanding of the features of separate teacher groups (effective, typical, ineffective) (see Figure 15).

In the first element cluster, Teacher 1 views E1 and ideal teacher identical at 100% match level. At a slight lower level, Teacher 1 perceives E3 identical with E1 and Ideal teacher at the match level of 96.7% and linked to E2 at 91.7% match level. Hence, we may assume that Teacher 1 has a clear idea of the qualities an effective teacher must have in terms of his/her communication strategies.

In her second element cluster, T2 and T3 are associated at the match level of 93.3%, subordinated by T1 at 90.0% match level. Within this cluster, Teacher 1 perceives self to be similar to the typical teachers at 88.3% match level. At the match level of 81.0%, some similarities have been drawn between Teacher 1's self and effective teachers. Drawing on these associations above, we may assume that Teacher 1 perceives herself as having the qualities of typical teachers in her mind, and has not yet achieved the qualities of her ideal and effective teachers in terms of communication skills.

In the third element cluster, I2 and I3 are perceived to be similar at the match level of 98.3. The element I1 is also linked to I2 and I3 at 95.0% match level. In view of these associations, we may conclude that Teacher 1 has a clear view about ineffective teachers regarding their communication strategies.

4.1.1.3 Changes Observed Between the Beginning and the End of the Study

Exchange Analysis:

- **Structure**

The Exchange analysis of Teacher 1's first and second grids reveals that the construct consensus between the two grids is 92.9 % and the element consensus is 90.9 % over 80% match level (see Figure 16).

The Exchange Analysis of both grids for Teacher 1 displays very little change. The only significant change at the 80% cut-off point took place in construct *flexible with the situations* (C5) (see Figure 16).

TEACHER 1 FOCUS 2 consensus-with TEACHER 1 FOCUS 1

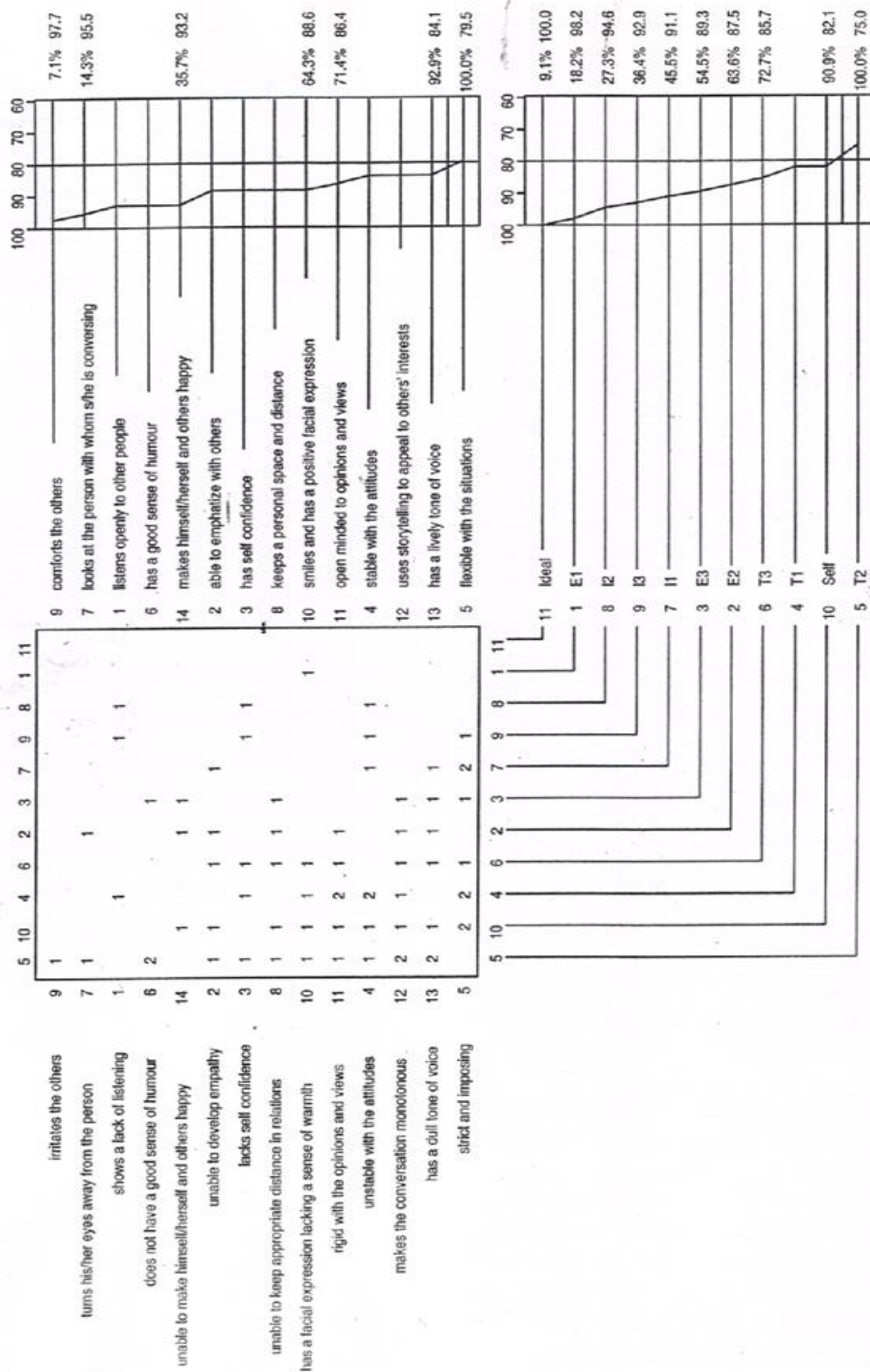


Figure 16 Exchange Analysis of Teacher 1's FOCUSED 1 and FOCUSED 2 Grids

At the beginning of the study, while this construct was linked with *open minded to opinions and views* (C12) at 93.0% match level, at the end of the study, it not only had a link with the constructs *open minded to opinions and views* (C12) and *has self confidence* (C3) but also with the other main clusters. Hence, Teacher 1 seems to have reorganized one of her constructs and associated C5 with other constructs which are directly linked to the good communication qualities. During the follow-up interview, Teacher 1 rationalised her view of this change as follows:

Quotation 2:

Being flexible with the situation is the key feature of having good relationships. At first, I associated being flexibility with the ideas and opinions. Now, I realise that other qualities as being humorous or being a good storyteller would also be the sub-features of this quality. All of there in total mainly make the person comfortable and give the sense of being understood.

Regarding Teacher 1's element clustering, Figure 16 reveals little structural changes. At the end of the study, Teacher 1 seems to have reorganized her views about the element T2 (75.0%). That is, at the beginning of the study, Teacher 1 placed T2 in the same category with two effective teachers and ideal teacher. However, at the end of the study, she perceives T2 similar to the teachers that fall into typical category. Therefore, we may infer that at the end of the study, Teacher 1 became aware of the distinguishing features of typical teachers from the effective ones.

- **Content**

Teacher 1 has not added any new constructs to her existing construct system at the end of the NLP-TD program. However, it should also be taken into consideration that the changes observed in content were not entirely in the form of adding new constructs into the whole system, but also in the form of attaching new meanings to the constructs that were already formed.

Another matter of interest is that Teacher1 has made a change in the rank order of her five prioritized constructs. She has substituted C2 with C15. Hence, it may be suggested that Teacher 1 has been in a reconstruction process that enabled her to clarify

her personal meanings she attached to her personal theories at the end of the NLP-TD program.

4.1.2 Teacher 2's Participant Profile

Teacher 2 is a graduate of the English Language Teaching Department of Hacettepe University. She has been teaching English for 10 years. During these years, she has taught at an Anatolian high school and a primary school. Currently, she is working at a state school in Adana/Turkey. Her major interests are reading books and psychology. Teacher 2 is a teacher who loves teaching and her job. She indicates that teacher education programs are sufficient but also she thinks that it is up to her to improve herself in her career. Teacher 2 has attended Teacher Development programs like some seminars and courses about English teaching methods. As for her personal and professional goals, she wants to get prepared for exams on English. Regarding her knowledge about NLP, she states that she has not attended any NLP programs before but she has read a book about NLP written by Gün, N. (2005). Regarding her ratings of her communication with herself, family, students, colleagues, and administration she rates herself as good.

4.1.2.1 The Content and Structure of Teacher 2's Personal Theories at the Beginning of the Study

Teacher 2's grid data consists of 13 constructs and 11 elements. Teacher 2's FOCUSED grid shown in Figure 17 below illustrates the construct and element trees drawn at 80% cut-off point.

FOCUS: TEACHER 2 FOCUS 1

Elements: 11, Constructs: 13, Range: 1 to 5, Context: good communication strategies

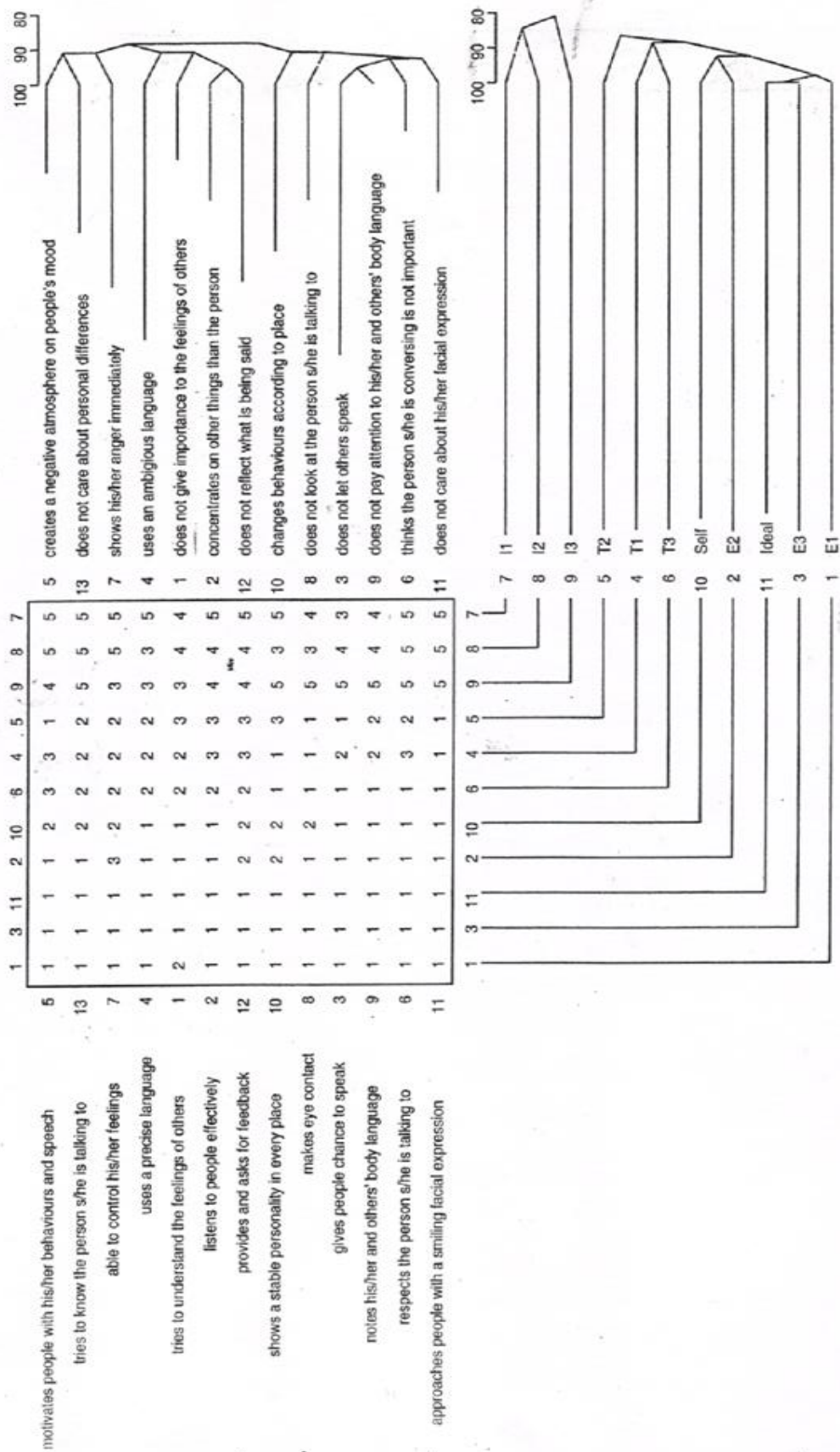


Figure 17 Teacher 2's FOCUSED Grid at the Beginning of the Study

- Construct Links

The FOCUS analysis of Teacher 2's grid produced three sub-clusters comprising a big cluster at 90.9 match level (see Figure 17). In the first sub cluster at the bottom of the grid, the constructs *gives people chance to speak* (C3) and *notes his/her and others' body language* (C9) are associated at a high match level of 95.5%. These two constructs are subordinated by the constructs *respects the person s/he is talking to* (C6) and *approaches people with a smiling facial expression* (C11) at 93.2% match level. All these four constructs (C3, C9, C6, C11) are linked to the constructs *makes eye contact* (C8) and *shows a stable personality in every place* (C10) at 90.9% match level. In fact, C6 and C10 were rank ordered as two of her 5 most important constructs. Hence, Teacher 2 seems to think that an effective communicator first should let others speak and approach people with a smiling facial expression. In this way, she/he respects the other person. Likewise, a teacher should pay attention to his/her and others' body language and make eye contact.

In the second sub cluster, her most related constructs are *listens to people effectively* (C2) and *provides and asks for feedback* (C12) matched at 95.5% level. This cluster is subordinated by the constructs *tries to understand the feelings of others* (C1) and *uses a precise language* (C4) at 90.9% match level. That is, according to Teacher 2's point of view, a teacher cannot reflect what is being said and give importance to the feelings of others, if he/she concentrates on other things than the person. Teacher 2 also believes that a teacher should use a precise language to communicate effectively.

In her third sub cluster at the top of the grid, constructs *motivates people with his/her behaviours and speech* (C5) and *tries to know the person s/he is talking to* (C13) are associated at 90.9% match level. The same cluster is subordinated by the construct *able to control his/her feelings* (C7) at the same match level (90.9%). In fact, C7 was rank ordered as one of her 5 most important constructs. Hence, Teacher 1 thinks that a teacher must firstly care about personal differences to enhance communication. Next, in order not to de-motivate people with his/her behaviours and speech, a teacher should not show his/her anger immediately.

- **Element Links**

Teacher 2's FOCUSed grid produced three element clusters (see Figure 17). Teacher 2 has a clear view regarding the features of effective, typical, and ineffective teachers, as each group of teachers form a separate cluster.

In her first element cluster at the bottom of the grid, her most related elements are E2 and Ideal teacher at 100.0% match level. At a slight lower match level (98.1%), E1 is linked to E2 and Ideal teacher. She relates Self to E2 at 92.3% match level. Moreover, herself as teacher has a direct link to her effective teachers and ideal teacher at 92.3% match level. Thus, we may assume that Teacher 2 thinks that she possesses some of the features of both effective teachers and ideal teacher; however, she believes that she still needs to develop herself in order to communicate in an efficient way.

In her second element cluster, the elements T1 and T3 are associated by 88.6% match level, which is subordinated by T2 at 86.5% match level. Hence, Teacher 2 has a clear view of the features of typical teachers regarding their communication strategies. Considering her third element cluster, the elements I1 and I2 are perceived to be similar at the match level of 84.6%. These two elements (I1 and I2) are subordinated by the element I3 at the match level of 80.8%. Likewise, Teacher 2 has a clear view in recognition of the features which make a teacher an ineffective communicator.

4.1.2.2 The Content and Structure of Teacher 2's Personal Theories at the End of the Study

Teacher 2's grid at the end of the NLP-TD program comprises 16 constructs and 11 elements. The FOCUS analysis illustrated in Figure 18 displays the construct and element trees drawn at 80 % cut-off point.

FOCUS: TEACHER 2, FOCUS 2

Elements: 11, Constructs: 16, Range: 1 to 5, Context: good communication strategies

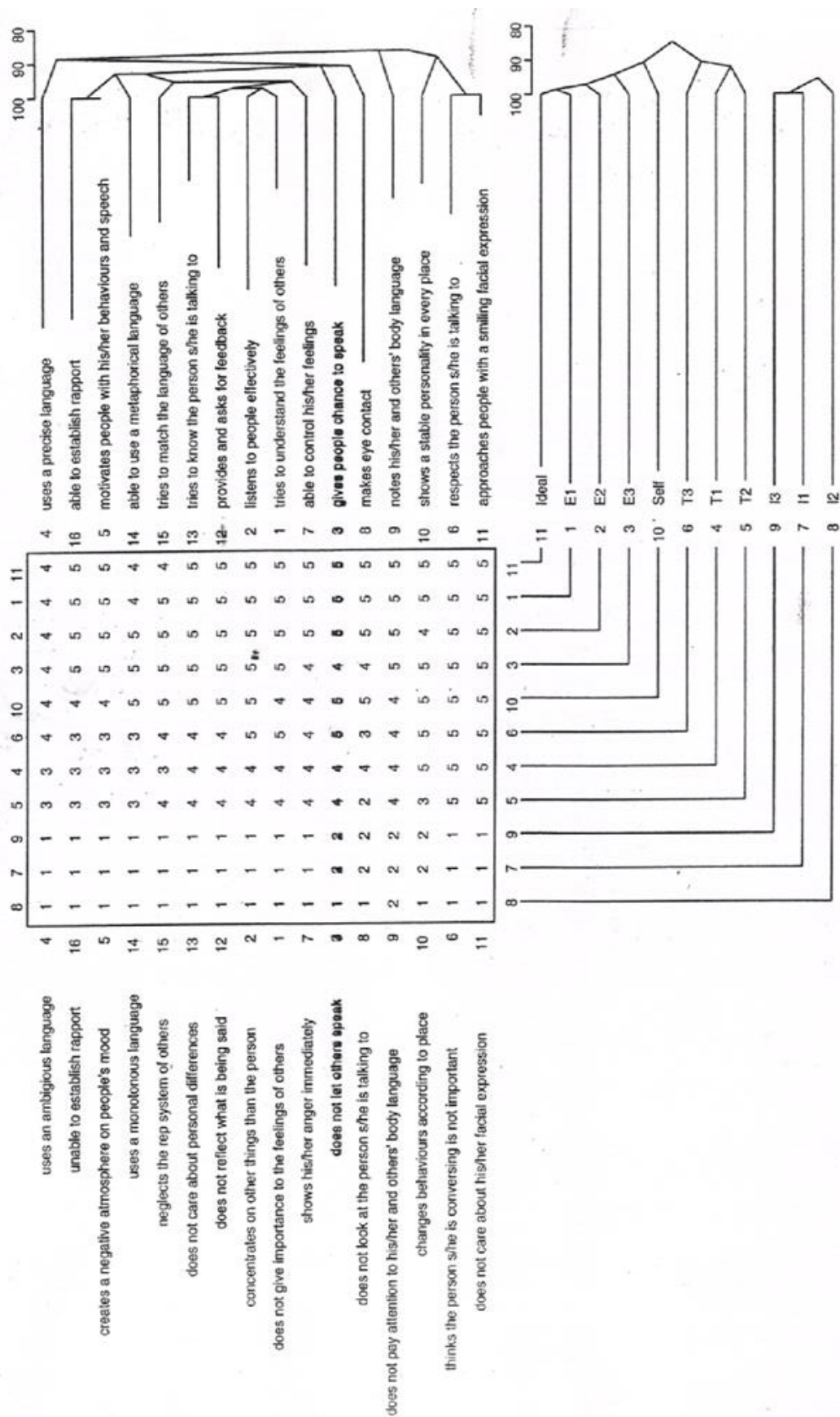


Figure 18 Teacher 2's FOCUSED Grid at the End of the Study

- **Construct Links**

The FOCUS analysis of Teacher 2's grid at the end of the study produced three main clusters. In the first cluster at the top of the grid, her most related constructs are *able to establish rapport* (C16) and *motivates people with his/her behaviours and speech* (C5) at the level of 100%. In fact, the construct *able to establish rapport* (C16) was rank ordered as one of her most important five constructs at the end of the study. These two constructs (C16 and C5) are subordinated at 93.2% match level with the construct *able to use a metaphorical language* (C14). During the follow-up interview, Teacher 2 rationalized those two constructs as follows:

Quotation 3:

In a relationship, I realize the importance of exploring things in common with other people when communicating. Focusing on similarities rather than the difference generates harmony. Congruency in behaviours and speech also leads to effective communication.

Also, linked to this cluster is the construct *uses a precise language* (C4) at 88.6% match level. Thus, Teacher 2 seems to construe that it is impossible to motivate people with his/her behaviours and speech if a teacher is not able to establish rapport. In order to achieve these, a teacher's language must be precise and metaphorical if needed.

The second main cluster consists of two parallel sub clusters: *tries to know the person s/he is talking to* (C13) and *provides and asks for feedback* (C12) are associated at 100% match level; *listens to people effectively* (C2) and *tries to understand the feelings of others* (C1) are associated at 97.7% match level. Each construct pair is linked together at the match level of 97.7%, which are subordinated by other four constructs: *tries to match the language of others* (C15) (95.5%), *gives people chance to speak* (C3) (90.9%), *makes eye contact* (C8) (90.9%), and *notes his/her and others' body language* (C9) (86.4%). In fact, the constructs C1, C9, and C15 were rank ordered as three of her most important five constructs. Hence, Teacher 2 perceives above mentioned constructs as important strategies in good communication.

In her third main cluster, at the bottom of the grid, the constructs *respects the person s/he is talking to* (C6) and *approaches people with a smiling facial expression*

(C11) are associated at 100.0% match level. The construct *shows a stable personality* (C10) subordinates construct 6 and 11 at the match level of 88.6%. In fact, the construct *respects the person s/he is talking to* (C6) was rank ordered as one of Teacher 2's five most important construct at the end of the study. Drawing on these above links established, Teacher 2 seems to think that a teacher should approach people with a smiling facial expression and respect the person s/he is talking to. According to Teacher 2, a teacher should show a stable personality in every place as well.

• Element Links

Teacher 2's element cluster at the end of the study, consists of three main clusters and reveals a clear understanding of the good communication strategies of separate teacher groups (effective, typical, ineffective) (see Figure 18).

In the first element cluster, Ideal and E1 are linked together at 98.4% match level. E3 is also perceived to be similar to E1 and Ideal at the match level of 93.8%. Another important point worth mentioning is her perception of self among the three different groups of teachers that she has identified. Teacher 2 associates self as teacher to E3 at 90.6% match level. Hence, she may perceive herself holding same features of the effective teachers and her ideal teacher; however, is still in the process of developing herself.

In her second element cluster, T1 and T2 are linked together at 92.2% match level, and subordinated by T3 at the match level of 90.6%. Teacher 2's element clusters of typical teachers and effective/ideal teachers are associated at 84.4% match level. Drawing on these associations, Teacher 3 may perceive a link between her effective and typical teachers in terms of the strategies they possess regarding their communication skills.

In her third element cluster, Teacher 2 perceives I3 and I1 identical at 100.0% match level and linked to I2 at the match level of 95.3%. Accordingly, we may conclude that Teacher 2 has a clear view about the features of effective, typical, and ineffective teachers regarding their communication strategies.

4.1.2.3 Changes Observed Between the Beginning and the End of the Study

Exchange Analysis:

The Exchange analysis of Teacher 2's grid revealed that the construct consensus was 83.3%, and the element consensus was 81.8% over 80% match level (see Figure 19).

- **Structure**

The exchange analysis of Teacher 2's grids reveals that two of her constructs have gone through remarkable structural change between the beginning and the end of the study (see Figure 19). The constructs with noteworthy structural change cover, in order of level of difference from the least to the most: *uses a precise language* (C3; 75.0%) and *makes eye contact* (C8; 75.0%). At the beginning of the study, while the construct *uses a precise language* (C3) was linked to the constructs C1, C2, and C12 (see Figure 4.4), C3 has become a subordinate construct to C16, C5, and C14 (see Figure 4.5). Thus, there has been a change of perception in the meaning attached to the construct *uses a precise language* (C3) at the end of the study.

During the follow-up interview, Teacher 2 could not explicitly state the reason behind this change, yet she explained why she has thought this construct (C3) embodies a strategy of good communication as follows:

Quotation 4:

Unless we use a precise language, we can lead to misunderstandings in communication. We cannot tell exactly what we mean.

Comparing Teacher 2's first and second grids in order to identify the pattern of structural change, it is seen that at the beginning of the study, the construct *makes eye contact* (C8) subordinated the first main cluster; it became a prerequisite for the other constructs at the end of the study. Thus, we observe a change of perception in the meaning attached to the construct *makes eye contact* (C8).

TEACHER 2, FOCUS 2 consensus-with TEACHER 2 FOCUS 1

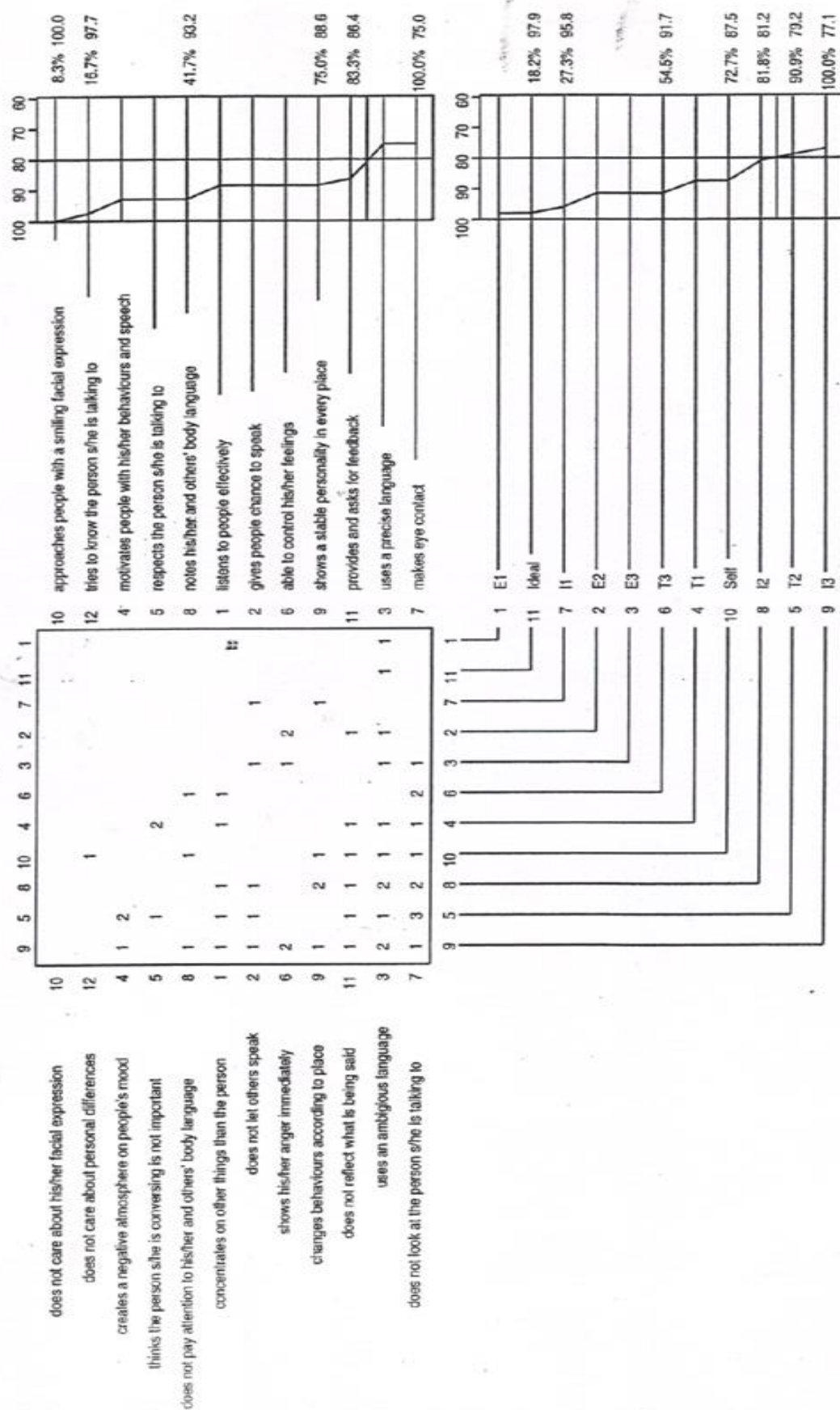


Figure 19 Exchange Analysis of Teacher 2's FOCUSed 1 and FOCUSed 2 Grids

Another significant change occurred in Teacher 2's perception (see Figure 19) was the structural change concerning the elements. The two elements included the following in order of the level of difference from the least to the most: T2 (79.2%) and I3 (77.1%).

- **Content**

The changes in the content of Teacher 2's two grids are remarkable. Teacher 2 has incorporated three additional constructs in her repertoire that are directly interconnected to the content of the NLP-TD program; *able to use a metaphorical language* (C14), *tries to match the language of others* (C15), *able to establish rapport* (C16). Another thing worth mentioning is that Teacher 2 has ranked constructs 15 and 16 as two of her most important constructs at the end of the study.

It seems that NLP-TD program in which Teacher 2 participated has expanded Teacher 2's repertoire of constructs on communication strategies.

4.1.3 Teacher 3's Participant Profile

Teacher 1 is a graduate of the English Language Teaching Department of Gazi University. She has been teaching English for 16 years. She has taught in two state high schools so far. Among her major interests, there appears such activities as teaching, communication, video classes, and social activities. Teaching English is a profession which she has always wanted to be. She indicates that communicating in a different way makes her happy. She feels she has got the sufficient education from her university. Teacher 3 also seeks opportunities to develop herself in order to catch up with the teenage fashion so that she can understand and train them better. In regards to her knowledge about NLP, she only knows what it is about-that it is about feelings, unconscious world and communication. However, she has not attended any NLP programs before. Regarding her ratings of her communication with her family and administration she rates herself as excellent; with her students and colleagues as good; however she rates her communication with herself as satisfactory.

4.1.3.1 The Content and Structure of Teacher 3's Personal Theories at the Beginning of the Study

Teacher 3's grid data consists of 12 constructs and 11 elements. Teacher 3's FOCUSED grid shown in Figure 20 below demonstrates the construct and element trees drawn at 80% cut-off point.

- **Construct Links**

The FOCUSED analysis of Teacher 3's grid produced a big main cluster (see Figure 20). In the first sub cluster, her most related constructs are *addresses people with their names* (C5) and *looks at the person s/he is talking to* (C2) at 97.7% match level. Also, linked to this cluster is the construct *thinks through what s/he wishes to say* (C8) at the same match level (97.7%). In fact, the constructs *looks at the person s/he is talking to* (C2) and *thinks through what s/he wishes to say* (C8) were rank ordered as two of her five most important constructs. Hence, we may assume that Teacher 3 construes the characteristics of an effective teacher in terms of communication skills as a teacher who thinks through what s/he wants to say while keeping eye contact with the person. In Teacher 3's point of view, a teacher should address people with their names to increase the effectiveness of communication.

In the second sub cluster, the constructs *cares about psychical details* (C4), *uses language clearly and effectively* (C6), and *varies his/her tone of voice* (C7) are perceived to be similar at 95.5% match level. In fact the constructs *uses language clearly and effectively* (C6) and *varies his/her tone of voice* (C7) were rank ordered as two of her five most important constructs. The first and second construct clusters have a link at 90.9% match level. Accordingly, Teacher 3 appears to think that a teacher must use language and his/her tone of voice effectively. Similarly, a teacher who does not pay attention to body language cannot be a good communicator.

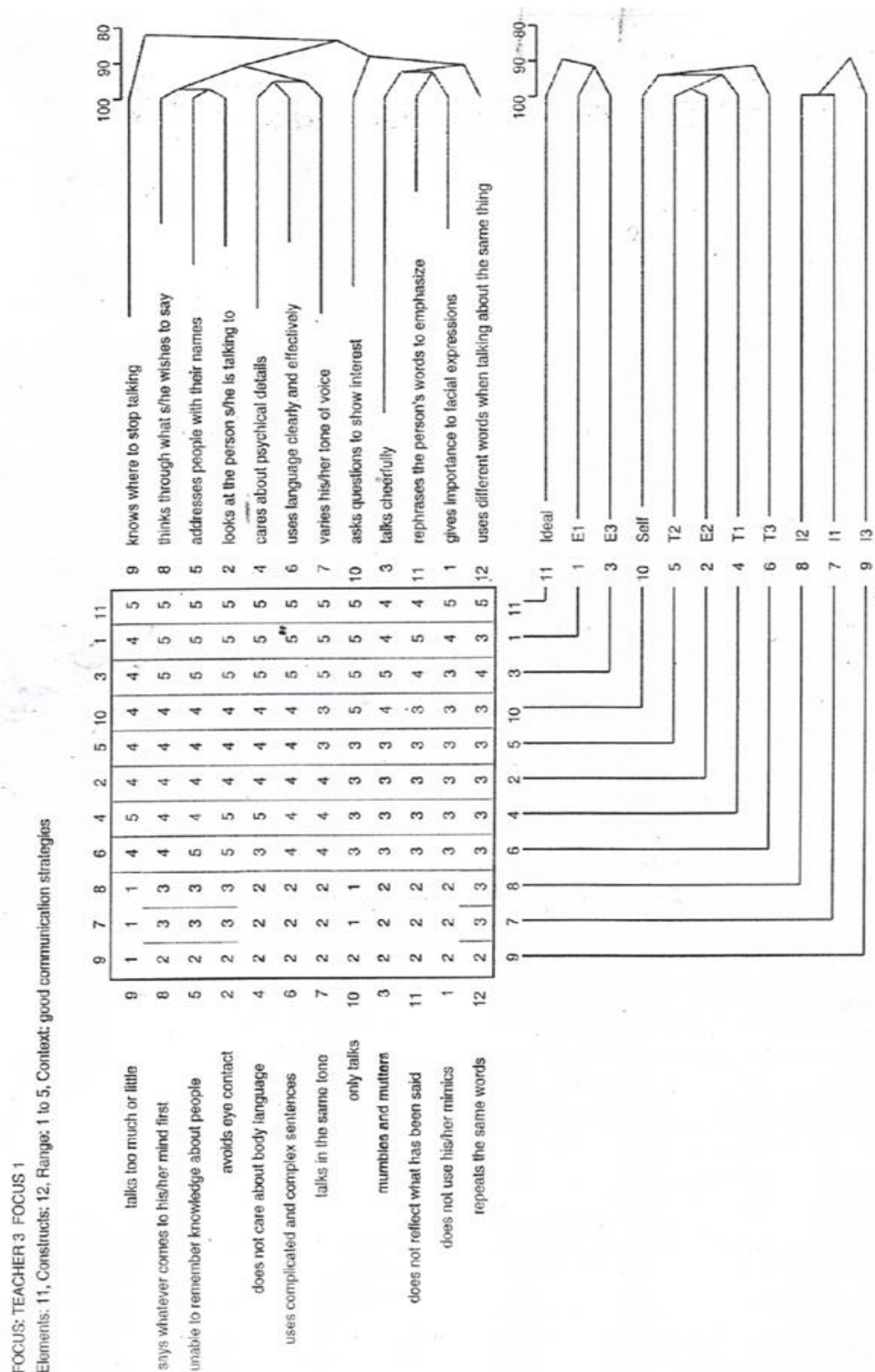


Figure 20 Teacher 3's FOCUSed Grid at the Beginning of the Study

In her third sub cluster, constructs *rephrases the person's words to emphasize* (C11) and *gives importance to facial expressions* (C1) are perceived to be similar at 93.2% match level. Subordinate to these constructs (C1 and C11) are the constructs *talks cheerfully* (C3) at 93.2% match level, *uses different words when talking about the same thing* (C12) at 90.9% match level and *asks questions to show interest* (C10) at 88.6% match level. In fact, the construct C3 was rank ordered as one of her five most important constructs. Drawing on the above associations, we may assume that Teacher 3 perceives a teacher as an effective communicator who avoids repeating the same words. This can also be achieved through rephrasing the other person's words and asking questions if essential. Utilizing facial expressions and talking cheerfully are other strategies of good communication from Teacher 3's point of view.

The construct *knows where to stop talking* C9 seems to be a superordinate to all the other constructs at 81.8% match level.

Quotation 5:

Talking too much does not make effective speaker. In relation to the listener's reactions, a short and clear speech is mostly welcomed rather than a long and boring speech. Listening and observing as well as speaking are also important for a good communication.

• Element Links

Teacher 3's element set consists of three main clusters (see Figure 20). Considering the first element cluster, it is seen that Teacher 3 has a clear view of the features of ineffective teachers. The elements I1 and I2 are associated by 100.0% match level, which is subordinated by I3 at 89.6% match level.

In the second element cluster, her most related elements are T2 and E2 at 97.9% match level. T1 and Self subordinate these two elements (T2 and E2) at 93.8% match level. T3 is also linked to this cluster at the match level of 91.7%. Another important point of view worth mentioning is her association of her Self to T2 and E2 at the match level of 93.8%. Thus, we may assume that even though Teacher 3 perceives her self as already having some features of E2, she indicates that she has the features of her typical teachers (T1, T2 & T3) more than that of her effective teacher. For that reason, it may be inferred that Teacher 3 is ready for development (or change).

In the third element cluster at the top of the grid, E1 and E3 are perceived to be similar, which are linked to Ideal at 89.6% match level. Teacher 3 perceives her effective teacher (E1 and E3) having the qualities of her Ideal teacher.

4.1.3.2 The Content and Structure of Teacher 3's Personal Theories at the End of the Study

Teacher 3's grid at the end of the NLP-TD program comprises 15 constructs and 11 elements. The FOCUS analysis illustrated in Figure 21 displays the construct and element trees drawn at 80 % cut-off point.

- **Construct Links**

The FOCUS analysis of Teacher 3's grid generated three main construct clusters. In the first cluster, the constructs *matches language and posture* (C14) and *rephrases the person's words to emphasize* (C11) are perceived to be similar at 100.0% match level. Within the same cluster, the construct *uses different words when talking about the same thing* (C12) is linked to construct 11 and 14 at the match level of 97.7%. In fact, the construct *matches language and posture* (C14) was rank ordered as the first most important five constructs at the end of the study. Hence, Teacher 3 appears to think that a teacher should know how to match the other person's language and posture. In order to achieve this, a teacher must be able to use different words even talking about the same thing and rephrase the other person's words as well. During the follow-up interview, Teacher 3 explained the meaning she attached to this construct cluster as follows:

Quotation 6:

In my opinion, harmony of the verbal and body language is necessary for a good speech to occur. We should concentrate on what we are saying or doing. Making a clear picture on the listeners' mind helps both sides.

FOCUS: TEACHER 3 FOCUS 2

Elements: 11, Constructs: 15, Range: 1 to 5, Context: good communication strategies

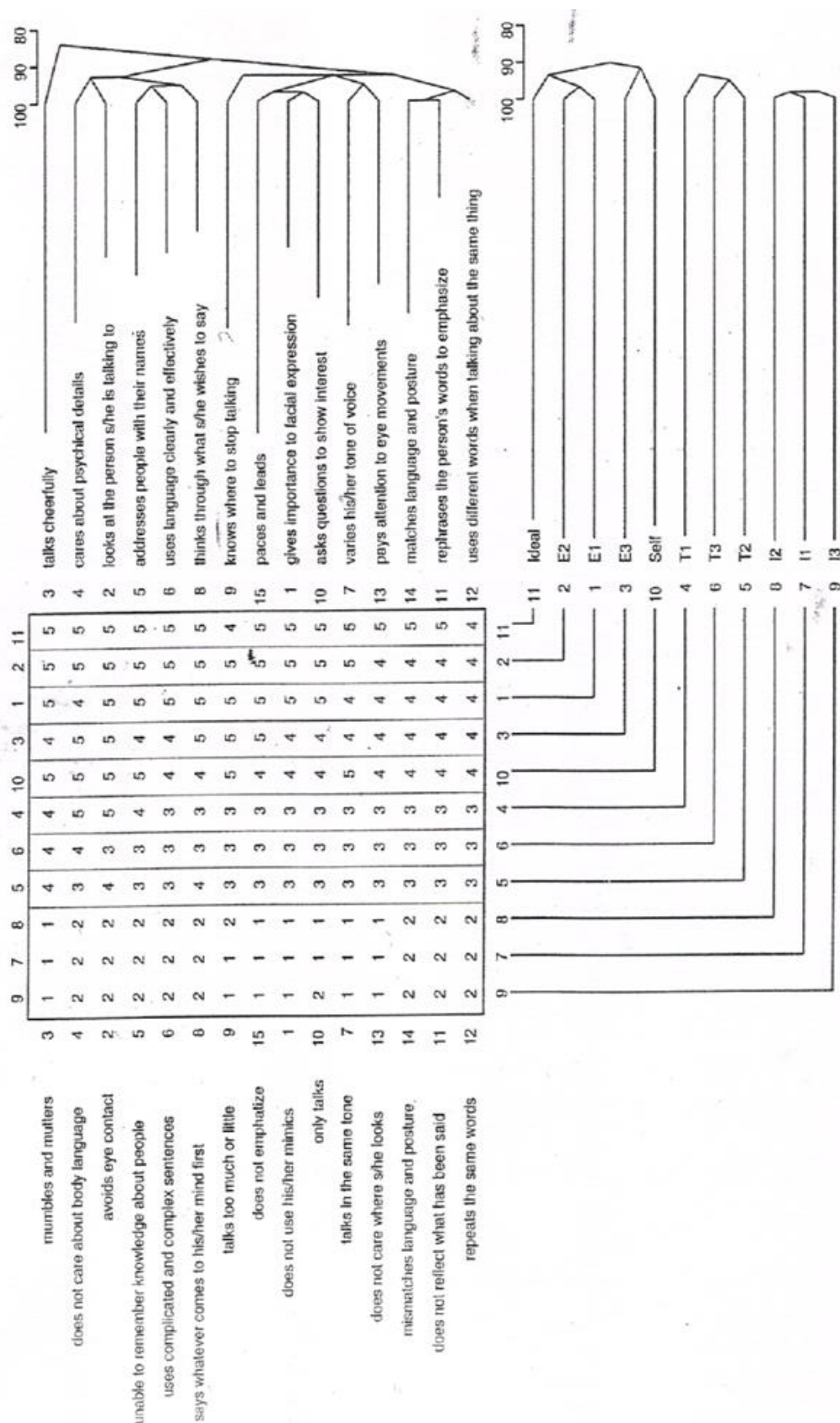


Figure 21 Teacher 3's FOCUSED Grid at the End of the Study

- **Construct Links**

The FOCUS analysis of Teacher 3's grid generated three main construct clusters. In the first cluster, the constructs *matches language and posture* (C14) and *rephrases the person's words to emphasize* (C11) are perceived to be similar at 100.0% match level. Within the same cluster, the construct *uses different words when talking about the same thing* (C12) is linked to construct 11 and 14 at the match level of 97.7%. In fact, the construct *matches language and posture* (C14) was rank ordered as the first most important five constructs at the end of the study. Hence, Teacher 3 appears to think that a teacher should know how to match the other person's language and posture. In order to achieve this, a teacher must be able to use different words even talking about the same thing and rephrase the other person's words as well. During the follow-up interview, Teacher 3 explained the meaning she attached to this construct cluster as follows:

Quotation 6:

In my opinion, harmony of the verbal and body language is necessary for a good speech to occur. We should concentrate on what we are saying or doing. Making a clear picture on the listeners' mind helps both sides.

The second main cluster consists of six constructs. The most related constructs are *gives importance to facial expression* (C1), *asks questions to show interest* (C10), and *paces and leads* (C15) associated at the 97.7% match level. Parallel to these three constructs, *varies his/her tone of voice* (C7) and *pays attention to eye movements* (C13) form a pair at the match level of 95.5%. Also linked to this cluster is the construct *knows where to stop talking* (C9) at 93.2% match level. In fact, the constructs C7, C13, and C14 were rank ordered as three of her five most important constructs. Hence, according to Teacher 3, if a teacher pays attention to facial expressions, eye movements, and tone of voice, then s/he can lead and pace. She also appears to think that a teacher must ask questions but also know where to stop talking.

In the third main cluster at the top of the grid, the constructs *addresses people with their names* (C5), *uses language clearly and effectively* (C6), and *thinks through*

what s/he wishes to say (C8) are linked to each other at 95.5% match level. In fact, the construct *uses language clearly and effectively* (C6) was rank ordered as one of her five most important constructs. That is, Teacher 3 construes that teachers who hold good communication strategies addresses people with their names. Moreover, those teachers think through before speaking and say what they wish to say in a clear and effective way. At a slight lower match (93.2%), there is a relationship between the following constructs; *cares about psychical details* (C4) and *looks at the person s/he is talking to* (C2). This means, if a teacher looks at the person s/he is talking to, she or he is likely to notice body language. In other words, if a teacher does not make eye contact, she or he cannot realize the psychical details. Finally, the construct *talks cheerfully* (C3) stands as a subordinate to all the other constructs at a rate of 83% match level. Hence, according to Teacher 3, a teacher must not mumble and mutter if she or he wants to communicate effectively.

- **Element Links**

Unlike the beginning of the study, Teacher 3's element clusters display a clear-cut pattern at the end of the study (see Figure 21). In the first main element cluster at the bottom of the grid, I1, I2, and I3 are related at a high match level of 98.3%. In the second main element cluster, typical teachers (T1, T2, and T3) formed a separate group. T2 and T3 are associated at 95% match level and T1 is linked to these two elements at the match level of 93.3%.

The third main element cluster comprises three effective teachers, self and ideal teacher. E1 and E2 are linked to each other at a high level of 96.7%. Teacher 3's Ideal teacher is linked with E1 and E2 at 93.3% match level. Above all, she perceives Self as being similar to E3. Thus, this may suggest that she thinks she possesses the communication strategies of effective teachers; however, she does not think she has reached the qualities of her ideal teacher yet. Her perception of a need to become a much better communicator may have contributed to her development.

4.1.3.3 Changes Observed Between the Beginning and the End of the Study

Exchange Analysis:

The Exchange analysis of Teacher 3's grids reveals that the construct consensus between the two grids is 72.7% and the element consensus is 72.7%, over 80% match level (see Figure 22).

- **Structure**

The exchange analysis of Teacher 3's grids reveals that three of her constructs has gone through remarkable structural change between the beginning and the end of the study (see Figure 22). The constructs with remarkable structural change cover, in order of level of difference from the least to the most: *varies his/her tone of voice* (C6; 77.3%), *knows where to stop talking* (C8; 77.3%), *talks cheerfully* (C3; 72.7) (see Figure 4.9). For example, at the beginning of the study, the construct *talks cheerfully* (C3) was linked with the constructs C11, C1, and C12 at 93.2% match level. However, at the end, it (C3) became a subordinate to all the other constructs at a rate of 83% match level. Similarly, at the beginning of the study, the construct *knows where to stop talking* was perceived to be a prerequisite for the other constructs, at the end, it became associated with the constructs of the second cluster (C15, C1, C10, C7, and C13). Thus, it may be suggested that in the light of her experience of NLP-TD program she has been in, these constructs might be reformulated leading to more clearly perceived theories.

Figure 4.9 also reveals that Teacher 3 has been in the process of reorganising three of her elements in the grid. These elements with structural change include the following in order of level of difference from the least to the most: T3 (77.3%), Self (77.3%), and E2 (70.5%). Regarding her element clustering, Teacher 3's concern seems to be on the distinguishing features of effective and typical teacher groups in the light of the new experiences gained. Another point to deal with is her perception of self as it showed a significant structural change. As it is mentioned in Section 4.1.3.1, in her first grid Teacher 3 found self as teacher similar to T2, E2, T1, and T3. However, in her second grid, she identified self as teacher as having the qualities of E3, E2, E1 and Ideal teacher.

TEACHER 3 FOCUS 2 consensus-with TEACHER 3 FOCUS 1

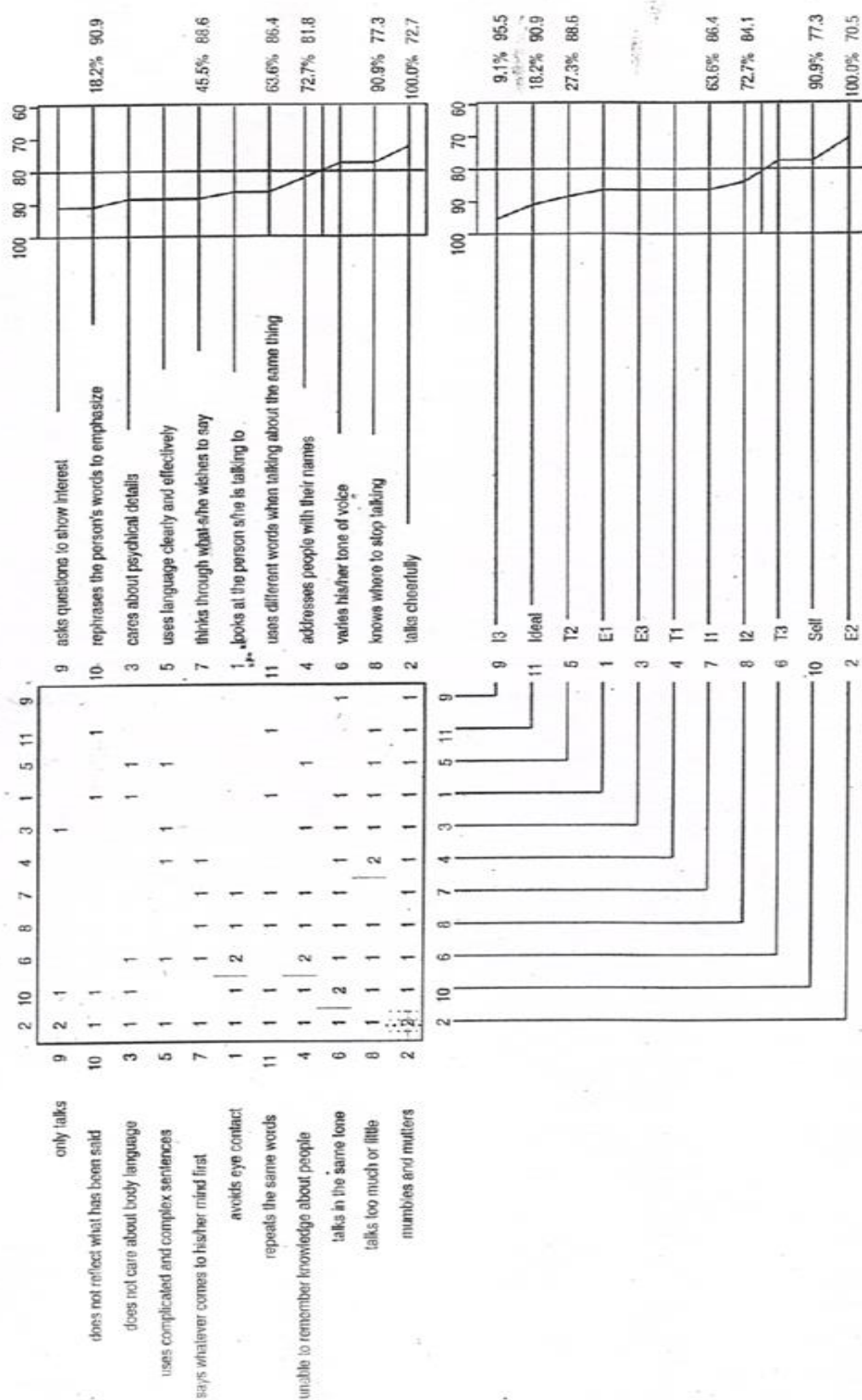


Figure 22 Exchange Analysis of Teacher 3's FOCUSed 1 and FOCUSed 2 Grids

- **Content**

The changes in the content of Teacher 3's two grids are noteworthy. At the end of the study, Teacher 3 added three new constructs to her existing construct system. These constructs which are directly linked to the content of the NLP-TD program, *pays attention to eye movements* (C13), *matches language and posture* (C14), and *paces and leads* (C15), are associated to three of her existing constructs (C11, C7, and C1) (see Figure 22). Another change worth mentioning is that Teacher 3 rank ordered these three new constructs (C13, C14, and C15) among her five most important constructs at the end of the study.

Drawing on these additions of constructs and changes in the rank order, it may be suggested that the NLP-TD program has led to a reconstruction of Teacher 3's personal theories regarding good communication strategies.

4.1.4 Teacher 4's Participant Profile

Teacher 4 is a graduate of the English Language Teaching Department of Dicle University. She has been teaching English for 10 years. During these years, she has worked at two different state schools, and is now working at a state school in Adana, Turkey. Teacher 4 does not think that teacher education program she took is sufficient for learning and for her learning to teach takes a long time. She tries to educate herself by reading, solving tests and watching English TV channels. As for her goals for future, she wants to learn a second foreign language. Within her teaching experience, she has not attended any teacher development programs yet. Likewise, she has not attended any NLP programs before and she states she does not know much about NLP. Regarding her ratings of her communication with her family, students, herself, colleagues and administration she rates herself as good.

4.1.4.1 The Content and Structure of Teacher 4's Personal Theories at the Beginning of the Study

Teacher 4's grid data consists of 11 constructs and 11 elements. Teacher 4's FOCUSed grid shown in Figure 23 below reveals the construct and element trees drawn at 80% cut-off point.

- **Construct Links**

The FOCUS analysis of Teacher 4's grid produced 11 constructs which are associated with each other at the level of 81.8% (see Figure 23). In her first cluster, there are four constructs. Two of her constructs *smiles and speaks in a calm manner* (C10) and *speaks in a clear and concise way* (C9) are matched at the level of 93.2%. Linked to these two constructs are the constructs *uses facial expressions to reflect passion* (C5) and *maintains eye contact* (C1) at 90.9% match level. Thus, Teacher 4 seems to think that a teacher should speak in a clear and concise way while speaking in a calm manner. She also construes *using facial expressions* and *maintaining eye contact* as good communication strategies.

Second of her three main clusters consists of two constructs, *stays focused on the topic* (C4) and *organizes and clarifies ideas in mind* (C2). These two constructs are matched at the level of 90.9%. In fact, Teacher 4 construes C4 as one of the most five important constructs. Therefore, Teacher 4 seems to believe that teachers who organizes and clarifies ideas in mind do not lose focus on the topic.

In her third cluster, there are four constructs. Two of her constructs *being an effective listener* (C8) and *removes distractions* (C7) are the most closely linked ones (100.0% match level) compared to the rest of her constructs. Hence, according to Teacher 4, a teacher who listens effectively does not allow external distractions. The constructs *uses hand gestures while speaking* (C6) and *able to generate empathy* (C11) are also construed within the same cluster at 90.9% match level with each other and at 86.4% match level together with C7 and C8.

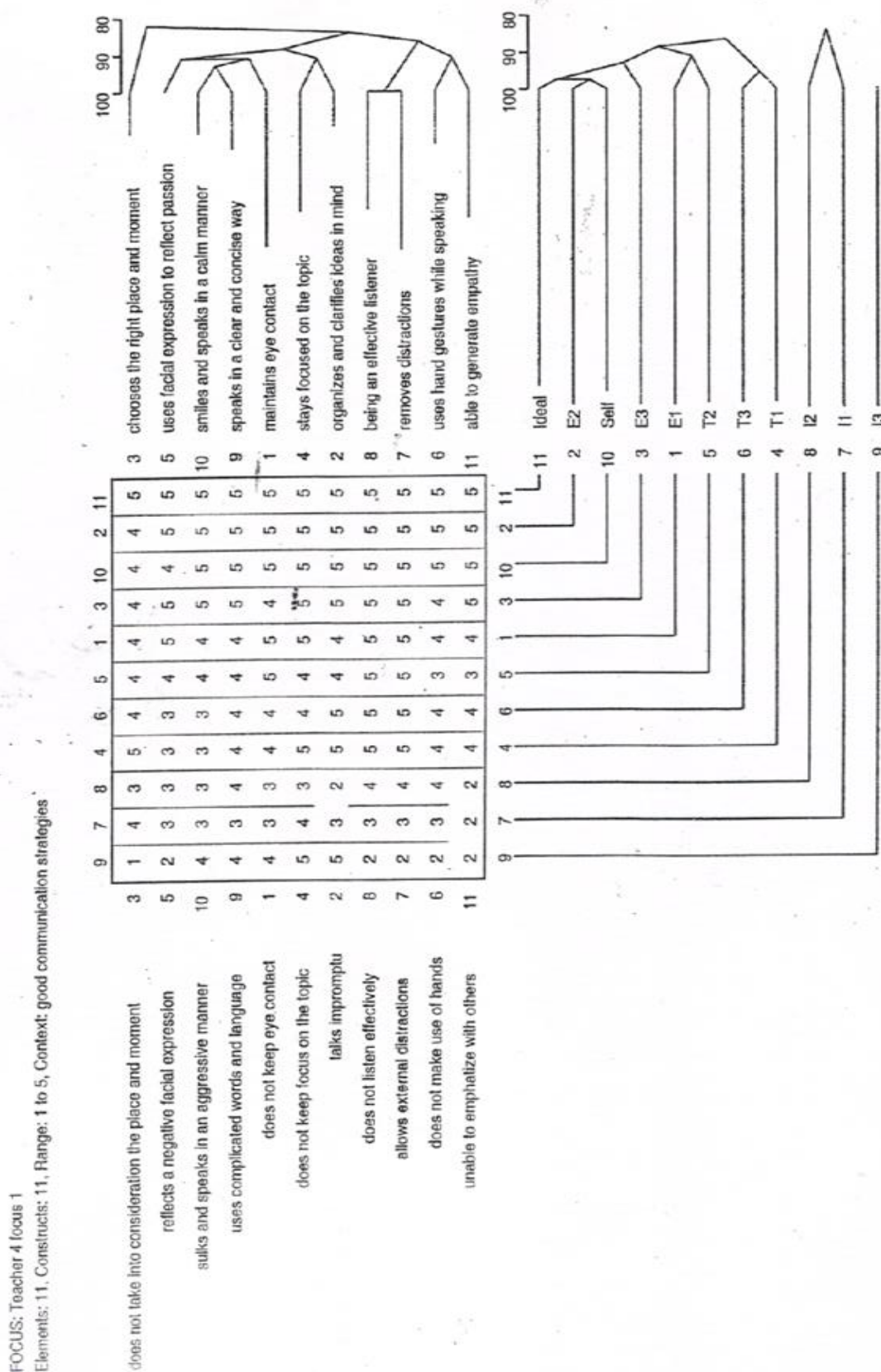


Figure 23 Teacher 4's FOCUSED Grid at the Beginning of the Study

In fact, the constructs *being an effective listener* (C8) and *able to generate empathy* (C11) were rank ordered as the two most important constructs. Regarding the importance given to these two constructs (C8 & C11) and the reason for giving priority to these in the rank ordering, Teacher 4 expressed the following in her follow-up interview:

Quotation 7:

The core of the communication in my opinion is to understand and be understood. In my relations, I expect the others to think about my situation and act accordingly. It is the same when I communicate with others. Before talking, I try to put myself in the other person's shoes and the most effective way to generate empathy with someone is listening to him/her.

Finally, the construct C3 seems to be a superordinate to the other constructs. Thus, Teacher 4 seems to construe that choosing the right place and moment is a prerequisite for good communication.

- **Element Links**

Teacher 4's FOCUS analysis produced four main element clusters (see Figure 23). The first main cluster at the top of the grid reveals that Teacher 4 associates E2 and Self with her Ideal teacher at 97.7% match level, which is subordinated by E3 (93.2% match level). The general pattern in Teacher 4's rating of Self at the beginning of the study suggest that she identifies her current self with effective teachers and ideal teacher. Hence, Teacher 4 perceives herself almost similar in the strategies of her effective and ideal teachers, and indicated only two constructs to be developed: *chooses the right place and moment* (C3) and *uses facial expressions to reflect passion* (C5).

Her second element cluster consists of two sub-clusters. In the first sub-cluster E1 and T2 are viewed to be similar at 90.9% match level. In the second sub-cluster T3 and T1 are perceived to be similar at 95.5% match level. Besides this, the second sub cluster has a direct link with E1 and T2 at 86.4% match level. Therefore, it may be suggested that Teacher 4's typical teacher is a combination of the features possessed by E1, T1, T2, and T3.

In the third one, I2 and I1 are associated at the match level of 84.1%. At a looser match level (70.5) I3 is linked with I1 and I2. Thus, Teacher 4 seems to think that ineffective teachers possess very different characteristics than that of typical and effective teachers. However, for Teacher 4, the distinguishing features of ineffective teachers are relatively similar to each other.

4.1.4.2 The Content and Structure of Teacher 4's Personal Theories at the End of the Study

Teacher 4's grid at the end of the NLP-TD program comprises 14 constructs and 11 elements. The FOCUS analysis illustrated in Figure 24 displays the construct and element trees drawn at 80 % cut-off point.

- **Construct Links**

The second focus analysis of Teacher 4's grid presents three major construct clusters, all linked to each other at the match level of 93.2% (see Figure 24).

The first cluster at the top of the grid suggests that Teacher 4 construes C4 and C2 similarly at 95.5% match level. At a lower level (93.2%), construct 13 is also clustered with these constructs. Hence, it may be speculated that these constructs reveal Teacher 4's perception of good communication strategies. Namely, *stays focused on the topic* (C4), *organizes and clarifies ideas in mind* (C2), and *keeps a moderated tone of voice* (C13). In fact, construct C13 was highlighted in her rank ordering of five most important constructs.

In the largest cluster in the middle of the grid, there are seven constructs which are closely related to each other at the match level of 97.7%: *maintains eye contact* (C1), *shows feelings by gestures* (C14), *calibrates and observes people* (C12), *uses facial expression to reflect passion* (C5), *removes distractions* (C7), *being an attentive listener* (C8), and *able to generate empathy* (C11). As a matter of fact these four constructs C1, C8, C11, and C12 are four of Teacher 4's top priority constructs in the rank order at the end of the study.

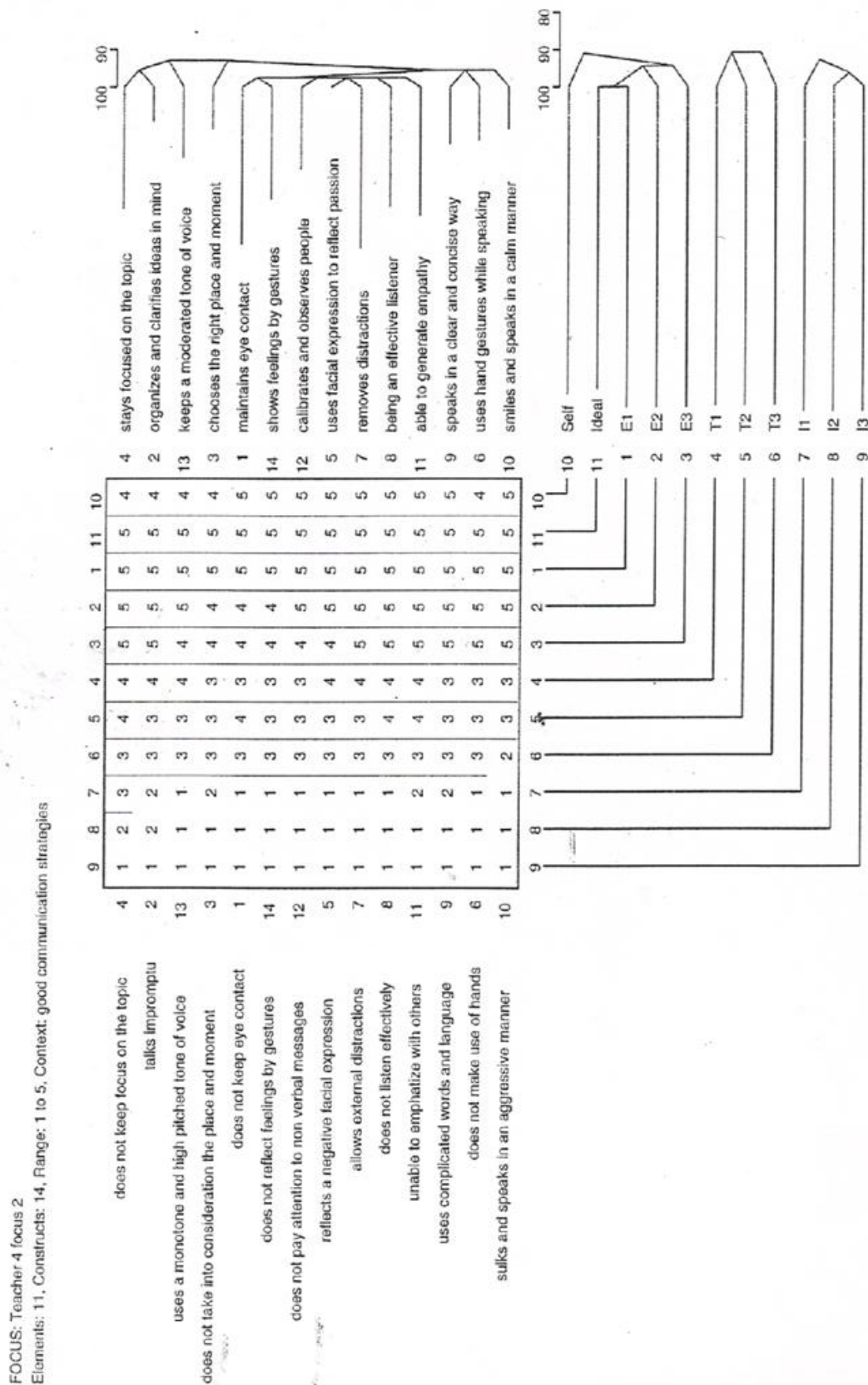


Figure 24 Teacher 4's FOCUSED Grid at the End of the Study

Thus, according to Teacher 4, teachers who have good communication strategies are not only able to generate empathy but also able to use facial expressions and gestures. To her, calibrating and observing people entails maintaining eye contact with the people. Teacher 4 also believes that these teachers know how to listen to people effectively, (i.e., being an effective listener, removing distractions)

In the third cluster, there is a match (at 95.5% level) between the constructs *speaks in a clear and concise way* (C9) and *uses hand gestures while speaking* (C6). Moreover, the construct *smiles and speaks in a calm manner* (C10) is also related to this cluster at the same match level (95.5%). For Teacher 4, a teacher not only speaks in a calm manner but speaks in a clear way as well. In addition to this, s/he is construed to be using his/her hand gestures to accompany meaning while speaking.

C3 seems to be a superordinate to other constructs at 93.32% match level. Thus, Teacher 4 seems to construe that choosing the right place and moment is a prerequisite for good communication.

- **Element Links**

Teacher 4's FOCUSed grid produced three element clusters (see Figure 24) which presents a clear view of separate teacher groups (effective, typical, and ineffective). In the first element cluster at the top of the grid, Teacher 4 perceives E1 and Ideal teacher identical at 100.0% match level. At a slight lower level, E2 and E3 subordinate E1 and Ideal teacher at the match level of 94.6%. Moreover, her Self has a direct link to her effective teachers and ideal teacher at 91.1% match level. Unlike the beginning of the study, Teacher 4 assumes that she possesses not almost all the communication strategies but only some of these strategies of both the effective teachers and ideal teacher. She has become aware that she still needs to progress in the following: *organizes and clarifies ideas in mind* (C2), *chooses the right place and moment* (C3), *stays focused on the topic* (C4), *uses hand gestures while speaking* (C6), and *keeps a moderated tone of voice* (C13).

In the second element cluster at the bottom of the grid, I2 and I3 are viewed to be similar at 96.4% match level, and I1 subordinates these two elements at 92.9% match

level. Within the third element cluster, Teacher 4's typical teachers (T1, T2, and T3) are linked together at the match level of 91.1%. Drawing on the above mentioned associations, the level of similarity between effective teachers and ineffective teachers is higher than that of typical teachers. That is, Teacher 4 construes the two most effective teachers in each group (Effective and Ineffective) more similarly than the teachers in the typical teachers' group. This may suggest that Teacher 4 has much clearer views regarding the communication strategies possessed by the effective teachers and ineffective teachers than that of typical teachers.

4.1.4.3 Changes Observed Between the Beginning and the End of the Study

Exchange Analysis:

The exchange analysis of Teacher 4's grid in Table 25 shows that the construct consensus between the first and the second grid is 9.1% and the element consensus is 45.5%, over 80% match level.

- **Structure**

The exchange analysis of Teacher 4's grids at the beginning and the end of the study display remarkable structural changes that took place both in the constructs and the elements (see Figure 25). The significant changes at 80% cut-off point took place in 10 out of 11 constructs. These changes from the least to the most are as follows: *chooses the right place and moment (C3)*, *stays focused on the topic (C4)*, and *uses facial expression to reflect passion (C5)* at 79.5%, *being an attentive listener (C8)*, and *smiles and speaks in a calm manner (C10)* at 77.3%, *maintains eye contact (C1)*, *organizes and clarifies ideas in mind (C2)*, *uses hand gestures while speaking (C6)*, *removes distractions (C7)*, and *speaks in a clear and concise way (C9)* at 75.0%.

Teacher 4 focus 2 consensus-with Teacher 4 focus 1

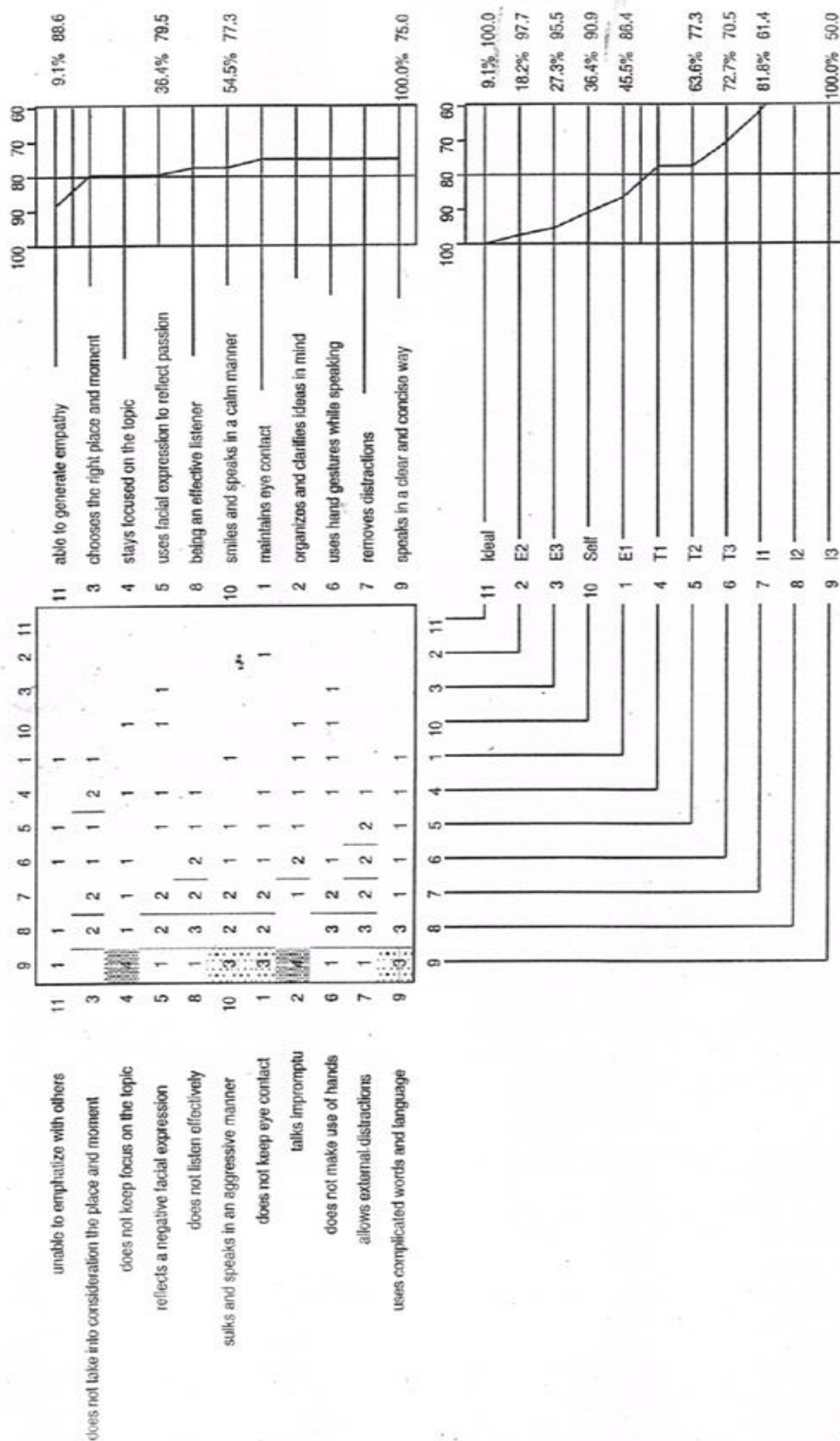


Figure 25 Exchange Analysis of Teacher 4's FOCUSED 1 and FOCUSED 2 Grids

Another important point revealed is that Teacher 4 has gone through a process of reorganisation of more than half of her elements in her first grid (see Figure 25). In other words, six out of eleven of her elements present significant structural change at 80% cut-off point. The elements with structural change cover the following in order of level of difference from the least to the most: T1 (77.3%), T2 (77.3%), T3 (70.5%), I1 (61.4%), I2 (50.0%), and I3 (50.0%). When examined which of the elements has gone through significant structural change, it is seen that the elements which showed structural change belong to teachers that fall into typical (T1, T2, and T3) and ineffective (I1, I2, and I3) teachers. Thus, it can be assumed that Teacher 4 has further refined the strategies which distinguish the typical and ineffective teachers from that of effective teachers.

This may suggest that Teacher 4 has been in the process of testing her own personal theories in terms of the meanings she attached both to the constructs and the elements in the light of the experience she has been involved in.

- **Content**

The comparison of Teacher 4's two grids yields significant changes in regard to content of the constructs. In contrast to her grid at the beginning of the study, Teacher 4 displays a larger repertoire of constructs at the end of the study (see Figure 25).

Analyzing her grid at the end of the NLP-TD program, it is seen that Teacher 4 has three additional constructs among her existing construct system which are closely related to the NLP-TD program. These constructs are as in the following: *calibrates and observes people* (C12), *keeps a moderated tone of voice* (C13), and *shows feelings by gestures* (C14).

Another matter of interest is that Teacher 4 has rank ordered construct 12 and construct 13 as two of her most important constructs at the end of the study. Accordingly, it may be assumed that the NLP-TD program has expanded Teacher 4's repertoire of constructs of the teachers regarding their good communication strategies.

4.1.5 Teacher 5's Participant Profile

Teacher 5 is a graduate of the English Language Teaching Department of Çukurova University. He has been teaching English for 12 years. During these years, he has taught at two different state schools one of which he is working at currently in Adana, Turkey.

Teacher 5 is happy to be an English teacher. He thinks that being a teacher is the source of happiness itself. He is interested in all the things related to English. Teacher 5 indicated that teacher education programs are not sufficient for a teacher's career and added that teachers need to refresh their knowledge and adopt themselves for the changes. He takes teacher development programs since he believes it is necessary.

In the future, he aims to live and work in an English speaking country. So far he has taken some courses for English teachers. However, he has not taken any NLP courses and he does not know much about NLP. Regarding his communication with his family and colleagues he rates himself as good; and with himself and students he rates his communication as satisfactory, and with administration he rates his communication as poor.

4.1.5.1 The Content and Structure of Teacher 5's Personal Theories at the Beginning of the Study

Teacher 5's grid data consists of 9 constructs and 11 elements. Teacher 5's FOCUSED grid shown in Figure 26 below demonstrates the construct and element trees drawn at 80% cut-off point.

- **Construct Links**

At the beginning of the study, the FOCUS analysis of Teacher 5's grid produced two main clusters. The largest cluster at the top of the grid consists of two sub-clusters matching each other at 81.8% level (see Figure 26).

In the first sub-cluster at the top of the grid, it can be seen that Teacher 5 associates the constructs *makes eye contact* (C1) and *uses variable tone of voice* (C3) at 88.6% match level. The construct *uses body language effectively* (C2) is also linked to these (C1 & C3) at 84.1% match level. In fact, the constructs C1, C2, and C3 were rank ordered as three of his five most important constructs. Drawing on these associations and the rank order, it may be suggested that for Teacher 5, a teacher who is good at communication varies his/her tone of voice and in order to enhance communication, s/he makes eye contact. Above all, such a teacher uses body language effectively.

His most related constructs appear in the second sub-cluster; *asks appropriate questions* (C9) and *provides constructive feedback* (C7) are matched with each other at the level of 90.9%. Also, linked to this cluster is the construct *updates his/her knowledge* (C4) at 88.6% match level. In fact, C4 is among his five most important rank ordered constructs. Thus, Teacher 5 seems to believe that such teachers who possess good communication strategies are open to update his/her knowledge, so they know how to provide constructive feedback and how to ask appropriate questions. In addition, the construct *well organized on what to say* (C6) has also a link with C9, C7, and C4 at 86.4% match level. Therefore, it may be assumed that Teacher 5 construes being well organized on what to say (C6) as a prerequisite for good communication to take place.

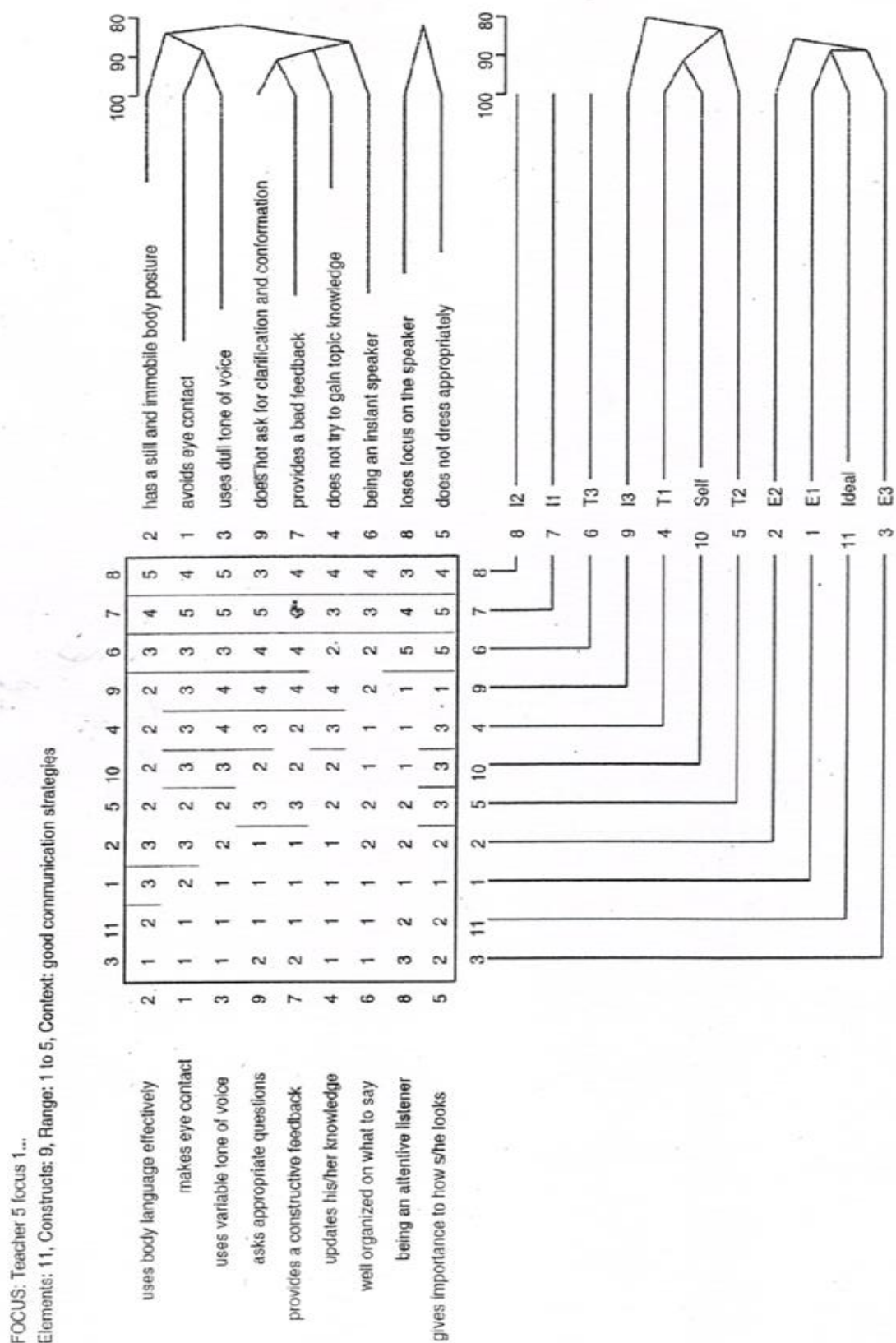


Figure 26 Teacher 5's FOCUSED Grid at the Beginning of the Study

The second of his two main clusters consists of two constructs; *being an attentive listener* (C8) and *gives importance to how s/he looks* (C5). These two constructs are matched at the level of 81.8%. Therefore, Teacher 5 seems to believe that teachers who are attentive listeners also give importance to how they look. During the follow-up interview, Teacher 5 explained the importance he attached to construct C5 as in the following words:

Quotation 8:

What she or he wears reflects a teacher's attitudes towards the people or students. For example, neat and tidy outfit can have a positive impact on students. As they consider their teacher as a model, they express accordingly.

- **Element Links**

The element links in Teacher 5's FOCUSed grid at the beginning of the study do not indicate a clear pattern. Teacher 5's element set consists of two main clusters (see Figure 26). In the first cluster, T1 and Self are associated at 91.7% match level. Within this cluster, it is also seen that I3 is linked to T1, Self, and T2 at 80.6% match level. Hence, Teacher 5 positions Self in a cluster comprising typical teachers (T1 & T2) and ineffective teachers (I3). He seems to think that he holds some qualities of his I3. This suggests that Teacher 5 is aware that he needs progress in order to be identical to his ideal teacher. Therefore, it can be assumed that Teacher 5 is open to development as he believes he has to develop himself to become an effective communicator. I2, I1 and T3 are loosely matched (75.0%) under the cut-off point of 80%. Accordingly, typical and ineffective teachers do not form clearly separate clusters. His second element clustering consists of E2, E1, Ideal, and E3. The most related elements of this cluster are E1, Ideal and E3 at 88.9% match level. E2 has a direct link with these three elements at the match level of 86.1%. Therefore, it may be assumed that Teacher 5 has a clear view regarding the communication strategies of effective teachers as only the group of effective teachers forms a separate cluster.

4.1.5.2 The Content and Structure of Teacher 5's Personal Theories at the End of the Study

Teacher 5's grid at the end of the NLP-TD program comprises 10 constructs and 11 elements. The FOCUS analysis illustrated in Figure 27 displays the construct and element trees drawn at 80 % cut-off point.

- **Construct Links**

In Teacher 5's grid at the end of the study, there appears one main construct cluster consisting of three sub-clusters linked to each other at an 81.8% match level (see Figure 27). In the first sub-cluster there is a match between the constructs *uses body language effectively* (C2) and *establishes effective rapport* (C10) at 95.5% level. Moreover, the construct *makes eye contact* (C1) is related to this cluster at 90.9% match level. In fact, C1, C2, and C10 were three of his top priority constructs at the end of the study. It may be assumed that, for Teacher 5, teachers who use body language effectively and teachers who make eye contact are associated with those who are able to establish effective rapport. The following extract taken from the follow-up interview mirrors the process he has gone through with the new experience he was involved in:

Quotation 9:

For me what makes a team is the cooperation, moving together. I believe good communication is like being in a team or to be a member of a team. To be successful you have to be in harmony. For harmony to take place you need to establish rapport.

The second sub-cluster consists of three constructs. Teacher 5 relates the constructs *provides constructive feedback* (C7) and *asks appropriate questions* (C9) at 95.5% match level. Besides, the construct *updates his/her knowledge* (C4) is linked to the constructs C7 and C9 at the match level of 93.2%. Hence, it may be assumed that Teacher 5 perceives a teacher effective in communication as a teacher who asks appropriate questions but at the same time who can provide constructive feedback to other people. Another important feature of an effective teacher, however, is updating his or her knowledge.

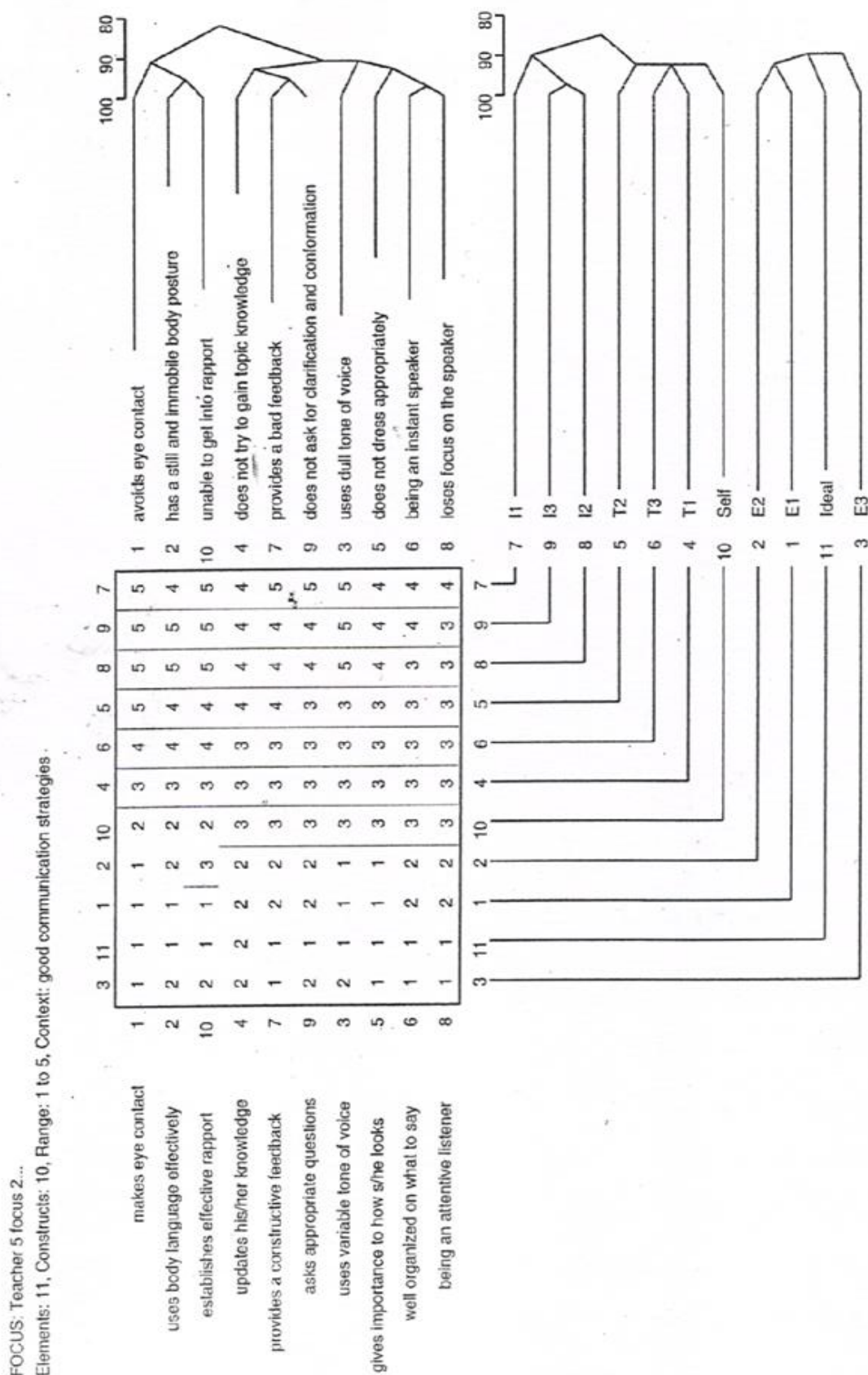


Figure 27 Teacher 5's FOCUSED Grid at the End of the Study

In the third sub-cluster, *well organized on what to say* (C6) and *being an attentive listener* (C8) associate highly at 97.7% match level. At a lower level, *gives importance to how s/he looks* (C5) at 93.2% level, and *uses variable tone of voice* (C3) at 90.9% match level subordinate this pair. In fact, two of his top priority constructs in the rank order *uses variable tone of voice* (C3) and *being an attentive listener* (C8) appear within this cluster. Therefore, for Teacher 5, the strategies of an effective teacher as regards to good communication include being well organized on what to say and being an attentive listener. He also seems to perceive that a teacher does not dress appropriately and avoids dull tone of voice.

- **Element Links**

The element clustering of Teacher 5 shows a clear pattern with reference to three teacher groups (Effective, Typical, & Ineffective) unlike the beginning of the study (see Figure 27). Teacher 5's element clustering consists of three groups. In the first one, I2 and I3 are linked to each other at 97.5% match level. Moreover, I1 subordinates these two elements at the level of 90.0%.

In the second element clustering, it is seen that Self is linked to typical teachers (T1, T2, & T3) at the match level of 92.5%. Unlike at the beginning of the study, Teacher 5 does not hold the features of ineffective teachers. Thus, it may be assumed that he now construes himself as being quite far from ineffective teachers. His perception of a need to become a better communicator may have contributed to his development. However, Teacher 5 seems to think that there is still room for improvement as can be seen in all the constructs. The third element clustering comprises three effective teachers and his ideal teacher. E1 and E2 are perceived to be similar at 95.2% match level, and Ideal and E3 are related to each other at the match level of 90.0%.

4.1.5.3 Changes Observed Between the Beginning and the End of the Study

Exchange Analysis:

The exchange analysis of Teacher 5's grid shows that the construct consensus between the first and the second grid shown in Table 28 is 22.2% and the element consensus is 45.5%, over 80% match level.

- **Structure**

Teacher 5 seems to be involved in a developmental process within which he tests his existing theories in the light of the new experience and new information gained through NLP-TD program.

As indicated in Figure 28, Teacher 5 has gone through a process of reorganisation of more than half of the constructs (7) in his first grid. The constructs which present significant structural change at 80% cut-off point in order of the level of difference from the least to the most cover the following: *updates his/her knowledge* (C4; 79.5), *gives importance to how s/he looks* (C5; 79.5%), *provides constructive feedback* (C7; 79.5%), *makes eye contact* (C1; 75.0%), *well organized on what to say* (C6; 75.0), *uses body language effectively* (C2; 72.7%), *being an attentive listener* (C8; 70.5%).

Examining Teacher 5's first and second grids to identify the pattern of structural change, it is seen that the construct *well organized on what to say* (C6) has gone through and the following links established. At the beginning of the study, C6 was linked to C4, C7, and C9. However, at the end, it is observed that C6 formed a cluster with C8, C5, and C3. Thus, it may be suggested that Teacher 5 has been involved in a reconstruction process that enabled him to clarify the personal meanings he attached to his personal theories and the structural relations he established among them.

Teacher 5 focus 2... consensus-with Teacher 5 focus 1...

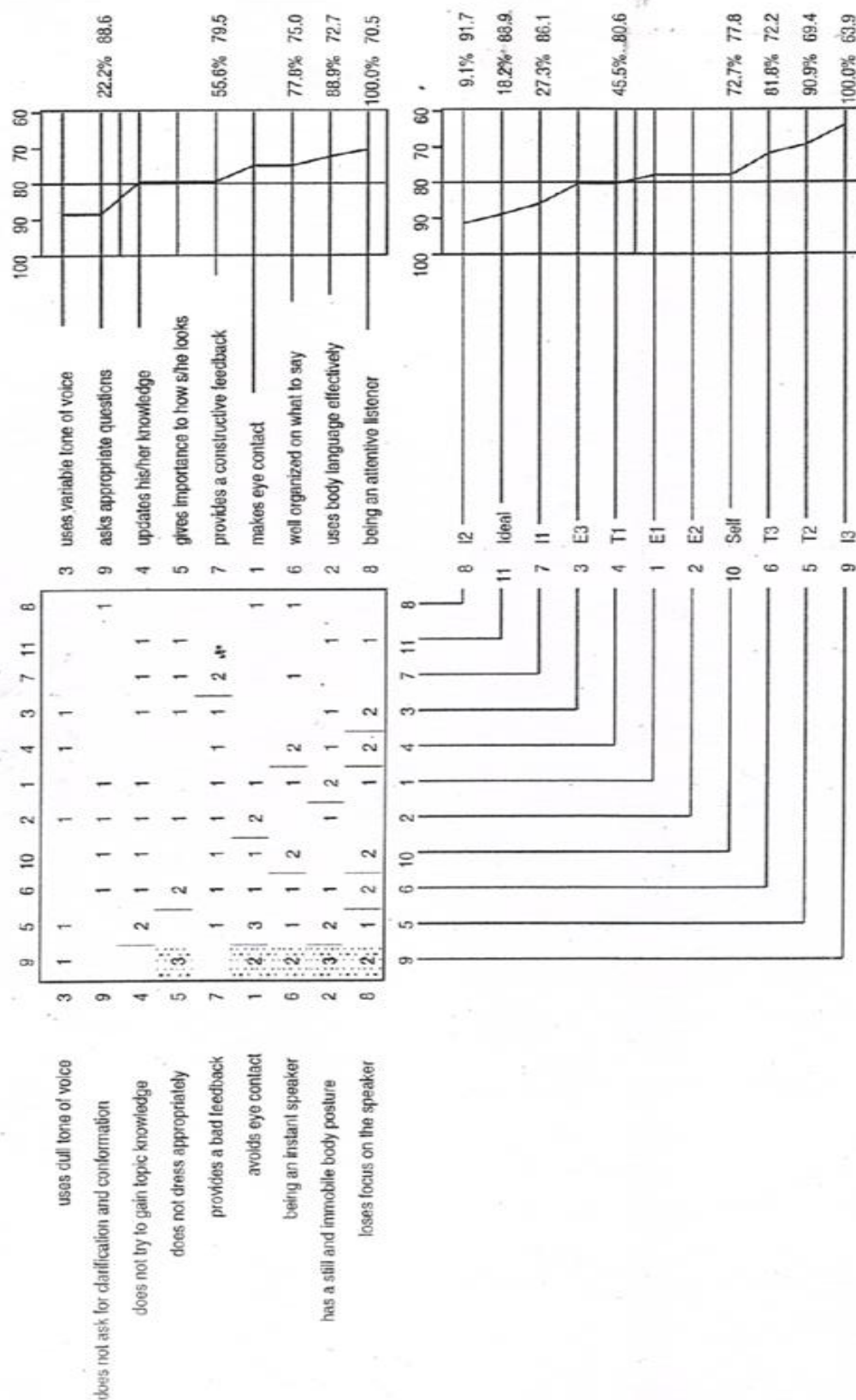


Figure 28 Exchange Analysis of Teacher 5's FOCUSED 1 and FOCUSED 2 Grids

Similarly, the constructs C1 and C2 has gone through. At the beginning of the study, C1 and C2 were placed in a link with *uses variable tone of voice* (C3). However, at the end, it is seen that these two constructs (C1 & C2) are specifically linked to the new added construct *establishes effective rapport* (C10). It might be argued that Teacher 5 has gone through a process of reorganisation within which he further clarified the meaning he attached to construct C1 and construct C3. Hence, it may be assumed that Teacher 5's new experience of NLP-TD program has been influential in the way he construes these two constructs: *makes eye contact* (C1) and *uses body language effectively* (C2).

Figure 28 also indicates some structural changes regarding Teacher 5's element clustering. The elements which showed structural change include the following order of the level of difference from the least to the most: E1 (77.8%), E2 (77.8%), Self (77.8%), T3 (72.2%), T2 (69.4%), I3 (63.9%). The elements with structural change might indicate a process of clarification that Teacher 5 has been in as to the qualities held by the teachers in each group. That is, at the beginning of the study, Teacher 5 seemed to have ambiguities regarding the features that differentiate each teacher group (see Figure 28). However, at the end of the study, he appeared to have further clarified the strategies possessed by the teachers in each group.

- **Content**

Teacher 5 incorporated one new construct in his existing repertoire of personal theories (see Figure 28). The noteworthy point to be mentioned is that this new added construct *establishes effective rapport* (C10) is directly related to the content of the NLP-TD program in which he participated. Teacher 5 established a link to C10 with his existing constructs C1 and C2.

Another matter of interest worth mentioning is that Teacher 5 has cited the new added construct as one of his most important constructs in the rank order at the end of the study. Four of his constructs (C1, C2, C3, and C8) cited in his rank ordering of his most important constructs remained the same as his foremost constructs at the end of the study as well.

Accordingly, it may be suggested that the NLP-TD program has led to an expansion in the content of personal theories of Teacher 5 and the meanings he attached to his existing constructs in the light of the new experience gained.

4.2 Overall View of the Content of Personal Theories

The content analysis of the repertory grid data obtained from the 5 teachers produced a total of 60 constructs at the beginning of the study, and 70 constructs at the end of the study (see Table 6).

Table 6 Constructs Emerged from the Data

CONSTRUCTS EMERGED FROM THE DATA	
Effective Communication Skills	
1.	listens openly to other people
2.	able to empathize with others
3.	has self-confidence
4.	stable with the attitudes
5.	flexible with the situations
6.	has a good sense of humour
7.	looks at the person with whom she/he is conversing
8.	keeps a personal space and distance
9.	comforts the others
10.	smiles and has a positive facial expression
11.	focused on the speaker
12.	open-minded to opinions and views
13.	uses storytelling to appeal to others' interests
14.	has a lively tone of voice
15.	makes himself/herself and others happy
16.	tries to understand the feelings of others
17.	listens to people effectively
18.	gives people chance to speak
19.	uses a precise language
20.	motivates people with his/her behaviours and speech
21.	respects the person she/he is talking to
22.	able to control his/her feelings
23.	makes eye contact
24.	notes his/her and others' body language
25.	shows a stable personality in every place
26.	approaches people with a smiling facial expression
27.	provides and asks for feedback

-
28. tries to know the person she/he is talking to
 29. able to use a metaphorical language
 30. tries to match the language of others
 31. able to establish rapport
 32. gives importance to facial expressions
 33. looks at the person she/he is talking to
 34. talks cheerfully
 35. cares about physical details
 36. addresses people with their names
 37. uses language clearly and effectively
 38. varies his/her tone of voice
 39. thinks through what she/he wishes to say
 40. knows where to stop talking
 41. asks questions to show interest
 42. rephrases the person's words to emphasize
 43. uses different words when talking about the same thing
 44. pays attention to eye movements
 45. matches language and posture
 46. paces and leads
 47. maintains eye contact
 48. organizes and clarifies ideas in mind
 49. chooses the right moment and place
 50. stays focused on the topic
 51. uses facial expressions to reflect passion
 52. uses hand gestures carefully
 53. removes distractions
 54. being an effective listener
 55. speaks in a clear and concise way
 56. smiles and speaks in a calm manner
 57. able to generate empathy
 58. calibrates and observes people
 59. keeps a moderated tone of voice
 60. shows feelings by gestures
 61. makes eye contact
 62. uses body language effectively
 63. uses variable tone of voice
 64. updates his/her knowledge
 65. gives importance to how she/he looks
 66. well-organized on what to say
 67. provides a constructive feedback
 68. being and attentive listener
 69. asks appropriate questions
 70. establishes effective rapport

Total: 70

The most frequently cited construct was related to *having eye contact*. It was cited five times, that is to say, by all the teachers participated in the study. This shows that this characteristic is seen as the most important feature of effective communication. Furthermore, the other 2 most frequently cited constructs are *smiles and has a positive facial expression*, and *using body language effectively*; cited four times both at the beginning and at the end of the study. This indicates that these two characteristics are seen as the most important features following *having eye contact*.

Similarly, varying *tone of voice* is another construct which was cited four times. At the beginning of the study, the frequency of this construct was three. This may mean that more teachers began to see this construct as important at the end of the study. The construct related to *having empathy* was cited 3 times. At the end of the study, the frequency of this construct has increased, indicating that more teachers viewed this feature as important. That is, more teachers became aware of this feature. On the other hand, the construct *establishing rapport* was not cited at the beginning of the study; however, cited 3 times at the end of the study. Thus, the teachers became aware of this construct as an important characteristic of effective communication at the end of the study. This change may be due to the process they have been involved in.

Similarly, the construct *matching language* was only cited at the end of the study. The last two constructs mentioned were not cited at the beginning of the study. This may mean that, teachers began to see these constructs as important and added them to their grids at the end of the study. This indicates that teachers' constructs increased at the end of the study and they started to consider the other important characteristics of effective communication. This change in the teachers' choice is important since the meaning attached to these two constructs is in line with the content of the NLP-TD program upon which this study has been based.

The four constructs; *listening effectively*, *letting others speak*, *using a precise and clear language*, *thinking through what to say* were cited three times both at the beginning and the end of the study. Most teachers were sure about the importance of these constructs at both times, so the constructs remained their importance. Lastly, the three constructs; *staying focused*, *providing and asking for feedback*, *asking questions* were cited twice. This illustrates that each was considered as equally important both at the beginning and at the end of the study.

Table 7 The Number of Constructs Regarding Participant Teachers' Personal Theories of Effective Communication Skills at the Beginning and the End of the Study

	Number of Constructs at the Beginning of the Study	Number of Constructs at the End of the Study
Teacher 1	15	15
Teacher 2	13	16*
Teacher 3	12	15*
Teacher 4	11	14*
Teacher 5	9	10*
TOTAL	60	70

Note: * indicates participant teachers who added new constructs at the end of the study

As can be seen in Table 7, the first change of the content regarding the personal theories of the participant teachers is identified in the form of adding new constructs to their existing construct systems. As can be seen in the table, four out of five participant teachers added new constructs at the end of the study (see Table 7). At the beginning of the study, 5 teachers cited a total of 60 constructs to define characteristics of effective communication (see Table 6). At the end of the study, 5 teachers cited 70 constructs in total. This shows that the teachers' repertoire of personal constructs has expanded. The experiences gained during the study might have led the teachers to change their views and they may have felt a need for adding more personal constructs and this may be interpreted as a process of development, as suggested by Bannister and Franseila (1980).

In short, in identifying a general change between the beginning and the end of the study, it can be stated that there is an increase in the content of participant teachers' constructs at the end of the study. This can be interpreted as consistent with Kelly's personal construct theory. The teachers might have had opportunities for reordering, "reconstruction" (Sendan, 1995) and recontextualisation of their personal theories from the beginning to the end of the study. Another change worth mentioning is that, the content of the newly added constructs affected the rank-ordering of the five most important constructs. Some of the constructs added are also included in the high priority constructs of the participants at the end of the study as can be seen in Table 7. In order to demonstrate the change between the high priority constructs at the beginning and end of the study, the following can be discussed:

Table 8 High Priority Constructs of Participant Teachers Regarding their Personal Theories of Good Communication Skills

Participant Teacher	Constructs At the Beginning of the Study	Constructs At the End of the Study
Teacher 1	1. listens openly to other people (C1) 2. comforts the others (C9) ▼ 3. flexible with the situations (C5) 4. has a good sense of humour (C6) 5. able to empathize with others (C2)	1. listens openly to other people (C1) 2. able to empathize with others (C2) 3. has a good sense of humour (C6) 4. makes himself/herself and others happy (C15) 5. flexible with the situations (C5)
Teacher 2	1. tries to understand the feelings of others (C1) 2. able to control his/her feelings (C7) ▼ 3. shows a stable personality in every place (C10) ▼ 4. provides and asks for feedback (C12) ▼ 5. respects the person s/he is talking to (C6)	1. tries to understand the feelings of others (C1) 2. respects the person s/he is talking to (C6) 3. able to establish rapport (C16)* 4. notes his/her and others' body language (C9) 5. matches the language of others (C15)*
Teacher 3	1. thinks through what s/he wishes to say (C8) ▼ 2. varies his/her tone of voice (C7) 3. looks at the person s/he is talking to (C2) ▼ 4. uses language clearly and effectively (C6) 5. talks cheerfully (C3) ▼	1. matches language and posture (C14)* 2. varies his/her tone of voice (C7) 3. paces and leads (C15)* 4. uses language clearly and effectively (C6) 5. pays attention to eye movements (C13)*
Teacher 4	1. maintains eye contact (C1) 2. stays focused on the topic (C4) ▼ 3. being an effective listener (C8) 4. smiles and speaks in a calm manner (C10) ▼ 5. able to generate empathy (C11)	1. maintains eye contact (C1) 2. calibrates and observes people (C12)* 3. being an effective listener (C8) 4. keeps a moderated tone of voice (C13)* 5. able to generate empathy (C11)
Teacher 5	1. makes eye contact (C1) 2. uses variable tone of voice (C3) 3. uses body language effectively (C2) 4. being an attentive listener (C8) 5. updates his/her knowledge (C4) ▼	1. uses body language effectively (C2) 2. uses variable tone of voice (C3) 3. makes eye contact (C1) 4. being an attentive listener (C8) 5. establishes effective listener (C10)*

Note: * indicates a new construct added at the end of the study

--indicates his priority construct which remains the same at the beginning and end of the study

▼ indicates the construct which is replaced with another construct at the end of the study

The comparison of Teacher 1's high priority constructs at the beginning and at the end of the study reveals little change at all. Four of her most important constructs (C1, C2, C5, and C6) remained the same at both times. Only C9 was substituted by C15 at the end of the study (see Table 8).

The comparison of Teacher 2's high priority constructs at the beginning and at the end of the study reveals significant changes (see Table 8). Two of her constructs (C1, C6) stayed the same at the beginning and at the end of the study. Three of her prioritized constructs (C7, C10, C12) were changed with C9 and two new added constructs (C15, C16) at the end of the study.

Teacher 3's high priority constructs at the beginning and end of the study also reveals remarkable differences (see Table 8). Two of her constructs (C6, C7) among her most important constructs both at the beginning and end of the study remained the same. Three of her constructs (C2, C3, C8) were changed with three new added constructs (C13, C14, C15) at the end of the study.

The difference between Teacher 4's high priority constructs at the beginning and the end of the study is also important. Three of her constructs (C1, C8, C11) remained the same, Teacher 4 replaced two of her constructs (C4, C10) at the beginning of the study with two new added constructs (C12, C13) at the end of the study.

Lastly, Teacher 5's high priority constructs at the beginning and end of the study only reveals little difference (see Table 8). Only one construct (C4) was replaced with a new added construct (C10) at the end of the study. Teacher 5 kept four of his constructs (C1, C2, C3, C8) among his most important constructs both at the beginning and end of the study.

4.3 Overall View of the Structure of Personal Theories

The structure of the personal theories as identified through Exchange Grid Analysis indicates the nature of the changes in the structure of personal theories held by the participant teachers in this study.

Table 9 displays the number of personal constructs held by the each teacher both at the beginning and at the end of the study. Similarly, it presents the number of structural changes in the teachers' construction of self as teacher and ideal teacher between the beginning and the end of the study.

Table 9 Structural Changes in Personal Theories between the Beginning and the End of the Study

Teacher	Number of Constructs		Frequency of Constructs with Significant Structural Changes	Self As Teacher	Ideal Teacher
	A*	B*			
1	15	15	1	82.1	100.0
2	13	16	2	87.5	97.9
3	12	15	3	77.3	90.9
4	11	14	10	90.9	100.0
5	9	10	7	77.8	88.9

Note: A* at the beginning of the study
B* at the end of the study

The frequency of constructs that showed structural changes between the beginning and the end of the study are displayed in Table 9. It is seen that 23 out of 60 constructs obtained from the participant teachers show pattern of significant change at 80% cut-off point. This represents 38.3% of the teachers' personal theories. Moreover, Table 9 also illustrates that in this study all the teachers' personal constructs show patterns of structural change. However, it is also observed that the degree of structural change varies among those 5 teachers. For instance, while only 1 out of 15 constructs

changed in one teacher's grid (Teacher 1), 2 out of 13 constructs changed in another's (Teacher 2) grid. Similarly, Teacher 3's construct change is 3. The rest of the teachers are 10 (Teacher 4) and 7 (Teacher 5) (see Table 9).

As for the changes in the teachers' perception of self and ideal teacher, it is seen that 2 out of 5 teachers' construction of self changed at 80% cut-off point (see Table 9). The change in Teacher 1's perception of self and ideal teacher was very similar to 80% cut-off point. The changes in the construction of the remaining 2 teachers are not significant at 80% cut-off point. The changes in the teachers' construction of ideal teacher remain well below the significance level (80% cut-off point).

Table 10 Overall View of Changes in Teachers' Construction of Self and Ideal Self between the Beginning and the End of the Study

Teacher	Self as Teacher				Ideal Teacher			
	Highest Link		Second Link		Highest Link		Second Link	
	A*	B*	A*	B*	A*	B*	A*	B*
1	T1	T1	E3, T3	T2,T3	E1	E1	E2	E3, E2
2	E2	E3	-	E1, E2 Ideal	E3	E1,E2	E1	E3, Self
3	T2	E3	T1,E2, T3	E2,E1, Ideal	E1, E3	E1, E2	-	E3, Self
4	E2, Ideal	E2,E3,	E3	E1, Ideal	E2, Self	E1	E3	E2, E3
5	T1, I3	T1,T2, T3	T2	-	E1	E3	E2,E3	E1,E2

Note: A* = at the beginning of the study
B* = at the end of the study

Analysis of the element links in each participant teachers' FOCUSED grids both at the beginning and at the end of the study provides information regarding the teachers' construction of self and ideal self as teacher (the teacher they would like to be in the future). It also displays whether there is any difference between the teachers' construction of these elements at the beginning and at the end of the study. Table 10 indicates the element links of the participant teachers' self and ideal self as teachers established at the beginning and at the end of the study.

Table 10 reveals that at the beginning of the study, two out of five teachers construed themselves to be very close to the teachers they classified as effective (Teachers 2 & 4). Out of these teachers, Teacher 4 also saw association between ideal as teacher and self as teacher. That is, at the beginning of the study, these two teachers perceived themselves as close to teachers they classified as effective which indicates that they might see an association between themselves and the characteristics of effective teachers. On the other hand, two of the teachers (Teachers 1 & 3) viewed themselves as similar to teachers that fall into typical category. It can also be seen in Table 10 that one teacher viewed self as teacher being the combination of typical and ineffective teachers (Teacher 5). This might be interpreted as openness to development and change.

As shown in Table 10, at the end of the study, there are changes in three teachers' (Teachers 3, 4, 5) perception of self. That is, while at the beginning of the study, Teacher 3 viewed self as teacher close to typical teachers, at the end, she related self as teacher to E3. This shows that, Teacher 3 construes self as teacher as having the features of effective teachers which indicates she does not have the features of typical teachers. This change may be due to the process Teacher 3 has been involved in.

Similarly, at the beginning of the study, while Teacher 5 perceived self as teacher similar to typical and ineffective teachers, at the end, he placed self as teacher close to T1, T2, and T3. It may be inferred that Teacher 5 does not have the features of ineffective teachers anymore which indicates development. Moreover, at the beginning of the study, Teacher 4 viewed self as teacher as the combination of E2 and Ideal, however, at the end, she placed self as teacher similar to effective teachers. That is,

Teacher 4 construes self as teacher as having the features of effective teachers but not the features of ideal teacher yet.

As is shown in Table 10, at the end of the study, Teacher 1's and Teacher 2's perception of self as teacher seem to reflect no changes. Teacher 1 perceived of self as teacher similar to teachers that fall in the typical category and Teacher 2 perceived self as teacher close to teachers that fall in the effective teachers. However, a detailed analysis of element links established reveal that Teacher 1 and Teacher 2 might also be regarded as having gone through a thinking (evaluation) process in term of the qualities held by self as teacher.

Regarding the participant teachers' construction of ideal self as teacher in relation to the way they classified the teachers as effective, typical, and ineffective, as it is seen in Table 10, at the beginning of the study, four out of five teachers construed ideal self as teacher very close to effective teachers. Ideal self was perceived as similar to effective teachers as well as self as teacher by one of the teachers (Teacher 4) at the beginning of the study.

At the end of the study, four out of five teachers' perception of ideal self as teacher remained the same, while one teacher (Teacher 4), who construed ideal self as teacher very close to self as teacher and E2, changed her views of ideal self as teacher to E1. It is noticeable that at the end of the study all the teachers viewed ideal self similar to the teachers that fall into effective teacher category. So, it may be suggested that, regarding the above mentioned finding, teachers' self perceptions of current self as teacher are more open to change than the perceptions of ideal self as teacher. The structural changes indicated by the data suggest in the participant teachers' construction of self as teacher is consistent with Sendan's (1995) study about student teachers' thinking processes. It is also compatible with and Yumru's (2000) findings regarding changes in the teachers' construction of ideal self as teacher.

4.4 Evaluation of the NLP Teacher Development Program

In this section, the analysis of the responses given to the Course Evaluation Questionnaire (CEQ) and the Reflection Sheets in relation to the evaluation of the NLP-TD program are presented. The analyses in regards to the evaluation of the NLP-TD program are summarized under the following subheadings:

- Reflections during the NLP-TD program
- Course Evaluation Questionnaire

4.4.1 Reflections during the NLP-TD Program

During the NLP-TD program, participant teachers' opinions were elicited in written forms about the program input. After every four sessions (after two weeks' time), participant teachers were provided with an outline of the NLP-TD program input of four sessions and were asked to reflect on their experience of the program by considering the following instructions adapted from the study of Sürmeli (2004):

1. Highlight any point(s) (if any) in the NLP-TD sessions that you have personally found significant or important, either in personal or professional sense and give your reasons.
2. How might that experience have helped you gain new insights and perspectives in your personal and professional life?
3. Have you already implemented some experiences related to NLP in your personal or professional life? If not, do you plan to do in future?

(Sürmeli, 2004, p. 146-147)

1) Reflections on Sessions 1, 2, 3 and 4

Regarding any points participant teachers found significant or important in the first four sessions, they have indicated the following points while indicating their reasons:

- *It expands the awareness that I “should” fit in smoothly to the environment and also it rings the bell to be conscious about where I am going in life and to*

recognize the importance of the small steps I take during my daily routine in order to reach my prime goal in my communications.

- *Knowing our outcomes is important. Because knowing what we want helps us to get it. In addition, being flexible is an important step in realizing our objectives.*
- *VAKOG. I have started to have a better awareness of myself and other people. Also, I have started to understand and therefore communicate with people easily by using this system of VAKOG.*
- *I see that it is important to be aware of our own behaviours and our unconscious world. When we want to share something, we should be able to mean what we really mean and be understood right.*
- *Environment, values and beliefs, behaviours... all of these are important in personal sense. What I have found significant is that all these things affect one's life interconnectedly.*
- *I think all the points we have dealt with were significant and important.*

In relation to participant teachers' reflections on how the experiences in the NLP-TD program might have helped them gain new insights and perspectives, they highlighted the following:

- *In my personal life, it helps me to ask this question to myself: "What is my main goal in life? How can I live my life by communicating more effectively?" By this way, I have become more decisive and conscious about more daily chores and conversations. In my professional life, it helps me to enlarge my vision of teaching via trying to understand the students better or via finding solutions to the problems not producing more excuses. In other words, I have become a person who takes the full responsibility of what is happening in my life and my failures, rather than blaming the others and the environment.*
- *I have learnt that everybody can experience and represent the world in different ways. From now on, I will try to communicate with people by concerning VAKOG.*
- *Living in an environment full of different people who have different views and reflections; this experience may help me to feel comfortable and improve my communication skills. I can also use these skills while I am with my family, friends or students.*

- *You learn what is important for you. So, you act what is good for you. You can change the things which are bad for you. You can look from outside window and change your communications and hence your life in a good, happy way.*
- *All these experiences might help us not only in teaching. They might help us in all aspects of life too. By gaining these new insights and perspectives we can understand and feel the other people easily.*

In regards to whether participant teachers had already implemented some experience related to NLP, or whether they planned to do so, they indicated the following:

- *In my personal and professional life it has helped me to accept the problematic situations and to act accordingly with dignity. Before I react to a problem I have learned to think in other aspects.*
- *I have not implemented yet, but I have some outcomes and I plan to do them in the future and I know that being flexible is very important when realizing an outcome.*
- *The experience of knowledge, feeling and unknown factors around us gained me awareness and I can change things in the way I want or good for me and my future, my health, my career and my social environment.*
- *Not yet. It takes time. I plan to do some changes in my life in the future.*
- *Yes, I did. I tried to discover some students' representational systems by asking some questions.*

2) Reflection on Sessions 5, 6, 7 and 8

Regarding any points participant teachers found significant or important in the sessions 5, 6, 7, and 8 they have indicated the following points while indicating their reasons:

- *It is important to find out the acquisition systems of the people whom we address to or talk to for receiving a better level of communication or for finding out more effective ways of teaching English. Using suitable predicates, body language or calibration would improve the quality of our communication and lead us to live our lives better.*
- *What tapped my attention mostly during the sessions was developing our sensory skills. In that way, we can understand easily what other people think and how they respond to communications. I have become aware that body language and voice tonality, that's to say, the non-verbal aspect of communication is more important than words in communication. Observing people in terms of breathing, voice tones and eye movements as well enables us to understand what people think and mean in fact in their communications.*
- *Most probably I have known some of these before, but observing a person when talking is really helpful to understand what she or he means, so it makes me one step ahead when having a conversation with a person I meet first.)*
- *Especially eye movements and mimics are important in terms of showing our feelings. You can know a person's feelings in reality.*
- *In my point of view, representational system is a key for teaching and knowing what the students' needs are. It shows the teachers what to give and how to give as well. Also, all these about NLP are important for us both in personal and professional sense.*

In relation to participant teachers' reflections on how the experiences in the NLP-TD program might have helped them gain new insights and perspectives, they highlighted the following:

- *It has made me become aware that I am the captain of this ship and if I wanted or let, the people and the events could affect me. It has given me the deeper understanding of the others' ideas and it has helped me to think in a more positive way.*
- *If we know how people perceive the world and remember the things again, we can understand them better and we can speak their language. Besides, we can communicate better with people if we use body language effectively.*
- *When I need to know someone better, I can observe both his physical movements, mimics, voice and words. At the same time if I want to be understood by another person in the way I mean, I can use verbal and non-verbal activities.*

- *Eye movements, body language, gestures and mimics, the words are very important in terms of knowing or understanding a person. For me, I have gained new insights in my personal life. I see when I am happy or not and I can criticise the moments which I live.*
- *With all these knowledge, I can understand what someone is thinking, how he feels at the moment, honest or dishonest and etc.*

In regards to whether participant teachers had already implemented some experience related to NLP, or whether they planned to do so, they indicated the following:

- *I have implemented the sandwich style of talking in my personal life and I am very satisfied with the result! Also, in the future I am planning to find out more creative ways of teaching English by using the different representational systems in the class.*
- *I have not implemented all the things we covered yet, but I plan to do them all. Now I am trying to use my body language more effectively in the class. Also, I am trying to understand which representational systems people use and communicate with them in that way.*
- *I have noticed that if I lower my voice when talking to someone angry, she is getting calm. That means of course I will be using these techniques more in the future. Because I have already experienced some and it has been very helpful.*
- *Especially, eye movements are interesting. I am examining people but not in an obsession way. Discovering what the eyes are telling is a great experience.*
- *Yes, I did. I observed the eye movements of the people in different situations.*

3) Reflections on Sessions 9, 10, 11 and 12

Regarding any points participant teachers found significant or important in the sessions 9, 10, 11, and 12 they have indicated the following points while indicating their reasons:

- *Rapport is one of the most important things in NLP. It is a must for a successful communication. Also, we know that matching predicates, mirroring, establishing empathy and listening effectively help us to have an effective communication with people. Moreover, the language we use affects our communication in a bad or good way. It can prevent the understanding of both sides in conversation. In that case, the Meta Model helps us to improve communication with others by clarifying what has been said. Lastly, seeing things from different angles can help us to have better relationships with other people.*
- *It is important to understand self feelings and other people's feelings. This makes relations between people easier. It can also help to solve problems. Knowing or being aware of how we are understood is an important process that we should experience.*
- *Body match and the tone of voice is of vital importance to me. If the voice is too loud or if the speaker talks very fast and moves his/her body rapidly, it disturbs me.*
- *In order to make the communication more effective, we should consider ourselves in others' shoes. By looking the matter in others' position might change our point of view.*

In relation to participant teachers' reflections on how the experiences in the NLP-TD program might have helped them gain new insights and perspectives, they highlighted the following:

- *I know that rapport is very important to have a successful communication with people. Because we have better relationships with people with whom we have similarities rather than differences. I have gained insight that body and voice match, empathy are the ways to show or to say that "I am very close to you", "I am listening to you" or "the things you say are very important to me". Moreover, the language that we use is very important in communication. From now on, I will try to use more precise language in my conversations. Also, we can help others to express themselves more clearly by the help of the precision model.*
- *We generally do not notice how other people see and understand us. If we could look from another angle to ourselves, we would behave differently. The people around us may behave differently. But we can empathize with them, match their acts or voice tone than we can lead them. The most important step we should take in a good communication is being clear, using specific words or not using negative ones and then trying to catch the harmony. Or minimizing the differences.*

- *I can use my voice and movements under control. So, it influences the listeners. If you know how to build rapport with each other, you can be successful in a communication. It affects everything in your personal or professional life.*
- *I will not make instant decisions about others.*

In regards to whether participant teachers had already implemented some experience related to NLP, or whether they planned to do so, they indicated the following:

- *I try to use all the things that I have learnt in NLP in my life.*
- *After learning some significant things, I think I am using these techniques with my students who have difficulty in having a good relationship. The wrong behaviours can be eliminated by matching, pacing and leading them. Also, I am trying to predict about the person I am relating from his words and this helps us to know each other better.*
- *I have implemented some experiences. Now I am observing body movements of people using body and voice match, developing empathy and seeing things from different angles...*
- *I tried to be in “rapport” with the people during the conversations. I observed that it really works!*

4) Reflections on Sessions 13, 14, 15 and 16

Regarding any points participant teachers found significant or important in the last four sessions, they have indicated the following points while indicating their reasons:

- *It has improved the power of my criticism via using the sandwich feedback. It has become clearer to me to read the signals that a person sends me during the communication and by this way the system of communication gets much easier.*
- *I can say that all the techniques given are important and helpful. Also, we might have been using the wrong behaviour or words unknowingly. So, I have learned about how I am understood by others.*

- *In communication, what we say is not always very important because communication is a complex system. The way we sit, the things we do unconsciously, our mimics and gestures are the small pieces of the fuller picture of communication. Likewise, using a metaphorical language helps us to create a colourful and effective communication.*
- *Communication is tightly connected to body language and unconscious mind. I find body language more important because one cannot hide his or her feelings. Being able to read and note body language of our own and others' are essential. Similarly using verbs in a conversation is important because you affect the listeners.*
- *Instead of a direct criticism, using a sandwich feedback is a great idea and works as well. By this way you make the words want to say more worthy. And observing people during a conversation may help us evaluate what has been said was true or false.*

In relation to participant teachers' reflections on how the experiences in the NLP-TD program might have helped them gain new insights and perspectives, they highlighted the following:

- *It has helped me to give importance to the story telling more and add some vivid details to the conversation to be more effective and funny.*
- *Now, I am trying to use suitable words for different situations. I am more careful about what is said and what must be said. Understanding other people makes me more confident about knowing them and communicating with them better.*
- *It is really interesting to learn that "do it" is more effective rather than "don't do it". From now on, if I want someone to do something I will try to use a positive language. Using a metaphorical language helps us to create an interesting atmosphere in class or other places. I know that people like to listening different stories.*
- *From the beginning of NLP program, we have learnt that it is very important how we behave, sit, and listen as well as the words we use. Everything we do affects understanding of the people we communicate with. As I try to do, I will go on trying to understand whether I am understood or not by taking into consideration the response I get.*
- *All parts of our body movements and the words, verbs we use are all connected to each other. If we want to communicate perfectly, we should use all of these things correct.*

- *I, myself will be more careful during a conversation in many ways. For example, I will support what I said with my posture, with my gestures, etc. or at least I will try to be more conscious when I tell something.*

In regards to whether participant teachers had already implemented some experience related to NLP, or whether they planned to do so, they indicated the following:

- *Deliberately not. But maybe I have implemented unconsciously. And I plan to do so in the future.*
- *Yes, I have. For example I began to use a positive language when talking to people. I am trying to use all the things I have learnt in NLP-TD program.*
- *I have been using and will certainly keep on using storytelling, accentuating the positive, sandwich feedback and non-verbal communicating in my classes and in my dialogues with people around me. It has been really helpful!*
- *Not yet. Yes, I plan to do so in the future.*
- *Yes, I did. I tried to see people in a mirror. I observe them and compare what they say and what they do with mine.*

4.4.2 Course Evaluation Questionnaire

In this section, the analyses of the responses given to the Course Evaluation Questionnaire (CEQ) are presented. The questions in the CEQ were utilised as a framework for the analysis of the information obtained. Besides, the opinions expressed by the participant teachers are also presented to exemplify and support the conclusions drawn. Since the CEQ consists of three components (A, B, & C) – as outlined in Section 3.5.2.2 – the analysis comprises three separate sections (Section A, B, and C).

4.4.2.1 Course Evaluation Questionnaire: Section A

The aim of this section was to elicit the participant teachers' opinions about the atmosphere they inhaled, the procedures they followed, the materials they were

provided with, in addition to the activities that they were engaged in during the NLP-TD program. To achieve this aim, the teachers were asked to rate their agreement on the usefulness of the employed activities, materials, atmosphere, and procedures using a 5-point scale. They were also asked to comment on the reasons for their ratings.

1) The Atmosphere Created During the Session

The participant teachers agreed that the atmosphere during the sessions were friendly, warm, and non-threatening in order to feel themselves comfortable while exchanging and sharing their experiences. This is expressed in the following quotations taken from the CEQ:

- *There was a positive atmosphere during the sessions. We learnt and shared things in a friendly atmosphere.*
- *The program was held in a non-threatening atmosphere. So I felt comfortable when talking to colleagues my poor points in my communications*
- The participant teachers liked the positive attitude of the program provider (researcher) as well.
- *As our moderator is a very efficient, warm and friendly person, that affected us all and it helped us to convey this programme in a very comfortable atmosphere.*
- The participant teachers also emphasized the advantage of knowing each other in the following views:
- *The participants' being colleagues is the other reason to catch the harmony during the sessions.*
- *It was an opportunity for us where we could share, cooperate, and collaborate with our colleagues that we know in a friendly and comfortable atmosphere.*
- *There was a warm atmosphere since we were colleagues. So, it was easy for us to analyze the behaviours. It was useful in observing, evaluating and developing ourselves as an EFL teacher.*

These opinions arrived at by the teachers support the argument that in teacher development programs it may be beneficial to encourage teachers from the same workplace to participate together.

2) The Procedures Followed During the Sessions

The second component to be evaluated by the participant teachers covered the procedures followed during the sessions. In relation to this area,

- Participant teachers mentioned that the flow of the procedures were planned and applied well.
 - *The procedure was step by step. It was all clear to understand and within its time everything was properly planned and presented.*
- Participant teachers indicated that the transitions were organized in a clear and sequenced way.
 - *I think the procedures employed were very useful. It was well organized. The subjects were given in a sequenced way.*
- Participant teachers described the logical order of the procedures employed as step leading. In relation to this, the following view was pointed out:
 - *The procedures were very clear and progressed to the main aim. They were very helpful for our development and each procedure formed a step leading to the upper one.*

3) The Materials Used During the Sessions

The third component of the NLP-TD program was related to the materials used during the sessions. All the teachers rated 5 very useful on the scale. Within this category, participant teachers highlighted the following:

- Participant teachers found the materials very colourful, attractive, and varied.
- Participant teachers stated that the materials were prepared in accordance with the subject discussed. In this way, they added that they could easily get visual feedback from the materials.
- Stories, which were related to the subjects, were also found to be enjoyable to read and reflect upon.

- Participant teachers liked to be given handy hand outs. They were pleased to keep their materials in a file.
- The diversity of the materials was found to be useful in that they illustrated and reminded the things covered during the sessions.
- The use of computer was also welcomed to assist the sessions.
- The teachers liked the idea of being given situations by cards, which they stated tapped their curiosity and interest.

4) The Activities Employed During the Sessions

All the teachers indicated that they found the activities offered very useful (5 very useful). The analysis of the teacher comments expressed in the CEQ supported the teachers' ratings as well. Regarding their opinions on the effectiveness of the activities, they came up with the following points:

- All the teachers pointed out that they found the activities useful since they had been fully engaged in the process. Referring to this experiential process, one teacher makes the following remark:
 - *We joined the activities, shared opinions and feelings. It wasn't a mere lecture but a process we were in. Therefore, I find the activities very effective.*
- The teachers pointed out that the activities were fun and interactive. Regarding their justification of the ratings, the teachers noted the following:
 - *The activities like dancing, stories, dialogues, examples, games were very enjoyable. The activities were nice experiences for us. We have never gotten bored.*
 - *The activities were mostly interactive and exciting. It helped us to discover our pros and cons and it was like a torch that enlightens our self-criticism.*
- Participant teachers also stated that they did not understand how the time passed.
- Engagement in different activities by the self and other teachers was also found to be beneficial in terms of memorability of the content in mind. The following comments were taken from a teacher's explanation as stated in the CEQ:

- *Thanks to the range of the activities, we had a turn to experience himself/herself the activities and to observe other teachers. Hence, the activities help me remember the things covered well now.*
- *The variety of the activities as individual, pair, and group work made the sessions more interesting, and more recollective in terms of their application.*

4.4.2.2 Course Evaluation Questionnaire: Section B

This section aims to present the participant teachers' opinions about the strengths and weaknesses of the NLP-TD program. With this aim in mind, the participant teachers were asked to comment on these domains.

1) The Strengths of the NLP-TD Program

The participant teachers' identification of the strengths of the program covered these points:

- Participant teachers highlighted the program's being interactive as one of its strongest side.
- Participant teachers liked the program input since they refreshed their emotional state.
- Participant teachers especially liked to be given opportunity for experiencing each activity actively.
- General revision of the previous sessions was also found to be useful by the participants.
- The participant teachers mentioned that the motivating and friendly atmosphere facilitated their experience of the program.
- Participant teachers indicated that the program helped them know each other and build up a collaborative staff as well.

2) The Weaknesses of the NLP-TD Program

The participant teachers' identification of the weaknesses of the program covered only a few points:

- Some participant teachers indicated that the duration of the program could be extended.
- One teacher stated that the program input would be taken to the classroom level and run the applications in the class.

4.4.2.3 Course Evaluation Questionnaire: Section C

In this section of CEQ, participant teachers were asked two open-ended questions to evaluate the NLP-TD program as a whole for the future implications of the NLP teacher development program. This section presents the views of the participant teachers in relation to the following questions;

1. Would you recommend other EFL teachers to attend the NLP-TD program?
2. Do you think the NLP-TD program could be an alternative for enhancing EFL teachers' communication skills?

All five participant teachers stated that they would strongly recommend the NLP-TD program to their colleagues. They indicated that everyone could find something in NLP about himself/herself and that especially EFL teachers could benefit from this program. Regarding the second question, participant teachers agreed on its being an alternative for enhancing their communication skills. The teachers stated that their justification relied on the reason that language required communication and that NLP comprised different aspects of communication.

CHAPTER 5

CONCLUSION

5.0 Introduction

This chapter deals with the conclusion of the present study. First, the starting point for the study is presented and a summary of the study is given. Next, according to regarding research questions findings of the study are given. Finally, implications and suggestions for further research are discussed.

5.1 Summary of the Study

This study emerged from a need to develop a new teacher development program to support EFL teachers' personal development. This study aimed to design a new teacher development program to enhance EFL teachers' communication skills. In this sense, Neuro Linguistic Programming (NLP) seemed to be promising to enable teachers to develop a system to support their strategies of communication. Thus, the aim of this study was to determine the personal theories of EFL teachers on effective communication and to determine the impact of NLP teacher development program (NLP-TD) designed for the purpose of the study. In short, EFL teachers' (in-service) personal theories of effective communication and their development and change were dealt thoroughly.

This study aimed to achieve three goals simultaneously:

- 1) To explore in depth the nature of secondary school EFL teachers' perceptions/personal theories of good communication strategies.
- 2) To investigate the impact of NLP-TD program on the development of EFL teachers' communication skills.
- 3) Based on the participant teachers' reflections, to suggest a framework for an alternative teacher development program based on NLP.

In order to achieve these aims, and find the answers to the research questions, first of all, related research of studies in teacher development, personal theories, constructivism, social constructivism and NLP have been surveyed. Based on those areas in the literature, a teacher development program based on NLP has been designed independently by the researcher. In light of the relevant information gained through the review of literature, the program input was either gathered from different sources or prepared by the researcher herself.

The repertory grid, follow-up interviews and reflection sheets data obtained from the participant teachers suggest that both the content and the structure of five EFL teachers' personal theories regarding good communication strategies showed significant changes. However, it should be emphasized that the changes were different for every teacher. The teachers went through a development (or change) process in their own ways. Hence, the findings of this study are in line with Kelly's Personal Construct Theory (1955). Because Kelly's theory provides the repertory grid tool "for investigating the personal and unique process of development of individual teachers" (Ben-Peretz, 1984, p. 104).

This study used Kelly's repertory grid as a tool for exploring the nature of and changes in the participant teachers' personal theories (Sendan, 1995, Yumru, 2000, Sürmeli, 2004). With the use of the repertory grid technique, through FOCUS analysis (see Section 3.6.1.1), teachers' personal theories of good communication strategies were uncovered both at the beginning and the end of the study. Through EXCHANGE analysis (see Section 3.6.1.2), the changes of participant teachers' personal theories

after the implementation of the program were aimed to be reflected. Accordingly, the assessment of the impact of the NLP-TD program can be interpreted in terms of change.

In order to see the effects of the NLP-TD program, the changes in the structure and content of participant teachers' personal theories regarding good communication strategies have been observed both at the beginning and the end of the study. The participant teachers' nature of construction of self as teacher and ideal teacher was also searched into. Finally, participant teachers' reflections regarding their experience of the NLP-TD program were obtained to illuminate the teacher educators for future implementation of this program.

Hence, the major research questions that guided this study were as follows:

- 1) What is the nature of the structure and content of EFL teachers' construct systems regarding good communication strategies at the beginning and the end of the study?
- 2) What is the nature of participant teachers' constructions of "self as teacher" and "ideal teacher" and whether there are any discrepancies between the two?
- 3) What are the changes (if any) in the content and in the structure of EFL teachers' personal theories regarding good communication strategies due to the NLP-TD program?
- 4) What are the participant teachers' reflections regarding their experience of the new NLP-TD program?
- 5) What are the participant teachers' views and suggestions regarding any modifications of the new NLP-TD program?

5.2 Findings and Implications

This section presents the findings of the study obtained by means of repertory grid data, follow-up interviews, teachers' reflection sheets, and questionnaires in the light of the research questions.

Research Question 1: What is the nature of the structure and content of EFL teachers' construct systems regarding good communication strategies at the beginning and the end of the study?

The repertory grid data provided by the FOCUS program revealed an effective way for this study to access the constructs of the participant teachers. The analysis of the repertory grid data obtained from five EFL teachers generated a total of 60 constructs at the beginning and a total of 70 constructs at the end of the study.

Constructs emerged from the first and the second grid administration show that teachers have their own personal theories. Teachers, naturally having different experiences, have different knowledge, skills and beliefs. However, some constructs were elicited many times by the participant teachers (see Table 4.1). The most frequently cited constructs from the most to the least are as follows: *having eye contact*, *smiling and having a positive facial expression*, *using body language effectively*, *varying tone of voice*, and *having empathy*. The construct *establishing rapport* was also cited frequently at the end of the study. Hence, these six constructs were considered to be good communication strategies by the participant teachers.

Drawing on the above conclusions, it can be suggested that at the outset of a teacher development program the focus should be on uncovering teachers' personal theories.

Research Question 2: What is the nature of participant teachers' constructions of "self as teacher" and "ideal teacher" and whether there are any discrepancies between the two?

In relation to participant teachers' construction of ideal teacher, the findings do not reveal significant change. The changes in the teachers' construction of ideal teacher remain well below the significance level (80% cut-off point). It can be inferred that participant teachers construe the teacher they would like to be in the future as stable role models both at the beginning and the end of the study. However, some changes are observed regarding their perception of self as teacher at the end of the study.

As for the changes in the teachers' perception of self as teacher, it is seen that 2 out of 5 teachers' construction of self (Teacher 3 and Teacher 5) changed at 80% cut-off point (see Table 4.4). One of the participant teachers' change in her perception of self as teacher (Teacher 1) was very close to the 80% cut-off point (82.1%). The changes in the construction of the remaining 2 teachers (Teacher 2 & Teacher 4) are above the 80% cut-off point.

The changes in the teachers' perception of themselves at the end of the study revealed that teachers needed development/change in the relevant constructs. For example, Teacher 1 believes she needs further development in all of her constructs except C7 (see Figure 4.2). Teacher 2 indicates a need for development in five of her constructs (C1, C5, C7, C9, and C16) (see Figure 4.5). Referring to Teacher 3, it is seen that she indicates she has to develop herself in eight of her constructs (C1, C6, C8, C10, C11, C13, C14, and C15) (see Figure 4.8). As for Teacher 4, it is observed that she needs further development in five of her constructs (C3, C2, C4, C6, and C13) (see Figure 4.11). Finally, Teacher 5 (see Figure 4.14) believes he needs to show progress in all of his constructs to become identical with his ideal teacher.

To sum up, all of the participant teachers believe that they still need to develop themselves in some areas. This finding is similar to the conclusion drawn from the NLP-TD study conducted by Sürmeli (2004).

Research Question 3: What are the changes (if any) in the content and in the structure of EFL teachers' personal theories regarding good communication strategies due to the NLP-TD program?

The repertory grid data findings obtained from five EFL teachers from a secondary school in Adana/Turkey suggest that the content analysis of the participant teachers' personal theories showed both in content and structure, which is consistent with prior research suggesting change in terms of teachers' personal theories both in content and structure (Sendan, 1995, Yumru, 2000, Yaman, 2004, Sürmeli, 2004).

As for the change in the content of participant teachers' personal theories, the analysis of the repertory grid data obtained from five EFL teachers generated a total of 60 constructs at the beginning and a total of 70 constructs at the end of the study. The participant teachers added in total 10 constructs to their repertoires at the end of the NLP-TD program. These additional constructs were mostly connected to the NLP-TD program, which suggest that the program input has an impact on teachers' personal theories regarding good communication strategies. The patterns of changes in the content of personal theories of the participant teachers suggest that from the beginning to the end of the NLP teacher development program, there has been an expansion in the repertoire of the participant teachers' constructs due to the process they have been involved in.

Regarding the changes in the structure of personal theories, the data obtained from the repertory grid suggest that 23 out of 60 constructs elicited at the beginning of the study showed significant structural changes, observing variations in number. For instance, while only 1 out of 15 constructs changed in one teacher's grid (Teacher 1, see Table 4.4), 10 out of 11 constructs changed in another's grid (Teacher 2, see Table 4.4). These structural changes were in the form of restructuring and clarification of existing construct system. The possible causes of these changes might be teachers' clarification of construct associations and their new constructs introduced into their existing construct system throughout the NLP-TD program, similar to the findings of the study done by Sendan (1995).

Research Question 4: What are the participant teachers' reflections regarding their experience of the new NLP-TD program?

The purpose of this research question was to find out whether the designed NLP-TD program was perceived to be effective and useful for the development of EFL teachers' communication skills. The findings of this study reveal that positive responses were given to the NLP techniques used during the NLP-TD program.

Another noteworthy conclusion was that all the participant teachers indicated in their reflection sheets that they had already implemented most of the input of NLP-TD

program and indicated that they planned to so in the future. Almost every NLP technique in the NLP-TD program received positive response.

Drawing on these findings, it may be stated that the NLP-TD program was effective in general to help participant teachers to gain awareness of themselves and others and so to enhance their communication skills while in particular to help them to

- establish and maintain effective rapport
- take responsibility in any interaction
- see things from different perspectives and empathise with others
- recognize and handle with own and others' verbal and non-verbal language
- build quality relationships with other people (students, colleagues, family members, administration...).

Research Question 5: What are the participant teachers' views and suggestions regarding any modifications of the new NLP-TD program?

Regarding the participant teachers' views of the strengths and weaknesses of the NLP-TD program, positive responses were more than the negative ones. Teachers indicated their contentment within participating in such a program at the end of the study. Only a few comments were cited for the modification of the teacher development program in terms of future implications of the study. Firstly, some of the teachers suggested that the program could be conducted over a longer period of time. Secondly, one of the participant teachers indicated that the program input could be applicable to the classroom.

Drawing on these and the above mentioned findings, this study suggests that NLP techniques can enhance EFL teachers' communication skills.

5.3 General Implications of the Study

- Data elicited from the repertory grids revealed that participant teachers construed their personal theories of effective communication in the way differed from each other. There seems to be a need “uncover teachers’ implicit theories in order to make them available for conscious review” (Roberts, 1998, p. 26). In relation to making the personal theories explicit Clark (1992) states that “personal theories that remain unconscious and implicit will not grow or become elaborated, or evolve” (p. 79). In line with the underlying intention of the present study, providers of teacher development programs have to uncover participant teachers’ personal theories in order to develop them by “getting them on the table where they can be seen” (Clark, 1992, p. 79).
- The input of the NLP-TD program was practical more than theoretical. Hence, participant teachers had a chance to experience each activity either themselves or with a partner. Accordingly, participant teachers had their own subjective experience. In the present study, constructivism was used as a theoretical framework in that it explains “why people learn different things in different ways even when the program input is the same (William & Burden, 1997). In the NLP-TD program, participant teachers showed changes in their own ways. Future providers of NLP-TD programs may overemphasize practical aspect of NLP rather than theoretical.
- A criticism of NLP from the scientific point of view was the measurement dilemma (Sürmeli, 2004, p. 173). By means of the repertory grid technique, changes in the participant teachers’ personal theories were aimed to be reflected at the end of the NLP-TD program. With the use of repertory grid data, the changes were assessed both in terms of content and structure. The effectiveness of the NLP-TD program can be inferred in terms of change. While preparing teacher development programs, providers who aim to change may use the implications of this study in considering measurement.

- The provider in this study had experience in NLP herself which assisted to create a comfortable atmosphere during the teacher development program. Studying NLP can offer more positive results when the provider is certificated for “the design and the presentation of the course” (O’Connor & Seymour, 1994).

5.4 Suggestions for Further Study

In this study, changes in the behaviour of the participants were not explored. So, the findings of the present study were limited to the conceptual changes. In order to see the direct impact of teacher development programs and changes in the behaviour of the participants, further research could deal with the behavioural changes as well.

This study was only conducted with teachers. In order to see the impact of such a teacher development program upon the students, another study might be done as regards whether teacher change is compatible with students’ thinking.

This study’s input was not directly associated with the classroom level. Another suggestion is related to the fact that the NLP-TD program did not focus on teaching English.

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APPENDIX 1

NLP Certificate

IANLP
International Association for Neuro-Linguistic Programming

hereby certifies that:

Asuman TOPÇU

has consistently demonstrated competence and skill in verbal and non-verbal communication using the art and techniques of Neuro-Linguistic Programming. Reaching the Practitioner level the holder of this certificate has demonstrated ability at detection, utilization and alteration of the structure of subjective experience for oneself and for others through specific Neuro-Linguistic Programming techniques.
The holder has demonstrated ethical standards of IANLP and respect for the ecology of change at a personal level
in 130 hours training course (April, 03, 2009 - April, 13, 2009).

The holder of this certificate has the permission to use the title

NLP - Practitioner IANLP

Istanbul
April, 13, 2009
NLP Grup

Certificate: NLP-P1-IST nr.: 0001

Iuliana APETRI
Fellow Member Trainer IANLP

MEETS THE INTERNATIONAL ASSOCIATION FOR NLP TRAINING GUIDELINES
www.ianlp.org

APPENDIX 2

Official Permission from the District National Education Directorate

T.C.
SARIÇAM KAYMAKAMLIĞI
İlçe Milli Eğitim Müdürlüğü

29 ARA 2009

Sayı : B.08.4.MEM.4.01.19.01.232.1/
Konu : Asuman ÖKÇÜN

09700

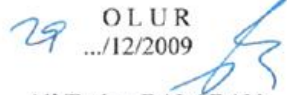
.../12/2009

KAYMAKAMLIK MAKAMINA
SARIÇAM

İlçemiz İncirlik Lisesinde geçici olarak görev yapan İngilizce Öğretmeni Asuman ÖKÇÜN, Gazi Üniversitesi Eğitim Bilimlerinde Yüksek Lisans yapmaktadır. Adı geçen şahsın Tez aşamasında olduğu, "İngilizce öğretmenlerinin iletişim becerilerini geliştirmek için **Neuro-linguistic programming** (NLP -Mükemmellik Psikolojisi Programı-Kişisel Gelişim Programı) bir **Öğretmen Gelişim Programı** olarak uygulanabilir mi" sorusunu da tez konusu seçtiği ve Tezini İlçemiz Okullarında görev yapan İngilizce Öğretmenleri ile beraber eğitim-öğretimi aksatmadan tamamlamak istediğine dair dilekçesi Müdürlüğümüzce uygun görülmektedir.

Makamlarınızca da uygun görüldüğü takdirde olurlarınıza arz ederim


Erdal DENCE
İlçe Milli Eğitim Müdürü


OLUR
.../12/2009
Ali Taşkın BALABAN
Kaymakam



Sarıçam İlçe Milli Eğitim Müdürlüğü
Telefon : 0.322.341.70.25
Faks : 0.322.341.70.26
e-posta : saricam01153@hotmail.com
Elektronik Ağ : saricam.meb.gov.tr



APPENDIX 3

Reading Passage for Session 9

SENSIBLE SAM'S PROBLEM PAGE

Dear Sensible Sam

Recently all my friends have had their noses pierced. Now they're talking about having their belly buttons done. They're putting a lot of pressure on me to have mine done too, but the idea leaves me completely cold. I'm afraid of the pain – even having an injection makes me go weak – and I don't think I could stand the feeling of having something up my nose all the time, especially when I've got a cold. Just the thought of it turns me right off!

How can I get through to my friends to make them leave me alone and stop pushing me?

Pressurised Pat from Peterborough

Dear Sensible Sam

I am nineteen years old and left school two years ago. Since then I've been practising my singing and my music so I can play in a band one day. My dad keeps yelling at me and telling me to get a job. I hear what he's saying but I really need time – and some peace and quiet – to think through what I want to do with my life. When I try to discuss it with him he seems to go deaf and just refuses to listen to me.

Does his attitude sound reasonable to you? Please tell me what to say to him to convince him.

Shouted-at Sean from Sheffield

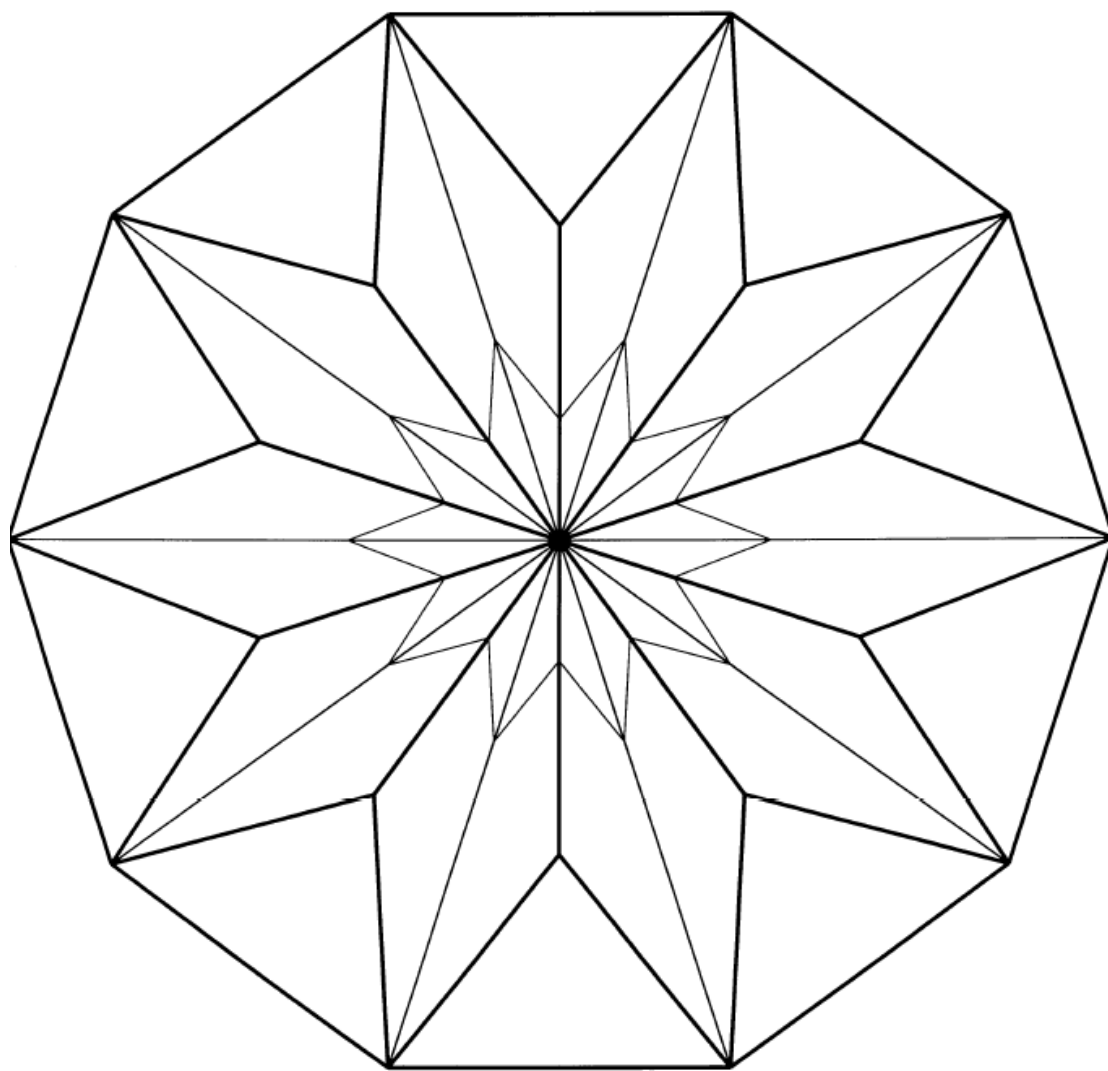
Dear Sensible Sam

My best friend, Lucy, is mad about my friend, Harry, and has this vision of their brilliant, sparkling future together. The trouble is though, that Harry finds Lucy really unattractive, in fact he can't stand the sight of her. Even though this is crystal clear to everyone else, Lucy refuses to see it. If she goes on imagining a relationship with Harry in this way, she's going to be very disillusioned.

How can I help open Lucy's eyes so she gets a clearer perspective on things?

Can you shed some light on this problem?

Watchful Wendy from Weymouth

APPENDIX 4**Mandala**

(taken from www.free-mandala.com)

APPENDIX 5 **Repertory Grid Form**

Interviewee: _____ Class: _____ Date: _____ Category: _____ No.: _____

No. of Constructs	Emergent Constructs (Similarities)	Rating Scale											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														
11														
12														
13														
14														
15														
16														

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

APPENDIX 7

Elicitation Procedures of the Repertory Grid Form in Turkish

Repertory Grid Tekniğın Uygulama Şekli

Amaç: Kişisel ve mesleki açıdan etkili bir İngilizce öğretmenin sahip olması gereken özelliklerini ortaya çıkarmak.

1. 9 İngilizce öğretmeni düşünün; 3'ü mesleki ve kişisel açıdan çok etkili, 3'ü tipik, 3'ü de yeterli olmayan .
2. Bu öğretmenleri E1, E2, E3, (etkili); T1, T2, T3, (tipik) ve I1, I2, I3 (yetersiz) olarak kodlayıp küçük kartlara yazınız. Bizim için öğretmenlerin isimleri kesinlikle önemli değil o yüzden onları kodluyoruz. Bu kodlamaları sadece kafanızda kelimelere verdiğiniz anlamları ortaya çıkarmak için kullanıyoruz.
3. Bu 9 karttan üç tanesini rastgele çekiyoruz.
4. Çektiğimiz bu üç kart arasındaki benzerlik ve farklılığı ortaya çıkarıyoruz. Yani iki öğretmenin diğer bir öğretmenden mesleki ve kişisel açıdan nasıl farklı olduğunu belirtip Rep-Grid'in 'construct'özellik bölümüne yazıyoruz.
5. Bu işlemi 10 defa tekrarlıyoruz; dolayısıyla 10 özellik ortaya çıkarmış oluyoruz.
6. Şimdi Rep-grid 'in orta bölümdeki değerlendirme ölçeğini kullanarak (1-5) arasında her bir kodlamayı tek tek değerlendiriyoruz. (1-5 olarak değerlendirirken constructa yakınlığı temel alıyoruz.)
7. Sonra 'yourself' bölümünde kendinizi değerlendiriyorsunuz.
8. Şimdi 'ideal' bölümünde kafanızdaki kişisel ve mesleki açıdan ideal öğretmeni değerlendiriyoruz.
9. Son olarak Rep-Grid'in alt tarafında bulunan sıralama bölümünde, sizin oluşturduğunuz constructlardan, sizin için en önemli 5 öğretmen özelliğini önem sırasına göre sıralayınız.



Teşekkürler!!!

APPENDIX 8**Participant Profile Questionnaire**

Name :

Graduated from :

School(s) you work(ed) for :

Teaching experience :

Subjects/activities you are interested in :

Please take your time and think about yourself for a while. Now, answer the following questions as sincerely as possible.

1. Are you happy to be an English teacher?

2. Do you think teacher education programs you have taken are sufficient for your career as an English teacher?

3. Do you seek opportunities to develop yourself as a teacher? If YES, what do you do for your personal and professional life?

4. Do you have any personal or professional goals for the future? If YES, what are they and do you believe you can realize them?

5. Have you attended any Teacher Development programs yet? If YES, how was your experience?

6. How much do you know about NLP?

7. Have you ever attended any NLP program?

8. How would you rate your communication with (your)

- a. Yourself _____
- b. Family _____
- c. Students _____
- d. Colleagues _____
- e. Administration _____

1 excellent

2 good

3 satisfactory

4 not good

5 poor

Thank You for Your Cooperation 😊

APPENDIX 9

Course Evaluation Questionnaire

Please answer the following questions as sincerely/truthfully as possible.

A) Rate the following course components employed considering the extent you think they have been useful to you in developing yourself as an EFL teacher.

1) The atmosphere created during the sessions.

5	4	3	2	1
Very useful				Not very useful
.....				
.....				
.....				
.....				
.....				

2) The procedures employed during the sessions.

5	4	3	2	1
Very useful				Not very useful
.....				
.....				
.....				
.....				
.....				

3) The materials used during the sessions.

5	4	3	2	1
Very useful				Not very useful
.....				
.....				
.....				
.....				
.....				

4) The activities done/employed during the sessions.

5	4	3	2	1
Very useful			Not very useful	
.....				
.....				
.....				
.....				
.....				

B) Can you add your comments on the strengths and weaknesses of the NLP-TD program you have participated in?

A. Strengths	B. Weaknesses
---	--

C) Please answer the following questions to evaluate the NLP-TD program as a whole?

1) Would you recommend your colleagues to attend a NLP-TD program?
☐ YES ☐ NO ☐ OTHER please specify

2) Do you believe the NLP-TD program could be a new alternative personal and professional development of EFL teachers?
☐ YES ☐ NO ☐ OTHER please specify

APPENDIX 10

Reflection Sheet I

Aim: To review and reflect on your experience of NLP-TD program

<u>Session 1:</u> NLP: <i>What is NLP all about?</i> Definition, Origins, NLP Presuppositions, Four Pillars of NLP (Outcomes, Rapport, Sensory Acuity, Flexibility), The Basic Action Model	<u>Session 2:</u> Life Levels: <i>Line up Your Life</i> Environment, Behaviour, Ability, Values and Beliefs, Identity, Spirit
<u>Session 3:</u> Outcomes: <i>Knowing Where You are Going</i> Well-formed Outcomes AEIOU Criteria	<u>Session 4:</u> VAKOG: <i>How We Experience and Represent the World</i> Representational Systems Translating Representational Systems

Think back over what we have done so far in relation to NLP (the table above might help) and

- 1. Highlight any point(s) (if any) that you have found significant or important, either in personal or professional sense, and give your reasons;**
- 2. How might that experience (if any) have helped you gain new insights and perspectives in your personal and/or professional life?**
- 3. Have you already implemented some experiences related to NLP in your personal and/or professional life? If not, do you plan to do so in future?**

Reflection Sheet III

Aim: To review and reflect on your experience of NLP-TD program

<u>Session 9:</u> Rapport: <i>The Key to Communication</i> Body Match, Voice Match, Match or Mismatch, Pacing and Leading, Influence	<u>Session 10:</u> <i>Relating with Rapport</i> Matching Predicates, Mirroring, Empathy, Listening Skills
<u>Session 11:</u> How Language Relates to Experience: <i>Deletion, Distortion, Generalization</i> The Meta Model: <i>Challenging the Imprecise Language</i>	<u>Session 12:</u> Perceptual Positions: <i>Seeing Things from Different Angles</i> First Position (Me), Second Position (You), Third Position (Neutral Observer)

Think back over what we have done so far in relation to NLP (the table above might help) and

- 1. Highlight any point(s) (if any) that you have found significant or important, either in personal or professional sense, and give your reasons;**
- 2. How might that experience (if any) have helped you gain new insights and perspectives in your personal and/or professional life?**
- 3. Have you already implemented some experiences related to NLP in your personal and/or professional life? If not, do you plan to do so in future?**

APPENDIX 11

The Representational System Preference Test

For each of the following statements, please place a number next to every phrase. Use the following system to indicate your preferences:

4 = Closest to describing you

3 = Next best description

2 = Third best

1 = Least descriptive of you

1. I make important decisions based on:

- ___gut level feelings.
- ___which way sounds best.
- ___what looks best to me.
- ___precise review and study of the issues.

2. During an argument, I am most likely to be influenced by:

- ___the other person's tone of voice.
- ___whether or not I can see the other person's argument.
- ___the logic of the other person's argument.
- ___whether or not I feel in touch with the other person's true feelings.

3. I most easily communicate what is going on with me by:

- ___the way I dress and look.
- ___the feelings I share.
- ___the words I choose.
- ___the tone of my voice.

4. It is easiest for me to:

- ___find the ideal volume and tuning on a stereo system.
- ___select the most intellectually relevant point concerning an interesting subject.
- ___select the most comfortable furniture.
- ___select rich, attractive colour combinations.

5. In my environment

- ___I function as very attuned to the sounds of my surroundings.

- ___ I function as very adept at making sense of new facts and data.
 ___ I function as very sensitive to the way articles of clothing fit on my body.
 ___ I have a strong response to colors and to the way a room looks.

SCORING THE REPRESENTATIONAL PREFERENCE TEST

STEP ONE:

Copy your answers from the test to the lines below. Transfer the answers in the exact order they are listed.

- | | | | | |
|---------|---------|---------|---------|---------|
| 1. ___K | 2. ___A | 3. ___V | 4. ___A | 5. ___A |
| ___A | ___V | ___K | ___D | ___D |
| ___V | ___D | ___D | ___K | ___K |
| ___D | ___K | ___A | ___V | ___V |

STEP TWO:

Add the numbers associated with each letter. Make five entries for each letter.

1.	V	K	A	D
2.				
3.				
4.				
5.				
Totals:	V	K	A	D

(taken from The User's Manual for the Brain Volume I, 1999, p.
7-8)

STEP THREE:

The comparison of the totalled scores gives the relative preference for each of the four major rep systems.

APPENDIX 12

Texts of the Focus Analysis Calculations

Teacher 1 at the Beginning of the study
Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	92	85	83	82	78	17	8	8	70	98
E2	*	92	100	83	85	90	87	22	13	13	68	93
E3	*	85	83	100	88	87	90	28	20	20	78	87
E4	*	83	85	88	100	82	88	33	25	25	77	82
E5	*	82	90	87	82	100	90	32	23	23	72	83
E6	*	78	87	90	88	90	100	35	27	27	78	80
E7	*	17	22	28	33	32	35	100	92	92	43	15
E8	*	8	13	20	25	23	27	92	100	97	35	7
E9	*	8	13	20	25	23	27	92	97	100	35	7
E10	*	70	68	78	77	72	78	43	35	35	100	72
E11	*	98	93	87	82	83	80	15	7	7	72	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15

R1	*	100	80	86	91	84	84	80	70	86	84	95	86	84	91	82
R2	*	80	100	93	80	82	91	95	91	93	91	84	89	86	84	89
R3	*	86	93	100	82	84	89	89	84	91	84	86	91	89	91	91
R4	*	91	80	82	100	89	80	80	70	82	80	91	86	75	82	77
R5	*	84	82	84	89	100	86	86	82	84	77	84	93	82	84	84
R6	*	84	91	89	80	86	100	95	86	98	91	89	93	95	93	93
R7	*	80	95	89	80	86	95	100	91	93	91	84	93	91	89	93
R8	*	70	91	84	70	82	86	91	100	84	82	75	84	86	80	84
R9	*	86	93	91	82	84	98	93	84	100	93	91	91	93	91	91
R10	*	84	91	84	80	77	91	91	82	93	100	89	84	86	89	84
R11	*	95	84	86	91	84	89	84	75	91	89	100	86	84	91	82
R12	*	86	89	91	86	93	93	93	84	91	84	86	100	89	91	91
R13	*	84	86	89	75	82	95	91	86	93	86	84	89	100	93	93
R14	*	91	84	91	82	84	93	89	80	91	89	91	91	93	100	91
R15	*	82	89	91	77	84	93	93	84	91	84	82	91	93	91	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15

R1	*	23	20	27	27	30	20	20	30	18	16	23	23	25	23	23
R2	*	20	18	25	25	27	18	18	27	16	14	20	20	23	20	25
R3	*	27	25	32	32	34	25	25	34	23	20	27	27	30	27	27
R4	*	27	25	32	32	34	25	25	34	23	20	27	27	30	27	32
R5	*	30	27	34	34	36	27	27	36	25	23	30	30	32	30	34
R6	*	20	18	25	25	27	18	18	27	16	14	20	20	23	20	25
R7	*	20	18	25	25	27	18	18	27	16	14	20	20	23	20	25
R8	*	30	27	34	34	36	27	27	36	25	23	30	30	32	30	34
R9	*	18	16	23	23	25	16	16	25	14	11	18	18	20	18	23
R10	*	16	14	20	20	23	14	14	23	11	9	16	16	18	16	20
R11	*	23	20	27	27	30	20	20	30	18	16	23	23	25	23	27
R12	*	23	20	27	27	30	20	20	30	18	16	23	23	25	23	27
R13	*	25	23	30	30	32	23	23	32	20	18	25	25	27	25	25
R14	*	23	20	27	27	30	20	20	30	18	16	23	23	25	23	23
R15	*	23	25	27	32	34	25	25	34	23	20	27	27	25	23	23

Element Links

E1 linked to E11 at 98.3
 E8 linked to E9 at 96.7
 E2 linked to E11 at 93.3
 E7 linked to E8 at 91.7
 E2 linked to E5 at 90.0
 E3 linked to E6 at 90.0
 E5 linked to E6 at 90.0
 E3 linked to E4 at 88.3
 E4 linked to E10 at 76.7
 E7 linked to E10 at 43.3

Construct Links

L6 linked to L9 at 97.7
 L1 linked to L11 at 95.5
 L2 linked to L7 at 95.5
 L6 linked to L7 at 95.5
 L2 linked to L3 at 93.2
 L5 linked to L12 at 93.2
 L9 linked to L10 at 93.2
 L13linked to L14 at 93.2
 L13linked to L15 at 93.2
 L1 linked to L4 at 90.9
 L3 linked to L12 at 90.9
 L11linked to L14 at 90.9
 L4 linked to L5 at 88.6
 L8 linked to L15 at 84.1

Teacher 1 at the End of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	88	97	70	70	77	8	3	2	65	100
E2	*	88	100	92	78	82	88	20	15	13	73	88
E3	*	97	92	100	73	73	80	12	7	5	65	97
E4	*	70	78	73	100	83	90	38	33	32	88	70
E5	*	70	82	73	83	100	93	38	33	32	78	70
E6	*	77	88	80	90	93	100	32	27	25	85	77
E7	*	8	20	12	38	38	32	100	95	93	43	8
E8	*	3	15	7	33	33	27	95	100	98	38	3
E9	*	2	13	5	32	32	25	93	98	100	37	2
E10	*	65	73	65	88	78	85	43	38	37	100	65
E11	*	100	88	97	70	70	77	8	3	2	65	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15

R1	*	100	98	82	95	84	89	82	89	91	89	93	84	84	86	91
R2	*	98	100	80	93	82	91	84	91	93	91	95	82	86	89	89
R3	*	82	80	100	86	89	84	82	84	82	84	75	93	84	86	86
R4	*	95	93	86	100	84	84	77	84	86	89	89	84	80	82	86
R5	*	84	82	89	84	100	91	84	86	89	91	82	91	86	89	89
R6	*	89	91	84	84	91	100	93	95	98	95	91	86	95	98	93
R7	*	82	84	82	77	84	93	100	93	91	89	84	89	93	95	91
R8	*	89	91	84	84	86	95	93	100	98	95	91	86	95	98	98
R9	*	91	93	82	86	89	98	91	98	100	98	93	84	93	95	95
R10	*	89	91	84	89	91	95	89	95	98	100	91	86	91	93	93
R11	*	93	95	75	89	82	91	84	91	93	91	100	77	91	89	89
R12	*	84	82	93	84	91	86	89	86	84	86	77	100	86	89	89
R13	*	84	86	84	80	86	95	93	95	93	91	91	86	100	98	93
R14	*	86	89	86	82	89	98	95	98	95	93	89	89	98	100	95
R15	*	91	89	86	86	89	93	91	98	95	93	89	89	93	95	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15

R1	*	18	16	36	23	25	20	23	20	18	20	11	34	20	23	23
R2	*	16	14	34	20	27	18	20	18	16	18	9	32	18	20	20
R3	*	36	34	55	41	43	39	41	39	36	39	30	52	39	41	41
R4	*	23	20	41	27	30	25	27	25	23	25	16	39	25	27	27
R5	*	25	27	43	30	32	32	34	32	30	32	23	41	32	34	30
R6	*	20	18	39	25	32	23	25	23	20	23	14	36	23	25	25
R7	*	23	20	41	27	34	25	27	25	23	25	16	39	25	27	27
R8	*	20	18	39	25	32	23	25	23	20	23	14	36	23	25	25
R9	*	18	16	36	23	30	20	23	20	18	20	11	34	20	23	23
R10	*	20	18	39	25	32	23	25	23	20	23	14	36	23	25	25
R11	*	11	9	30	16	23	14	16	14	11	14	5	27	14	16	16
R12	*	34	32	52	39	41	36	39	36	34	36	27	50	36	39	39
R13	*	20	18	39	25	32	23	25	23	20	23	14	36	23	25	25
R14	*	23	20	41	27	34	25	27	25	23	25	16	39	25	27	27
R15	*	23	20	41	27	30	25	27	25	23	25	16	39	25	27	27

Element Links

E1 linked to E11 at 100.0
E8 linked to E9 at 98.3
E1 linked to E3 at 96.7
E7 linked to E8 at 95.0
E5 linked to E6 at 93.3
E2 linked to E3 at 91.7
E4 linked to E6 at 90.0
E4 linked to E10 at 88.3
E2 linked to E5 at 81.7
E7 linked to E10 at 43.3

Construct Links

R1 linked to R2 at 97.7
R6 linked to R9 at 97.7
R6 linked to R14 at 97.7
R8 linked to R9 at 97.7
R8 linked to R15 at 97.7
R13linked to R14 at 97.7
R1 linked to R4 at 95.5
R2 linked to R11 at 95.5
R3 linked to R12 at 93.2
R7 linked to R13 at 93.2
R10linked to R15 at 93.2
R5 linked to R10 at 90.9
R5 linked to R12 at 90.9
R3 linked to R4 at 86.4

Teacher 2 at the Beginning of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	90	98	75	77	87	12	23	19	87	98
E2	*	90	100	92	73	79	85	17	29	25	92	92
E3	*	98	92	100	73	75	85	10	21	17	88	100
E4	*	75	73	73	100	87	88	37	48	44	77	73
E5	*	77	79	75	87	100	83	35	46	42	79	75
E6	*	87	85	85	88	83	100	25	37	33	88	85
E7	*	12	17	10	37	35	25	100	85	77	21	10
E8	*	23	29	21	48	46	37	85	100	81	33	21
E9	*	19	25	17	44	42	33	77	81	100	29	17
E10	*	87	92	88	77	79	88	21	33	29	100	88
E11	*	98	92	100	73	75	85	10	21	17	88	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13

R1	*	100	91	84	91	80	82	84	80	89	80	80	86	84
R2	*	91	100	84	91	89	91	84	80	89	84	84	95	89
R3	*	84	84	100	84	82	89	77	91	95	82	91	80	86
R4	*	91	91	84	100	84	86	89	84	89	84	84	86	89
R5	*	80	89	82	84	100	89	86	82	82	77	86	89	91
R6	*	82	91	89	86	89	100	84	84	93	84	93	86	93
R7	*	84	84	77	89	86	84	100	77	82	82	82	89	91
R8	*	80	80	91	84	82	84	77	100	91	91	91	80	86
R9	*	89	89	95	89	82	93	82	91	100	86	91	84	91
R10	*	80	84	82	84	77	84	82	91	86	100	86	89	86
R11	*	80	84	91	84	86	93	82	91	91	86	100	80	91
R12	*	86	95	80	86	89	86	89	80	84	89	80	100	89
R13	*	84	89	86	89	91	93	91	86	91	86	91	89	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13

R1	*	41	36	30	36	34	27	39	30	30	34	20	41	30
R2	*	36	32	25	32	30	23	34	25	25	30	16	36	25
R3	*	30	25	18	25	23	16	27	18	18	23	9	30	18
R4	*	36	32	25	32	30	23	34	25	25	30	16	36	25
R5	*	34	30	23	30	27	20	32	23	23	27	14	34	23
R6	*	27	23	16	23	20	14	25	16	16	20	7	27	16
R7	*	39	34	27	34	32	25	36	27	27	32	18	39	27
R8	*	30	25	18	25	23	16	27	18	18	23	9	30	18
R9	*	30	25	18	25	23	16	27	18	18	23	9	30	18
R10	*	34	30	23	30	27	20	32	23	23	27	14	34	23
R11	*	20	16	9	16	14	7	18	9	9	14	0	20	9
R12	*	41	36	30	36	34	27	39	30	30	34	20	41	30
R13	*	30	25	18	25	23	16	27	18	18	23	9	30	18

Element Links

E3 linked to E11 at 100.0
E1 linked to E3 at 98.1
E2 linked to E10 at 92.3
E2 linked to E11 at 92.3
E4 linked to E6 at 88.5
E6 linked to E10 at 88.5
E4 linked to E5 at 86.5
E7 linked to E8 at 84.6
E8 linked to E9 at 80.8
E5 linked to E9 at 42.3

Construct Links

L2 linked to L12 at 95.5
L3 linked to L9 at 95.5
L6 linked to L9 at 93.2
L6 linked to L11 at 93.2
L1 linked to L2 at 90.9
L1 linked to L4 at 90.9
L3 linked to L8 at 90.9
L5 linked to L13 at 90.9
L7 linked to L13 at 90.9
L8 linked to L10 at 90.9
L4 linked to L7 at 88.6
L10 linked to L12 at 88.6

Teacher 2 at the End of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	97	94	75	70	81	9	5	9	91	98
E2	*	97	100	94	72	70	78	9	5	9	91	95
E3	*	94	94	100	78	73	81	12	8	12	91	92
E4	*	75	72	78	100	92	91	34	30	34	81	77
E5	*	70	70	73	92	100	89	39	34	39	77	72
E6	*	81	78	81	91	89	100	28	23	28	84	83
E7	*	9	9	12	34	39	28	100	95	100	16	11
E8	*	5	5	8	30	34	23	95	100	95	11	6
E9	*	9	9	12	34	39	28	100	95	100	16	11
E10	*	91	91	91	81	77	84	16	11	16	100	89
E11	*	98	95	92	77	72	83	11	6	11	89	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16

R1	*	100	98	91	84	91	93	95	82	91	86	93	95	95	84	91	91
R2	*	98	100	93	82	89	95	93	84	89	89	95	98	98	86	93	89
R3	*	91	93	100	80	82	89	91	91	91	91	89	91	91	80	86	82
R4	*	84	82	80	100	89	77	89	80	80	80	77	84	84	91	89	89
R5	*	91	89	82	89	100	84	91	86	86	82	84	91	91	93	91	100
R6	*	93	95	89	77	84	100	89	80	84	89	100	93	93	82	89	84
R7	*	95	93	91	89	91	89	100	86	91	82	89	95	95	84	91	91
R8	*	82	84	91	80	86	80	86	100	86	86	80	86	86	84	82	86
R9	*	91	89	91	80	86	84	91	86	100	86	84	91	91	80	86	86
R10	*	86	89	91	80	82	89	82	86	86	100	89	86	86	80	82	82
R11	*	93	95	89	77	84	100	89	80	84	89	100	93	93	82	89	84
R12	*	95	98	91	84	91	93	95	86	91	86	93	100	100	89	95	91
R13	*	95	98	91	84	91	93	95	86	91	86	93	100	100	89	95	91
R14	*	84	86	80	91	93	82	84	84	80	80	82	89	89	100	93	93
R15	*	91	93	86	89	91	89	91	82	86	82	89	95	95	93	100	91
R16	*	91	89	82	89	100	84	91	86	86	82	84	91	91	93	91	100

R1	*	14	11	18	30	23	7	18	27	23	18	7	14	14	25	18	23
R2	*	11	9	16	27	20	5	16	25	20	16	5	11	11	23	16	20
R3	*	18	16	23	34	27	11	23	32	27	23	11	18	18	30	23	27
R4	*	30	27	34	45	39	23	34	39	39	34	23	30	30	41	34	39
R5	*	23	20	27	39	32	16	27	32	32	27	16	23	23	34	27	32
R6	*	7	5	11	23	16	0	11	20	16	11	0	7	7	18	11	16
R7	*	18	16	23	34	27	11	23	32	27	23	11	18	18	30	23	27
R8	*	27	25	32	39	32	20	32	32	36	27	20	27	27	34	32	32
R9	*	23	20	27	39	32	16	27	36	32	27	16	23	23	34	27	32
R10	*	18	16	23	34	27	11	23	27	27	23	11	18	18	30	23	27
R11	*	7	5	11	23	16	0	11	20	16	11	0	7	7	18	11	16
R12	*	14	11	18	30	23	7	18	27	23	18	7	14	14	25	18	23
R13	*	14	11	18	30	23	7	18	27	23	18	7	14	14	25	18	23
R14	*	25	23	30	41	34	18	30	34	34	30	18	25	25	36	30	34
R15	*	18	16	23	34	27	11	23	32	27	23	11	18	18	30	23	27
R16	*	23	20	27	39	32	16	27	32	32	27	16	23	23	34	27	32

Element Links

E7 linked to E9 at 100.0
E1 linked to E11 at 98.4
E1 linked to E2 at 96.9
E7 linked to E8 at 95.3
E2 linked to E3 at 93.8
E4 linked to E5 at 92.2
E3 linked to E10 at 90.6
E4 linked to E6 at 90.6
E6 linked to E10 at 84.4
E5 linked to E9 at 39.1

Construct Links

R5 linked to R16 at 100.0
R6 linked to R11 at 100.0
R12 linked to R13 at 100.0
R1 linked to R2 at 97.7
R2 linked to R12 at 97.7
R1 linked to R7 at 95.5
R13 linked to R15 at 95.5
R5 linked to R14 at 93.2
R14 linked to R15 at 93.2
R3 linked to R7 at 90.9
R3 linked to R8 at 90.9
R4 linked to R16 at 88.6
R6 linked to R10 at 88.6
R8 linked to R9 at 86.4
R9 linked to R10 at 86.4

Teacher 3 at the Beginning of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	75	92	77	73	77	40	40	33	79	90
E2	*	75	100	75	94	98	94	65	65	58	92	69
E3	*	92	75	100	77	73	77	40	40	33	79	90
E4	*	77	94	77	100	92	92	58	58	52	85	75
E5	*	73	98	73	92	100	92	67	67	60	94	67
E6	*	77	94	77	92	92	100	62	62	56	85	71
E7	*	40	65	40	58	67	62	100	100	90	60	33
E8	*	40	65	40	58	67	62	100	100	90	60	33
E9	*	33	58	33	52	60	56	90	90	100	54	27
E10	*	79	92	79	85	94	85	60	60	54	100	73
E11	*	90	69	90	75	67	71	33	33	27	73	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12

R1	*	100	73	91	82	75	82	86	77	77	84	93	91
R2	*	73	100	77	91	98	91	86	95	82	75	75	77
R3	*	91	77	100	86	80	86	86	82	77	89	93	86
R4	*	82	91	86	100	89	95	91	91	86	84	84	77
R5	*	75	98	80	89	100	93	89	98	80	77	77	80
R6	*	82	91	86	95	93	100	95	95	86	84	84	77
R7	*	86	86	86	91	89	95	100	91	82	84	89	82
R8	*	77	95	82	91	98	95	91	100	82	80	80	82
R9	*	77	82	77	86	80	86	82	82	100	80	75	73
R10	*	84	75	89	84	77	84	84	80	80	100	86	80
R11	*	93	75	93	84	77	84	89	80	75	86	100	89
R12	*	91	77	86	77	80	77	82	82	73	80	89	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12

R1	*	73	55	68	55	57	55	59	59	50	57	70	77
R2	*	55	36	50	36	39	36	41	41	32	39	52	59
R3	*	68	50	64	50	52	50	55	55	45	52	66	73
R4	*	55	36	50	36	39	36	41	41	32	39	52	59
R5	*	57	39	52	39	41	39	43	43	34	41	55	61
R6	*	55	36	50	36	39	36	41	41	32	39	52	59
R7	*	59	41	55	41	43	41	45	45	36	43	57	64
R8	*	59	41	55	41	43	41	45	45	36	43	57	64
R9	*	50	32	45	32	34	32	36	36	27	34	48	55
R10	*	57	39	52	39	41	39	43	43	34	41	55	61
R11	*	70	52	66	52	55	52	57	57	48	55	68	75
R12	*	77	59	73	59	61	59	64	64	55	61	75	82

Element Links

E7 linked to E8 at 100.0
E2 linked to E5 at 97.9
E2 linked to E4 at 93.8
E5 linked to E10 at 93.8
E1 linked to E3 at 91.7
E4 linked to E6 at 91.7
E1 linked to E11 at 89.6
E7 linked to E9 at 89.6
E3 linked to E10 at 79.2
E6 linked to E8 at 62.5

Construct Links

R2 linked to R5 at 97.7
R5 linked to R8 at 97.7
R4 linked to R6 at 95.5
R6 linked to R7 at 95.5
R1 linked to R11 at 93.2
R3 linked to R11 at 93.2
R1 linked to R12 at 90.9
R2 linked to R4 at 90.9
R3 linked to R10 at 88.6
R7 linked to R10 at 84.1
R8 linked to R9 at 81.8

Teacher 3 at the End of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	97	90	67	65	63	23	25	25	88	90
E2	*	97	100	90	67	62	60	20	22	22	92	93
E3	*	90	90	100	77	72	70	30	32	32	92	83
E4	*	67	67	77	100	92	93	53	55	55	75	63
E5	*	65	62	72	92	100	95	58	60	60	70	58
E6	*	63	60	70	93	95	100	60	62	62	68	57
E7	*	23	20	30	53	58	60	100	98	98	28	17
E8	*	25	22	32	55	60	62	98	100	97	30	18
E9	*	25	22	32	55	60	62	98	97	100	30	18
E10	*	88	92	92	75	70	68	28	30	30	100	85
E11	*	90	93	83	63	58	57	17	18	18	85	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15

R1	*	100	82	91	80	89	93	95	89	91	98	89	86	95	89	98
R2	*	82	100	86	93	93	89	82	93	86	84	84	82	77	84	84
R3	*	91	86	100	84	89	84	91	84	86	89	80	77	86	80	89
R4	*	80	93	84	100	91	86	84	86	84	82	86	84	80	86	82
R5	*	89	93	89	91	100	95	89	91	89	91	91	89	84	91	86
R6	*	93	89	84	86	95	100	89	95	89	95	95	93	89	95	91
R7	*	95	82	91	84	89	89	100	84	91	93	89	86	95	89	93
R8	*	89	93	84	86	91	95	84	100	89	91	91	89	84	91	91
R9	*	91	86	86	84	89	89	91	89	100	89	84	86	86	84	93
R10	*	98	84	89	82	91	95	93	91	89	100	91	89	93	91	95
R11	*	89	84	80	86	91	95	89	91	84	91	100	98	93	100	86
R12	*	86	82	77	84	89	93	86	89	86	89	98	100	91	98	84
R13	*	95	77	86	80	84	89	95	84	86	93	93	91	100	93	93
R14	*	89	84	80	86	91	95	89	91	84	91	100	98	93	100	86
R15	*	98	84	89	82	86	91	93	91	93	95	86	84	93	86	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15

R1	*	36	32	27	34	39	43	36	39	36	39	48	50	41	48	34
R2	*	32	27	23	30	34	39	32	34	32	34	43	45	36	43	30
R3	*	27	23	18	25	30	34	27	30	27	30	39	41	32	39	25
R4	*	34	30	25	32	36	41	34	36	34	36	45	48	39	45	32
R5	*	39	34	30	36	41	45	39	41	39	41	50	52	43	50	36
R6	*	43	39	34	41	45	50	43	45	43	45	55	57	48	55	41
R7	*	36	32	27	34	39	43	36	39	36	39	48	50	41	48	34
R8	*	39	34	30	36	41	45	39	41	39	41	50	52	43	50	36
R9	*	36	32	27	34	39	43	36	39	36	39	48	50	41	48	34
R10	*	39	34	30	36	41	45	39	41	39	41	50	52	43	50	36
R11	*	48	43	39	45	50	55	48	50	48	50	59	61	52	59	45
R12	*	50	45	41	48	52	57	50	52	50	52	61	64	55	61	48
R13	*	41	36	32	39	43	48	41	43	41	43	52	55	45	52	39
R14	*	48	43	39	45	50	55	48	50	48	50	59	61	52	59	45
R15	*	34	30	25	32	36	41	34	36	34	36	45	48	39	45	32

Element Links

E7 linked to E8 at 98.3
E7 linked to E9 at 98.3
E1 linked to E2 at 96.7
E5 linked to E6 at 95.0
E2 linked to E11 at 93.3
E4 linked to E6 at 93.3
E3 linked to E10 at 91.7
E1 linked to E3 at 90.0
E4 linked to E10 at 75.0
E5 linked to E8 at 60.0

Construct Links

R11 linked to R14 at 100.0
R1 linked to R10 at 97.7
R1 linked to R15 at 97.7
R11 linked to R12 at 97.7
R5 linked to R6 at 95.5
R6 linked to R8 at 95.5
R7 linked to R13 at 95.5
R2 linked to R4 at 93.2
R2 linked to R5 at 93.2
R7 linked to R10 at 93.2
R9 linked to R15 at 93.2
R13 linked to R14 at 93.2
R8 linked to R9 at 88.6
R3 linked to R4 at 84.1

Teacher 4 at the Beginning of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	89	89	86	91	86	66	68	59	86	86
E2	*	89	100	95	80	80	80	55	57	52	98	98
E3	*	89	95	100	84	80	84	59	61	57	93	93
E4	*	86	80	84	100	82	95	70	73	64	82	82
E5	*	91	80	80	82	100	86	75	73	64	82	77
E6	*	86	80	84	95	86	100	75	77	64	82	77
E7	*	66	55	59	70	75	75	100	84	70	57	52
E8	*	68	57	61	73	73	77	84	100	64	59	55
E9	*	59	52	57	64	64	64	70	64	100	55	50
E10	*	86	98	93	82	82	82	57	59	55	100	95
E11	*	86	98	93	82	77	77	52	55	50	95	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11

R1	*	100	84	80	89	84	86	86	86	91	89	82
R2	*	84	100	77	91	77	80	84	84	89	86	84
R3	*	80	77	100	82	82	84	80	80	80	77	80
R4	*	89	91	82	100	82	80	84	84	89	86	80
R5	*	84	77	82	82	100	84	84	84	84	91	84
R6	*	86	80	84	80	84	100	86	86	91	84	91
R7	*	86	84	80	84	84	86	100	100	86	80	82
R8	*	86	84	80	84	84	86	100	100	86	80	82
R9	*	91	89	80	89	84	91	86	86	100	93	86
R10	*	89	86	77	86	91	84	80	80	93	100	84
R11	*	82	84	80	80	84	91	82	82	86	84	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11

R1	*	36	30	43	30	48	45	32	32	36	43	41
R2	*	30	23	41	23	41	43	30	30	34	36	34
R3	*	43	41	41	41	45	43	30	30	43	50	43
R4	*	30	23	41	23	41	39	25	25	30	36	39
R5	*	48	41	45	41	50	48	34	34	48	55	43
R6	*	45	43	43	39	48	45	32	32	45	52	45
R7	*	32	30	30	25	34	32	18	18	32	39	32
R8	*	32	30	30	25	34	32	18	18	32	39	32
R9	*	36	34	43	30	48	45	32	32	36	43	45
R10	*	43	36	50	36	55	52	39	39	43	50	48
R11	*	41	34	43	39	43	45	32	32	45	48	36

Element Links

E2 linked to E10 at 97.7
E2 linked to E11 at 97.7
E4 linked to E6 at 95.5
E3 linked to E10 at 93.2
E1 linked to E5 at 90.9
E1 linked to E3 at 88.6
E5 linked to E6 at 86.4
E7 linked to E8 at 84.1
E4 linked to E8 at 72.7
E7 linked to E9 at 70.5

Construct Links

R7 linked to R8 at 100.0
R9 linked to R10 at 93.2
R1 linked to R9 at 90.9
R2 linked to R4 at 90.9
R5 linked to R10 at 90.9
R6 linked to R11 at 90.9
R1 linked to R4 at 88.6
R6 linked to R7 at 86.4
R2 linked to R8 at 84.1
R3 linked to R5 at 81.8

Teacher 4 at the End of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	95	89	62	57	48	11	4	0	91	100
E2	*	95	100	95	68	62	54	16	9	5	89	95
E3	*	89	95	100	73	68	59	21	14	11	88	89
E4	*	62	68	73	100	91	86	48	41	38	71	62
E5	*	57	62	68	91	100	91	54	46	43	66	57
E6	*	48	54	59	86	91	100	62	55	52	57	48
E7	*	11	16	21	48	54	62	100	93	89	20	11
E8	*	4	9	14	41	46	55	93	100	96	12	4
E9	*	0	5	11	38	43	52	89	96	100	9	0
E10	*	91	89	88	71	66	57	20	12	9	100	91
E11	*	100	95	89	62	57	48	11	4	0	91	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14

R1	*	100	84	93	84	93	91	91	93	91	91	91	95	91	98
R2	*	84	100	91	95	91	93	93	91	93	89	93	89	93	86
R3	*	93	91	100	86	91	93	89	86	93	89	89	93	93	95
R4	*	84	95	86	100	86	89	89	91	89	84	93	84	89	82
R5	*	93	91	91	86	100	93	98	95	93	93	93	98	98	95
R6	*	91	93	93	89	93	100	95	93	95	95	91	95	95	93
R7	*	91	93	89	89	98	95	100	98	95	95	95	95	95	93
R8	*	93	91	86	91	95	93	98	100	93	93	98	93	93	91
R9	*	91	93	93	89	93	95	95	93	100	95	95	95	91	93
R10	*	91	89	89	84	93	95	95	93	95	100	91	95	91	93
R11	*	91	93	89	93	93	91	95	98	95	91	100	91	91	89
R12	*	95	89	93	84	98	95	95	93	95	95	91	100	95	98
R13	*	91	93	93	89	98	95	95	93	91	91	91	95	100	93
R14	*	98	86	95	82	95	93	93	91	93	93	89	98	93	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14

R1	*	32	34	39	34	30	32	27	25	32	27	27	32	32	34
R2	*	34	36	41	36	32	34	30	27	34	30	30	34	34	36
R3	*	39	41	45	41	36	39	34	32	39	34	34	39	39	41
R4	*	34	36	41	36	32	34	30	27	34	30	30	34	34	36
R5	*	30	32	36	32	27	30	25	23	30	25	25	30	30	32
R6	*	32	34	39	34	30	32	27	25	32	27	27	32	32	34
R7	*	27	30	34	30	25	27	23	20	27	23	23	27	27	30
R8	*	25	27	32	27	23	25	20	18	25	20	20	25	25	27
R9	*	32	34	39	34	30	32	27	25	32	27	27	32	32	34
R10	*	27	30	34	30	25	27	23	20	27	23	23	27	27	30
R11	*	27	30	34	30	25	27	23	20	27	23	23	27	27	30
R12	*	32	34	39	34	30	32	27	25	32	27	27	32	32	34
R13	*	32	34	39	34	30	32	27	25	32	27	27	32	32	34
R14	*	34	36	41	36	32	34	30	27	34	30	30	34	34	36

Element Links

E1 linked to E11 at 100.0
E8 linked to E9 at 96.4
E1 linked to E2 at 94.6
E2 linked to E3 at 94.6
E7 linked to E8 at 92.9
E4 linked to E5 at 91.1
E5 linked to E6 at 91.1
E10linked to E11 at 91.1
E3 linked to E4 at 73.2
E6 linked to E7 at 62.5

Construct Links

R1 linked to R14 at 97.7
R5 linked to R7 at 97.7
R5 linked to R12 at 97.7
R7 linked to R8 at 97.7
R8 linked to R11 at 97.7
R12linked to R14 at 97.7
R2 linked to R4 at 95.5
R6 linked to R9 at 95.5
R6 linked to R10 at 95.5
R9 linked to R11 at 95.5
R1 linked to R3 at 93.2
R2 linked to R13 at 93.2
R3 linked to R13 at 93.2

Teacher 5 at the Beginning of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	86	78	67	69	47	31	33	58	75	89
E2	*	86	100	75	69	78	61	44	47	61	78	86
E3	*	78	75	100	67	75	53	36	39	53	75	89
E4	*	67	69	67	100	81	64	58	61	81	92	67
E5	*	69	78	75	81	100	72	56	58	72	83	75
E6	*	47	61	53	64	72	100	72	64	67	67	47
E7	*	31	44	36	58	56	72	100	75	56	50	31
E8	*	33	47	39	61	58	64	75	100	64	53	33
E9	*	58	61	53	81	72	67	56	64	100	72	53
E10	*	75	78	75	92	83	67	50	53	72	100	75
E11	*	89	86	89	67	75	47	31	33	53	75	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9

R1	*	100	84	89	82	80	77	75	66	80
R2	*	84	100	77	75	73	80	73	73	68
R3	*	89	77	100	84	77	75	77	64	82
R4	*	82	75	84	100	70	86	89	66	84
R5	*	80	73	77	70	100	70	77	82	82
R6	*	77	80	75	86	70	100	80	80	70
R7	*	75	73	77	89	77	80	100	73	91
R8	*	66	73	64	66	82	80	73	100	73
R9	*	80	68	82	84	82	70	91	73	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9

R1	*	59	57	48	50	52	45	52	48	52
R2	*	57	55	55	52	50	43	55	45	55
R3	*	48	55	36	39	45	43	45	45	41
R4	*	50	52	39	41	52	41	48	48	48
R5	*	52	50	45	52	45	43	50	41	50
R6	*	45	43	43	41	43	32	48	39	48
R7	*	52	55	45	48	50	48	45	45	45
R8	*	48	45	45	48	41	39	45	36	45
R9	*	52	55	41	48	50	48	45	45	45

Element Links

E4	linked to	E10	at	91.7
E1	linked to	E11	at	88.9
E3	linked to	E11	at	88.9
E1	linked to	E2	at	86.1
E5	linked to	E10	at	83.3
E4	linked to	E9	at	80.6
E2	linked to	E5	at	77.8
E7	linked to	E8	at	75.0
E6	linked to	E7	at	72.2
E6	linked to	E9	at	66.7

Construct Links

L7	linked to	L9	at	90.9
L1	linked to	L3	at	88.6
L4	linked to	L7	at	88.6
L4	linked to	L6	at	86.4
L1	linked to	L2	at	84.1
L3	linked to	L9	at	81.8
L5	linked to	L8	at	81.8
L6	linked to	L8	at	79.5

Teacher 5 at the End of the Study

Element Matches

	*	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11

E1	*	100	92	85	62	48	55	25	32	30	70	90
E2	*	92	100	88	70	55	62	32	40	38	72	82
E3	*	85	88	100	62	48	55	25	32	30	70	90
E4	*	62	70	62	100	85	92	62	70	68	92	52
E5	*	48	55	48	85	100	92	78	85	82	78	38
E6	*	55	62	55	92	92	100	70	78	75	85	45
E7	*	25	32	25	62	78	70	100	88	90	55	15
E8	*	32	40	32	70	85	78	88	100	98	62	22
E9	*	30	38	30	68	82	75	90	98	100	60	20
E10	*	70	72	70	92	78	85	55	62	60	100	60
E11	*	90	82	90	52	38	45	15	22	20	60	100

Construct Matches

	*	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10

R1	*	100	91	89	77	84	77	84	75	80	91
R2	*	91	100	89	86	84	82	84	80	84	95
R3	*	89	89	100	84	91	84	86	82	91	89
R4	*	77	86	84	100	89	91	93	89	93	82
R5	*	84	84	91	89	100	93	91	91	91	80
R6	*	77	82	84	91	93	100	93	98	93	77
R7	*	84	84	86	93	91	93	100	91	95	84
R8	*	75	80	82	89	91	98	91	100	91	75
R9	*	80	84	91	93	91	93	95	91	100	84
R10	*	91	95	89	82	80	77	84	75	84	100

	*	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10

R1	*	18	27	30	41	34	41	34	43	39	27
R2	*	27	36	39	50	43	50	43	52	48	36
R3	*	30	39	41	52	45	52	45	55	50	39
R4	*	41	50	52	64	57	64	57	66	61	50
R5	*	34	43	45	57	50	57	50	59	55	43
R6	*	41	50	52	64	57	64	57	66	61	50
R7	*	34	43	45	57	50	57	50	59	55	43
R8	*	43	52	55	66	59	66	59	68	64	52
R9	*	39	48	50	61	55	61	55	64	59	48
R10	*	27	36	39	50	43	50	43	52	48	36

Element Links

E8 linked to E9 at 97.5
E1 linked to E2 at 92.5
E4 linked to E6 at 92.5
E4 linked to E10 at 92.5
E5 linked to E6 at 92.5
E1 linked to E11 at 90.0
E3 linked to E11 at 90.0
E7 linked to E9 at 90.0
E5 linked to E8 at 85.0
E2 linked to E10 at 72.5

Construct Links

L6 linked to L8 at 97.7
L2 linked to L10 at 95.5
L7 linked to L9 at 95.5
L4 linked to L7 at 93.2
L5 linked to L6 at 93.2
L1 linked to L2 at 90.9
L3 linked to L5 at 90.9
L3 linked to L9 at 90.9
L4 linked to L10 at 81.8