

THE EFFECTS OF COOPERATIVE LEARNING ON  
LEARNING OUTCOMES AND REACTIONS TO TRAINING  
IN AN IN-SERVICE TRAINING COURSE

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## **ABSTRACT**

### **THE EFFECTS OF COOPERATIVE LEARNING ON LEARNING OUTCOMES AND TRAINING REACTIONS IN AN IN-SERVICE TRAINING COURSE**

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The purpose of this study is to compare the effects of cooperative learning method and individualistic learning method on learning outcomes and training reactions of adults participating an in-service training course. The study was conducted with 42 adults in pilot study and 92 in main study conducted in a government bank. Subjects were randomly assigned to two pilot study groups and four main study groups.

Two different training programs were developed, one for individualistic learning, and the other for cooperative learning in order to test the effect of each method on learning outcomes and training reactions. The content and length of the training programs taught were held constant, and duration of training was totally 15 hours (3 hours in each of the five days). Participants, in all groups, learned the same topic of “Structured On-the-Job Training” and were taught by the same trainer.

Cooperative learning groups worked on the exercises structured with the five basic elements of cooperative learning, and the individualistic learning groups worked as individually with the instructor calling on participants at random. Learning Outcomes Tests were administered at the end of each day to measure cognitive learning outcomes, which learners

attained during the Training. Training Reactions Questionnaire was administered at the end of the Training.

A significant difference between the cooperative learning group and the individualistic learning group was examined concerning learning outcomes as a result of ANCOVA by using the age as covariate. Subjects in the cooperative learning group had a significantly higher level of Learning Outcomes Test score than did those in the individualistic learning group. However, there was no significant difference between the cooperative learning groups and individualistic learning groups based on their training reactions.

This study indicated that cooperative learning appears to be a method of instruction that is well suited to the needs of adult learners. Subjects of the study learned more through the cooperative learning method than individualistic learning method that was used. They responded to training as much positive as their counterparts learning in individualistic learning group. Results of the study suggest that structuring positive social interdependence in the classroom through cooperative learning procedures can be used effectively within adult education and specifically training settings.

**Key Words:** cooperative learning, adult learning, individualistic learning, training, learning outcomes, training reactions, training effectiveness, structured on-the-job training

## ÖZ

### İŞBİRLİĞİNE DAYALI ÖĞRENMENİN HİZMETİÇİ EĞİTİMDE ÖĞRENME ÜRÜNLERİ VE PROGRAMA İLİŞKİN TEPKİLER ÜZERİNE ETKİLERİ

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Bu çalışmanın amacı, işbirliğine dayalı öğrenme ve bireysel öğrenme yöntemlerinin hizmetiçi eğitim programına katılan yetişkinlerin öğrenme ürünleri ve eğitime ilişkin tepkileri üzerindeki etkilerini karşılaştırmaktır. Çalışma, bir kamu bankasında pilot uygulamada 42, esas çalışmada ise 92 yetişkin ile yürütülmüştür. Çalışmaya katılanlar, iki pilot grup ve dört esas gruba tesadüfi yöntemle atanmışlardır.

Eğitim yöntemlerinin öğrenme ürünleri ve programa ilişkin tepkiler üzerindeki etkilerini belirlemek amacıyla bireysel öğrenme yönteminin ve işbirliğine dayalı öğrenme yönteminin kullanıldığı iki farklı eğitim programı geliştirilmiştir. Aynı içeriğin kullanıldığı eğitimlerin toplam süresi 15 saat olarak gerçekleşmiştir (günde 3 saat olmak üzere 5 gün). Aynı eğitmenin görev aldığı tüm eğitimlerde katılımcılar, “Yapılandırılmış İş Başında Eğitim” konusunu öğrenmişlerdir.

İşbirliğine dayalı öğrenme gruplarında konular, işbirliğine dayalı öğrenmenin beş ilkesine göre yapılandırılmıştır. Bireysel öğrenme gruplarında ise eğitmenin rasgele aralarından seçerek öğrenmelerini kontrol

ettiği katılımcılar, konuları bireysel çalışarak öğrenmişlerdir. Bilişsel öğrenme ürünlerini ölçmek üzere geliştirilen Öğrenme Ürünleri Testleri her günün sonunda, Programa İlişkin Tepkiler Ölçeği eğitimin sonunda uygulanmıştır.

Öğrenme ürünleri açısından işbirliğine dayalı öğrenme gruplarıyla bireysel öğrenme grupları arasındaki farkı incelemek amacıyla yapılan ve yaş değişkeninin eşdeğişken olarak kullanıldığı ANCOVA sonucuna göre iki grup arasında anlamlı düzeyde fark olduğu belirlenmiştir. Ancak, her iki grubun programa ilişkin tepkileri arasındaki fark anlamlı çıkmamıştır.

Bu çalışmayla işbirliğine dayalı öğrenmenin yetişkin öğrenenler için etkili bir öğretim yöntemi olarak kullanılabileceği belirlenmiştir. İşbirliğine dayalı öğrenme yöntemiyle öğrenen katılımcıların, bireysel öğrenme grubundakilere kıyasla öğrenme ürünleri açısından daha başarılı oldukları ve eğitim programını bireysel öğrenme grubundakiler kadar olumlu değerlendirdikleri bulunmuştur. Araştırma sonuçları, işbirliğine dayalı öğrenmenin beş ilkesine göre katılımcılar arasında sosyal bağımlılığın yapılandırılmasının yetişkin eğitimi ve özellikle de hizmetiçi eğitimde etkili bir şekilde kullanılabileceğini göstermektedir.

**Anahtar Sözcükler:** işbirliğine dayalı öğrenme, yetişkinlerde öğrenme, bireysel öğrenme, hizmetiçi eğitim, öğrenme ürünleri, hizmetiçi eğitime ilişkin tepkiler, hizmetiçi eğitimin etkililiği, yapılandırılmış iş başında eğitim

I dedicate this study to my husband, Çetin, and my two children, Umur and İpek. This work and this accomplishment are truly for them as much as they are for me.



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## **ABBREVIATIONS**

CL	– Cooperative Learning
IL	– Individualistic Learning
SOJT	– Structured On-the-Job Training
LOT	– Learning Outcomes Test
CBRT	– Central Bank of Republic of Turkey
SPO	– State Planning Organization
MoNE	– Ministry of National Education
RES	– Relative Evaluation System

# **CHAPTER I**

## **INTRODUCTION**

Each year the number of businesses and organizations that utilize training are expanding. The reasons for this increase in training have been the need to develop desirable attitudes, increase knowledge, and improve skills to help increase personnel and organizational performance. Although research has indicated that cooperative learning, which is an instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson, & Holubec, 1993), enhances student achievement, promotes self-esteem, and improves interpersonal relations, few studies have focused on cooperative learning in adult training programs in organizational settings. Cooperative learning may serve as an effective way of increasing employee expertise, which will help both employee and organizational development. This study investigates the effects of cooperative learning and individualistic learning on learning outcomes and training reactions of employees.

In this chapter, first, the background to the present study is presented. Next, the purpose and significance of the study and definitions of the key terms are provided. In the second chapter, the relevant literature is reviewed. The third chapter is devoted to the method of study. The results of the study are reported in the fourth chapter while conclusions and implications for practice and further research are presented in the last chapter.

### **1.1. Background of the Study**

Training has become an increasingly important aspect of many business and organizations. Organizations are now realizing that workplace expertise is crucial to maintaining optimal performance and adapting to change in today's dynamic business world (Holton & Collins, 2004). Based

on these reasons, the development of the training process has been to solve a variety of existing or, in some settings, anticipated personnel performance problems. Besides, Wexley and Latham (2002) argue that training and development can improve an individual's level of self-awareness, enhance an individual's skills or increase an individual's motivation on the job. As organizational activity becomes more knowledge-driven, training and development is performing an ever more important role in meeting both the learning needs of individuals and strategic organizational imperatives (Harrison & Kessels, 2004). Marchington and Wilkinson (2002) argue that training and development facilitates greater levels of creativity and initiative on behalf of employees.

Training is noted as an important criterion in Fortune Magazine's annual survey of the 100 best companies (Schmidt, 2004). The 1999 survey noted that "Swimming pools and surging pay may give employees a lift, but continued training and human treatment get the best ones to stick around". A similar survey of the best Canadian companies to work for noted that the best companies invest their employees in training and education (Schmidt, 2004). Further evidence for the prevalence of training programs comes from the American Society for Training and Development (ASTD), which publishes an annual report of the human resource development industry (Van Buren & Erskine, 2002). ASTD reported that dollars spent on training employees increase gradually and would continue to grow. In the information age, organizations and countries are realizing the importance of a workforce of well-trained employees, and are spending more money on human resource development than ever before.

Similarly, there is considerable scope and need for improvement by strengthening the workplace expertise of employees in Turkey (ETF, 2006). Turkey has developed certain policies and initiated particular program in recent years with regard to the development of human resources. Because

the Turkish State Institute of Statistics has made projections until 2020 predicting that, by then, 40 million people will be in the 15 – 44 age group and 10 million in the 45 – 64 age group. This implies that almost 70% of the population will be working age (15 – 64). Despite positive signs of becoming a developing society, Turkey has not been able to take full advantage of this opportunity stemming from its young population.

The overall educational attainment levels of the working population are very low compared to European countries (nearly 60% of the labor force is composed of basic education graduates or people who dropped out from basic education) (ETF, 2006). Besides the newcomers to the labor market are not offered sufficient guidance in accordance with the needs of the labor market (Toka, 2005). Basic education (compulsory education) is 8 years in Turkey and it ends at the age of 14-15. Compulsory education aims to equip individuals with core competencies that will allow them to be active citizens. These competencies do not include any vocational competencies that will prepare them to enter into work life (Corradini & Fragoulis, 2003). Thousands of young people are trained in the fields that are not needed. The content of vocational training courses hardly meets the needs of working life. In higher education the two year diploma program, which aims to develop working skills of young people, does not emphasize learning generic competencies that would assist graduates participate in a changing labor market (ETF, 2006).

In order to overcome those problems, public, non-governmental, and private organizations have involved in the efforts to develop certain policies and particular programs in recent years with regard to the development of human resources and shared responsibilities. Within the non-formal training system, public, non-governmental, and private organizations, like public education centers, Non-Governmental Organizations (NGOs) and training centers of companies, offer a variety of social/cultural, vocational, and

literacy/numeracy courses in order to overcome the problems stemming from the shortage of skilled workers. Vocational training centers offer apprenticeship, journeymanship, and mastership programs. Among these, particularly visible are a number of foundations established by affiliates of employers' organizations. Available information suggests that larger companies do organize training activities for their staff, but since this is done under their own responsibility and funding, it is largely undocumented and therefore not reflected in the official statistics. Besides, there is no data available for on-the-job trainings received by public and private employees on their occupations or on different subjects.

In the Eighth Five Year Development Plan of Turkey, one of the policies related to the development of industry was also stated as improving labor force through training activities (SPO, 2003). The main objective for the improvement of industrial sectors emphasized in the Eighth Five Year Development Plan of Turkey is to increase competitiveness and productivity of the industry, and to promote and maintain sustainable growth within outward oriented structure, in the face of increased global competition. The plan states that the qualifications of the labor force shall be improved in order to increase international competitiveness and ongoing training activities shall be strengthened inline with technological developments; importance shall be given to improve vocational and technical formal and informal education in order to fulfill labor force needs of the economy (SPO, 2003).

The newly established Ninth Development Plan covers the 2007-2013 period, with the vision of "*Turkey, country of information society, growing in stability, sharing more equitably, globally competitive and fully completed her coherence with the European Union*". Among the main objectives, it is stated that an effective human resource planning will be made in public institutions and organizations to enable all employees to

reach a level of competence and capacity to adapt to changing conditions. With the programs to be prepared within this scope, employees will be exposed to a continuous process of education, training and development, and they will be provided with necessary information and skills, which will enable them to perform their jobs in a productive manner.

Training, however, is only useful to the employee and organization when it promotes the true learning and retention of relevant KSAs (Knowledge, Skills, and Abilities), and assists employees in translating these newly learned KSAs into improved performance within the work environment (Goldstein & Ford, 2002). Learning, retention, and transfer of trained material are affected by (1) training program design factors (e.g., objectives, instructional plan, consideration of relevant learning principles, and preparation for training and practice), (2) trainee characteristics (e.g., goal orientation, cognitive ability, self-efficacy, and readiness and motivation to learn), and (3) characteristics of the work environment (e.g., opportunity to perform newly learned KSAs, transfer climate, and support) (Baldwin & Ford, 1988).

A wide variety of instructional delivery options exists for nearly every training program in order to foster the acquisition of competence. But the capacity to predict the impact of instructional methods on the training effectiveness would have immense practical utility for training decision makers. In order for trainers to be effective in their role as support to employee development through training, they need to know and understand how to support adult learners (Lyons & Pinnell, 2001). Foundational theories or models have been developed in an effort both to provide a theoretical basis for the practice of adult education and to expand educators' understanding of the adult learner and the learning process. Adult learning principles – need to know, learners' self-concept, role of the learners' experience, readiness-to-learn, orientation to learning, and motivation- are

identified by Knowles, Holton and Swanson (1998). Each of these principles is stated as having an impact on how trainers deliver content and information. Throughout the literature on adult education reference is made to these principles and their influence in the teaching of adults (Merriam & Caffarella, 1999).

Knowles's six principles of adult learning impact instructors working with adults. It is important for instructors to be aware and adapt the instruction to serve the diverse and individual abilities, styles, and preferences found in the make-up of the groups that they lead. Galbraith (1990) identified specific responsibilities for teachers of adults. These include establishing a climate that fosters learning, involving learners in the planning of the curriculum and the setting of objectives, helping learners identify their learning needs, facilitating the use of resources to accomplish their identified goals, and involving learners in evaluating their learning.

Additionally, regardless of the purpose for their learning attempts, adults may face the uncertainty when reentering a learning milieu in training programs. Often unsure of their own capacity to learn, many suffer from the "imposter syndrome" or "reentry shock" (Evans, 1989). Consequently, although many maintain autonomous control in other life roles, feelings of incompetence, displacement, and even a perceived lack of control over their destinies may affect individual beliefs about the ability to learn (Feigenbaum, 1998). Aging, education, life tasks, health, and traumatic events all contribute to internal evolution. Internal wanderings, the wants of significant people, cultural values assaulted by environmental shifts, and an educational milieu not sufficiently responsive to adult needs may make learning activities seem overwhelming. Society generally places increasingly sophisticated demands on adults without determining whether they have the mental capacity to meet those demands would seem to generate anxiety. Many adults who attempt formal learning may find a

learning milieu not sufficiently responsive to their need to integrate new experiences in their lives (Feigenbaum, 1998). Perhaps, then, many employees are not cognitively equipped to interpret the unexpected in a way that allows them to (a) integrate such changes into their lives, and (b) more easily meet their potentials for creative growth and fulfillment. Educational environments fostering learning are needed in training programs for adults.

Training is a dynamic industry, which continues to reward customization and instructional innovation, while accepting limited evidence of the validity of instructional designs (Yates, & Feldon, 2004). In this highly competitive environment, speed to market and development and incorporation of new techniques is rewarded and initial claims of validity often go unchallenged. Few instructional designs exist over a long periods of time without having the methods “fine tuned” or adapted when new innovations appear. However, instructional methods in training programs are need to be selected to be in keeping with adult education principles and beliefs of adults about learning. For example, methods of instruction are chosen that require the participants to engage in active and cooperative learning and that allowed opportunities for constructive sharing of prior experience.

Cooperative learning is widely recognized as one of the most promising practices in the field of education. Cooperation is much more than being physically near to other students, discussing and helping or sharing material with other students in the classroom (Johnson, Johnson & Stanne, 2000). Cooperative learning may be contrasted with competitive learning (learners work against each other to achieve an academic goal such as a grade of A that only one or a few students can attain) and individualistic learning (learners work by themselves to accomplish learning goals unrelated to those of the other students). The literature suggests that



cooperative learning has many benefits over didactic styles of leadership and teaching (or individualistic and competitive learning).

In cooperative learning environment, the instructor acts as facilitator of the learning process, and thus steps back from center stage. Learners form groups and cooperate to meet common goals. Deep learning, skills at interpersonal communication, and mutual support are just a few of the benefits possible when persons support each other in learning attempts.

Contrary to cooperative learning, individualistic learning ignores social interaction. When a situation is structured individualistically, there is no correlation among participants' goal attainments. Each individual perceives that he or she can reach his or her goal regardless of whether other individuals attain or do not attain their goals. Thus, individuals seek an outcome that is personally beneficial without concern for the outcomes of others. In individual learning, learners work by themselves to ensure their own learning meets a preset criterion independently from the efforts of other learners (Johnson & Johnson, 1999). The results of the meta-analysis conducted by Johnson, Johnson, and Stanne (2000) provide evidence that individualistic learning methods have produced lower achievement than cooperative learning, and the more conceptual approaches to cooperative learning may produce higher achievement than the direct methods. In individualistic situations, individuals seek outcomes that are beneficial to themselves. Learners work alone or with a minimum of interaction and rewards are given according to set criteria so there is little opportunity for social comparison. In individualistic learning, sometimes referred as traditional methods of teaching that have been used in most learning settings, the main source of the learning process in a classroom was the teacher; therefore, learners should deal mainly with the teacher to acquire knowledge.

Learners and instructors in cooperative learning environments work together to construct knowledge – the quest for understanding seems more fluid and multidirectional, as all members of a learning milieu examine multiple perspectives and mine diverse stories from each other. Cooperative group work, then, can foster both individual creativity and respect for diversity. Risk-taking and exploration –going beyond given boundaries– allow participants to build on each other’s ideas. Via the social interaction and support inherent in group work, insights may be uncovered that would have never surfaced in isolation.

In the best cooperative learning situations, the members of a group should benefit in several ways. For example, according to Slavin (1995), in the process of working together, students should acquire new strategies and knowledge, both about the subject and about thinking in general. When a class is divided into groups, a new social context is created in which students have the opportunity to share individual cognitions with their peers and come to a conclusion based on the sum of those cognitions. The benefits of cooperative group learning are cited in several ways (Summers, Beretvas, Svinicki, & Gorin, 2005). Among these are benefits derived from the method itself and benefits derived from the social context of learning that is part of group learning.

Over 600 studies have been completed in the last hundred years comparing individualistic, competitive, and cooperative structures (Johnson, Johnson, & Stanne, 2000). Conducted in a variety of settings with learners of various ages with various levels of support and organizational constraints, these mostly quantitative studies demonstrated, overwhelmingly, that benefits of cooperative models far exceeded those of other structures. The popularity and wide spread use of cooperative learning may be largely due to its being based on a theory validated by a great deal of research. Clear and specific operationalizations of cooperative learning have been made

based on understanding social interdependence theory and the variables that mediate and enhance cooperation's effectiveness. The application of social interdependence theory and research provides a conceptual framework from which practical procedures that teachers use to promote learning through cooperative learning. The basic premise of social interdependence theory is that the ways in which participants' goals are structured determine how they interact, and the interaction pattern determines the outcomes of the situation (Deutsch, 1949 as cited in Johnson & Johnson, 2003). The research on social interdependence has an external validity and generalizability rarely found in the social sciences (Johnson & Johnson, 2003). The basic premise of social interdependence theory is that the type of interdependence structured in a situation determines how individuals interact with each other which, in turn, determines outcomes. Positive interdependence tends to result in promotive interaction, negative interdependence tends to result in oppositional interaction, and no interdependence results in an absence of interaction.

In spite of its effectiveness as an instructional method, cooperative learning climate can add value to the organizational effectiveness. Because, the design of adequate learning environments plays an important role in supporting organizational learning, changing mental models, fostering alternative interpretation patterns of reality, developing new communication and action patterns, and reconstructing the sociotechnical aspects of organizations (Kriz, 2003). Human beings and organizations as social systems must be able to learn. Learning on the individual level implies acquiring knowledge, skills, and competencies to cope successfully with different circumstances. Learners need to change their inner conditions. Through cognitive (re)construction of mental models, learners change their perception and interpretation patterns of reality. Simultaneously, individuals must deal with the environment in which they live and learn to understand

the influence of transformed behavior and communication patterns on that environment. Learning at the level of organizations signifies the change of organizational cultures and structures, strategies, and work processes. Organizational learning affects the (re)construction of social representations of groups and the development of social systems' processes.

## **1.2. Purpose of the Study**

The Central Bank of the Republic of Turkey (CBRT) is established in the form of a joint stock company with the exclusive privilege of issuing banknotes in Turkey and is vested with the powers and duties set forth in the Law. CBRT has a Banknote Printing House and open branches in cities within the country. The primary objective of the Bank is to achieve and maintain price stability. Bank employees are appointed to perform continuously the main duties that the services of the Bank require. On 31 December 2007, CBRT had about 4,515 members of staff, 1585 female and 2930 male.

The Training Department of CBRT offers programs to help Bank employees meet their professional and departmental goals. Through training, they provide solutions in ways that work with varying work schedules and priorities. The Department offers courses to cover a wide spectrum of topics. These include management, professional, and general development. The course list, for example, includes classes on strategic planning, presentation skills, information technology, and performance planning and appraisal. Additional topics include team building, decision-making, interpersonal communication, security, banknote printing, auditing, accounting, and law. Bank employees' life long learning and use of their skills are essential outcomes of the training system that need to be enhanced because Bank Management are looking forward to increase the effectiveness of the Bank through developing its employees' knowledge, skills and

abilities. The improvement of these outcomes can occur when trainers utilize strategies, which are useful for trainees. The capacity to predict the impact of changes in instructional methods on the training effectiveness would have immense practical utility for training decision makers.

Different instructional methods are used for different purposes in training programs. But, information presentation methods are most widely used method, and individualistic learning efforts are encouraged within such training settings. However, cooperative learning has become a widely used and effective instructional procedure in many educational settings (Johnson & Johnson, 2003). Hence, the purpose of this study was to compare the effects of cooperative learning method and individualistic learning method on learning outcomes and reactions to training in CBRT. This study sought to build on and extend previous research by examining the effect of utilizing the cooperative learning method in comparison to the use of the individualistic learning method with adult learners.

### **1.3. Significance of the Study**

Researchers and practitioners have always attempted to develop methods for increasing effectiveness in instruction while minimizing costs. Optimizing training delivery systems requires understanding the cost and effectiveness implications for alternative instructional method options. Because training costs, as contrasted with training effectiveness, can generally be assessed directly and unambiguously, and because costs are incurred immediately, cost consideration are likely to overwhelm effectiveness considerations in many training implementation decisions. Information improvement in this area has an economic beneficiary for organizations. Knowledge that can be applied generally to improve the delivery of instruction has substantial utility. The study will contribute to the existing body of research through comparing different instructional

methods, cooperative learning and individualistic learning methods on learning outcomes and training reactions in training programs.

Although research has indicated that cooperative learning enhances student achievement, promotes self-esteem, and improves interpersonal relations, few studies have focused on cooperative learning in adult training programs. Knowledge of the impact of cooperative learning on training effectiveness and their generalizability would contribute to improvement in training activities. Cooperative learning may construct adult learning milieu where adults feel themselves free to talk, share their own experiences, and support each other academically and socially. Knowledge of the effectiveness of cooperative learning would also contribute to applicability of adult learning principles in training environments.

The findings may also serve as a catalyst for future research on the influence of cooperative learning on organizational development. It promotes more trainer involvement with individual learners and has positive academic affects for learners of all abilities (Yager, Johnson, Johnson & Snider, 1985). Assuming participation on-task, CL has the potential of providing for achieving training gains because of the sharing information. Presumably, cooperative learning (CL) improves learners' social interaction skills (Johnson & Johnson, 1996). The design of adequate learning environments plays an important role in supporting organizational learning, changing mental models, fostering alternative interpretation patterns of reality, developing new communication and action patterns, and reconstructing the sociotechnical aspects of organizations (Kriz, 2003). Cooperation among the members of organization can be accelerated through training programs using cooperative learning, and developing cooperation skills in training programs may lead to increase in cooperation in the work settings, which is among the necessary characteristics of successful organizations.

There is no cited research study that has focused on both effectiveness of training programs and instructional methods used in training programs in institutions of Turkey. The profile of Turkey is not comparable to that of the other countries where most of the cooperative learning research studies done, and therefore, this experimental study will contribute to the effect of instructional methods on training effectiveness research in Turkey. As previously mentioned Turkey has developed certain policies and initiated particular programs in recent years with regard to employment training. Because, the newcomers to the labor market are not offered sufficient training in accordance with the needs of the labor market, and shortage of qualified labor force remains to be a problem, there is an effort to develop human resource of the Country through investment in training. So, the findings will provide guidance to trainers and training program designers in both CBRT and other institutions in Turkey regarding the influence of cooperative learning on employee development and overall excellence of training programs.

Additionally, there are very few studies in the field of adult education, which were mainly descriptive and specifically focused on needs assessment and program evaluation in Turkey (Yıldız, 2004). Knowledge of the impact of cooperative learning on training effectiveness and their generalizability would contribute to theoretical base of adult learning and applicability of adult learning principles in training programs in both Turkey and other countries. Learning theory is neither stable nor integrated (Sugrue & Clark, 2000). Multiple incomplete models of learning (sub-theories) are currently used to describe various phenomena in the absence of a single universal learning paradigm. Innovations in instructional methods can and are generated based on each of these sub-theories. Integration of the various instructional methods and adult learning principles in training programs is left to individual training program developers and adult education

practitioners in many institutions. They are expected to stay current with important instructional developments related to adult learning and their appropriate application to the design of various types of instruction. Knowledge that the adult learning principles generalize across a wide range of training contents, training objectives, and trainee characteristics via cooperative learning could support the development of adult learning principles in the training process and adult education.

#### **1.4. Definitions of Terms**

**Training:** An experience, a discipline or a regimen that causes people to acquire new, predetermined behaviors (Laird, 2003).

**Cooperative Learning:** The instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson, & Holubec, 1993). Students work together to accomplish shared goals. Students are assigned to small groups and instructed to learn the assigned material and make sure that the other members of their group learn the assigned material. Individual accountability can be checked by randomly selecting a paper from each group to grade. A criterion-referenced evaluation system is used. Further, Nattie (1994) defines cooperative learning strategies as follows:

It is the name given to a method of instruction, which includes over 80 strategies, in which students work together in small teams toward a common goal. Each member is individually accountable for learning the material. Interdependence of reward, task, materials, and/or role is part of the method. Teams are usually heterogeneous in achievement, gender, and ethnicity, where differences exist in the classroom population.

**Individualistic Learning:** Lessons structured so that students are working by themselves to accomplish learning goals unrelated to the learning goals of other students; when one student achieves his or her goal, the goal



attainment of other students is unaffected (Johnson & Johnson, 1991). Within individualistic learning situation, learners receive assignments from the teacher, do not interact with each other, and request assistance only from the teacher and do not bother classmates. Trainer built the learning process based on a learner centralized concept, which is different from the traditional individualistic learning situations based on a centralized trainer concept. Individualistic learning is also different from individualized instruction. Because, individualized instruction include individual lesson plans for each learner, assessment of every learner's readiness, needs, characteristics, and accomplishments, redefinition of learning time, alternative learning aides, periodic monitoring of progress, and flexibility in assignments, facilities and time (Bolvin, 1991).

**Learning Outcomes:** The cognitive learning outcomes, which learners acquire after the learning process. Cognitive learning outcomes include verbal knowledge representing the first to be acquired and which serves as the foundation for efficient and accurate cognitive organization and strategies. For this purpose of this study, learning outcomes are measured by the test designed by the researcher.

**Training Reactions:** Training reaction measures of trainees were described as indicants of how much they liked the training, perceptions of how well organized the training program was, and whether trainees found the training useful (Kirkpatrick, 1987). The reaction questionnaire developed and used in CBRT was used in this study.

**Time of Groups:** Morning or afternoon groups. Trainings were conducted 3 hours in each of the five days. In order to control morning-afternoon effect coming from both trainer and subjects, first week, during morning session cooperative learning group participated training; and in the afternoon, individualistic learning group participated training. Second week, time of groups was shifted.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This chapter describes the literature in several disciplines that provide the conceptual framework for this research. The areas targeted were selected to determine major trends, recommendations, and gaps in research. Four distinct areas in this review are (a) training, with an emphasize on the effectiveness and evaluation of training programs, (b) adult learning, focusing on the principles of effective practice in facilitating learning in adults, (c) cooperative learning - theoretical background, essential elements, comparison with individualistic learning methods, and cooperative learning procedures within adult education settings, and (d) Turkish context related to training, cooperative learning and adult learning areas.

#### **2.1. Training**

To remain competitive, organizations need to maintain a flexible and strategic approach to their business, constantly assessing their strengths and weaknesses (Barber, 2004). For many organizations, these strengths and weaknesses are not derived from their physical assets, but from their intellectual assets; i.e. the people they employ. Key to a knowledge driven organization's survival, in a market where continuous improvement and adaptation are essential to remain competitive, is its ability to measure, manage, develop and leverage these intellectual assets. From an organizational perspective, Mabey, Salaman, and Storey (1998) argue that training and development is the pivotal link between an organization's human resource strategy and overall business strategy. Used in a strategic manner, Mabey et al. (1998) argue that training and development can give organizations a competitive edge in the content and delivery of products and services. Besides, today, more than ever, employees must have a working

knowledge, skills and abilities across various areas in order to meet changes in market dynamics, business enabling technologies, business ethics etc. (Attia, Honeycutt, & Leach, 2005).

Organizations recognize that without training their staff will miss opportunity and most likely perform at a lower level than is otherwise possible. Organizations also recognize that training is not a cost to the organization but an investment in it. However, organizations investing resources in training want to see that training expenditures actually aid the firm in reaching its objectives (Attia, Honeycutt, & Leach, 2005). Organizations use wide variety of training evaluation procedures that range from self-administered reports completed by the trainees, to informal debriefing sessions, to more elaborate calculations of enhanced revenue. The information and feedback emanating from these evaluation procedures are central to successful implementation of strategic organizational initiatives.

#### **2.1.1. Effectiveness of Training Programs**

The phrases training evaluation and training effectiveness have often been used interchangeably, yet each addresses very different research questions (Kraiger, Ford, & Salas, 1993). Training effectiveness models seek to explicate why training did or did not achieve its intended outcomes. This objective is accomplished by identifying and measuring the effects of individual, organizational, and training related factors on training outcomes such as learning and transfer of training (Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991).

An examination of training effectiveness models illustrates the central role of learning. For example, Baldwin and Ford (1988) discussed trainee, training design, and organizational characteristics that may affect the effectiveness of training. They included learning and retention as

mediating variables between these characteristics and the generalization and maintenance of trained behaviors on the job. The wide range of trainee characteristics found to predict training motivation and outcomes includes locus of control, conscientiousness, anxiety, age, cognitive ability, job involvement, and self-efficacy (Colquitt, LePine, & Noe, 2000).

Among the training design factors, objectives, instructional plan, consideration of relevant learning principles, and preparation for training and practice are the most important factors affecting learning, retention, and transfer of trained material (Baldwin & Ford, 1988). A wide variety of training design and instructional delivery options exist for nearly every training program in order to foster the acquisition of competence. Methods of training range from passive, information-based techniques (e.g., lectures) to computer-based, programmed instruction and learner-centered, performance-based techniques (e.g., hands-on demonstrations) (Laird, 2003). Lectures, one of the least engaging methods of training, are commonly used to present training content, and the most engaging methods of training focus on the development of knowledge in stages and emphasize principles of behavioral modeling. There is ample of evidence in the training literature that active approaches to learning are superior to less active approaches (Taylor, Russ-Eft, & Chan, 2005; Frese, & Zapf, 1994).

In their analysis, Burke, Sarpy, Smith-Crowe, Chan-Serafin, Salvador, and Islam, (2006) assessed relative effectiveness of different methods of worker safety and health training aimed at modifying safety-related knowledge, behaviors, and outcomes. In their meta-analysis including all studies published since 1971, findings are generally consistent with the expectation that as level of engagement in training increases, training will have greater effects in terms of reductions in negative safety and health outcomes. For the overall distributions, the mean effects associated with the least engaging, moderately engaging, and the most

engaging safety and health training methods were 0.20, -0.13, and -0.48, respectively, and these effects were significantly different from each other.

Bolt, Killough, and Koh (2001) examined the behavior modeling and lecture-based approaches to computer training using a social cognitive theory framework. Their emphasis was on task complexity as an added variable to prior performance, computer self-efficacy, outcome expectations, and performance. The authors conducted a laboratory experiment using a sample of 249 learners to determine the interaction effects between task complexity and training method on performance. The results showed that behavior modeling outperformed lecture-based training when task complexity was high.

Those and similar research results provide guidance for the design and delivery of training interventions. Efforts to increase the capacity of the workforce must be achieved through continued training programs, and the capacity to predict the impact of instructional methods on the training effectiveness would have immense practical utility for training decision makers (Goldstein & Ford, 2002).

### **2.1.2. Evaluation of Training Programs**

In addition to concerns regarding the preparation for and design of training, it is important to consider the vital role of evaluation in the training process (Alliger, Tannenbaum, Bennet, Traver, & Shotland, 1997; Kirkpatrick, 1994). The choice of evaluation criteria (i.e., the dependent measure used to operationalize the effectiveness of training) is a primary decision that must be made when evaluating the effectiveness of training (Arthur, Bennett, Edens, & Bell, 2003).

Training evaluation refers to a system for measuring whether trainees have achieved learning outcomes (Kraiger, Ford, & Salas, 1993). It is concerned with issues of measurement and design, the accomplishment of

learning objectives, and the attainment or requisite of knowledge and skills. Constructive evaluation occurs when specified outcome measures are conceptually related to intended learning objectives. Evaluation is conducted to answer either of two questions: whether training objectives were achieved (learning issues), and whether accomplishment of those objectives results in enhanced performance on the job (transfer issues) (Kraiger, Ford, & Salas, 1993).

Given the complexity of the marketplace and the speed at which changes must be implemented in order for organizations to compete and survive, human resources professionals and corporate trainers must demonstrate that training objectives have been met, and more importantly, have translated into improved performance on the job (Huselid, 1995). Such information may be gained during the evaluation process. However, for any training to be valuable, training criteria must be psychometrically sound, meaningful to decision makers, and must be able to be collected within typical organizational constraints (Tannenbaum & Woods, 1992).

Typical training evaluation studies examine the effects of either (a) a training intervention provided to an experimental sample as compared to an “no training” control sample or (b) two alternative forms of training provided to two roughly equivalent samples of trainees (Campbell, 1988). The latter represents the analysis of an incremental effect for the training. In these analyses, uncertainty regarding the effectiveness of the standard or baseline treatment introduces ambiguity into the incremental effect limits generalizability (Yates, & Feldon, 2004).

The most developed and used of the training evaluation models in the human resource literature focuses on defining different training effectiveness criteria and their organizational implications (Tan, Hall, & Boyce, 2003). Common to these models is the use of multiple criteria to gather data on training effectiveness. For example, although newer

approaches to, and models of, training evaluation have been proposed (Arthur, Bennett, Edens, & Bell, 2003). The Kirkpatrick's four-level model remains by far the most influential and prevalent approach among practitioners, and, to a certain extent, researchers. It serves as a point of departure for communicating understandings about training criteria (Alliger et al., 1997). Kirkpatrick's taxonomy of training criteria involves the assessment of (1) the trainee's reactions to training, (2) the extent of learning that has occurred, (3) whether trained knowledge, skills or behaviors have been transferred to the work environment, and (4) organization-level outcomes or results that have been impacted by training (Alliger et al., 1997; Kirkpatrick, 1994).

Kirkpatrick's model has been misunderstood by researchers and practitioners to be hierarchical (Alliger, & Janak, 1989). Specifically, the following assumptions arose: (1) each succeeding level of evaluation criteria is more informative (or "better" in terms of information obtained for the organization) than the last, (2) each level is caused by the preceding level, and (3) each succeeding level is correlated with the previous level. Using meta-analysis, Alliger and Janak (1989) clarified these misconceptions and found weak correlations among the evaluation types of training, and proposed that Kirkpatrick's model or taxonomy of training evaluation criteria clearly met a felt organizational need. The power of Kirkpatrick's model is its simplicity and its ability to help people think about training evaluation criteria; it provides a vocabulary and rough taxonomy for criteria. In the following sections, two levels were discussed, including relevant correlations from the literature.

#### **2.1.2.1. Training Reactions**

Level I of Kirkpatrick's framework for training evaluation represents the reactions of participants to training, usually collected through questionnaires administered at the end of the training program. Reaction

measures of trainees were described as indicants of how well they liked the training, perceptions of how well organized the training program was, and whether trainees found the training useful (Kirkpatrick, 1987). These measures provide feedback on the quality of training delivery, and for most of organizations, trainee reactions are the sole means of evaluation.

Mann and Robertson (1996) examined trainees reactions and knowledge gained as measures for effective training. Each trainee was asked to fill a questionnaire before the training, at the end of training, and one month later. The results indicate that training increased trainees' knowledge. However, positive attitudes do not predict how well people are able to perform actual tasks. Attitudes and reaction measure are not linked to later performance.

Although trainee reactions to training are clearly not the sole indicator of its effectiveness, it is possible that their reactions represent one variable that is part of many variables that influence training effectiveness. Mathieu, Tannenbaum, and Salas (1992) found that reactions to training played an important indirect role in both learning and posttraining performance. Specifically, reactions to training were found to moderate the relationship between motivation and learning and to mediate the relationship between motivation and posttraining performance. Several researchers have suggested that reaction measures that directly ask trainees about the transferability or utility of the training should be more closely related to other criteria than reactions measures that ask about "liking" (Tannenbaum & Yukl, 1992).

Although there are problems with the performance predictability of training reaction criteria, training researchers agree on the importance of evaluating training reactions (Morgan, & Casper, 2000). First, participant reactions can provide substantive input for the design and improvement of training efforts. Training is a continuous process, with participant reactions



providing one source of data for continuous improvement of each component of the training effort. Credible reaction data can be a tremendous diagnostic tool for improving the design and delivery of training. Second, the process of collecting participant reactions can serve a “customer relations” function, building up the customer’s sense that the training function is sincerely interested in the service it delivers. A third use of participant reactions is as a potential predictor of more costly criteria of training effectiveness – measures of learning, measures of on-the-job behavior or performance, and measures of organizational results. Because of the efficiency of the methodology (for example, surveys collected at the conclusion of training), the development of reactions as predictors of actual learning, transfer to the job, and organizational results would dramatically increase the utility of training evaluation.

#### **2.1.2.2. Learning Outcomes**

Level II of Kirkpatrick’s framework for training evaluation consists of measures of actual learning in the training program. This usually involves posttraining measures of knowledge, skill, or attitude change. While research suggests organizational training, when appropriately designed and delivered, is effective in yielding such outcomes (Arthur et al., 2003), it is logical that learning and retention of training material is a prerequisite to transfer (Kraiger, Ford, & Salas, 1993).

According to Kraiger et al. (1993), three types of learning outcomes might be targeted during training: (1) cognitive outcomes, such as the training of specific knowledge or cognitive strategies, (2) skill-based outcomes, and (3) affective outcomes, such as targeting attitude or motivation change. When assessing the learning outcome of organizational training, it is useful to consider which learning outcome is of interest, and how that outcome might best be impacted and evaluated. As compared with the Kirkpatrick (1994) or the Alliger et al. (1997) evaluation frameworks,

the Kraiger et al. (1993) framework of learning outcomes facilitates a more focused examination and evaluation of learning that results from training. Specifically, while Kirkpatrick and Alliger et al. point to the need to examine learning when evaluating a training program, the Kraiger et al. taxonomy specifies which learning outcomes (as well as levels of learning) have the potential of being impacted by training. Simply knowing whether a trainee can perform a task or process information says little about whether this individual has accurately learned the information, has integrated this information with prior knowledge, understands its hierarchical interrelationships with other concepts of interest, or gaps its potential for application. Further, training programs do not always target a cognitive change. Other outcomes may also be of interest (e.g. attitude, motivation or skill change).

Kraiger et al. (1993) reasoned that evidence of learning could be found in trainee development or improvement within three unique capacities: (1) cognitive, (2) skill, and (3) affective learning outcomes. Further, training objectives may be directed toward any or all of these categories. *Cognitive outcomes* of training may include the development of verbal knowledge, knowledge organization, and cognitive strategies. These outcomes are organized in chronological order, representing the order in which trainees will acquire the capability, with verbal knowledge the first to be acquired and which serves as the foundation for efficient and accurate cognitive organization and strategies. Measurement within this category is concerned with assessing not only the state of trainee knowledge, but also the processes by which knowledge is acquired, organized, and applied.

*Skill-based outcomes* of training refer to the development or motor or technical skills (Gagne, Briggs, & Wager, 1992; Kraiger et al., 1993). Trainee skill development typically includes a goal orientation and a demonstration of skill-related behaviors in a thoughtful and sequential

manner. Typically, development of trained skills will involve the movement through three distinguishable stages: (1) skill acquisition, (2) compilation, and (3) automaticity. Initial skill acquisition is measured by development of procedure-related declarative knowledge. Compilation involves integrating specific skill-related steps into a coherent whole. At this stage, skills are performed faster and with fewer errors. With high levels of compilation, automaticity will result, wherein the trainee will be able to produce skill-related behaviors while performing other activities. In general, skill development has been measured via trainee performance in role plays, simulations, or on the job (Kraiger et al., 1993).

*Affective outcomes*, the final category of learning outcomes, are neither cognitive nor skill-based, but still indicate that learning has occurred. Specifically, not all training programs target learning at the cognitive or skill level (Kraiger et al., 1993). Rather, the focus of these training programs may be to exact changes in an attitude or in level or direction of motivation. For example, training programs may target attitude change by developing organizational commitment, teaching tolerance for diversity, and instilling self-awareness. Such outcomes are measured by assessing trainee attitude strength (i.e., attitude accessibility, centrality, and internalization or conviction). Or, a training program may target motivational outcomes, such as altering or improving motivational dispositions, levels of self-efficacy, or goal-setting strategies.

## **2.2. Adult Learning**

In order for trainers to be effective in their role as support to employee development through training, they need to know and understand how to support adult learners (Lyons & Pinnell, 2001). It is important to distinguish the unique attributes of adult learners so as to be better able to

incorporate the principles of adult learning in the design of training instruction.

Foundational theories or models have been developed in an effort both to provide a theoretical basis for the practice of adult education and to expand educators' understanding of the adult learner and the learning process. Two main views of adult learning dominated the thinking in the early twenties. One view, proposed by Thorndike, approached adult learning from a behavioral perspective. The question that framed much of the early research on adult learning focused on whether or not adults could learn. In his book *Adult Learning*, Thorndike documented that adults could learn and had different abilities and interests than children. Thorndike's work provided the scientific foundation for the previously assumed facts that adults could learn (McGrath, 2005).

In contrast, the work of Lindeman focused on how adults learned. His belief was that adults discover new knowledge through the analysis of experience. This laid the foundation for six principles: situational learning over subject matter concentration; curriculum based on adult needs; the learner's experience is the most valuable resource; a focus on problem solving; of equal importance is the learners' experience and the teachers' knowledge; and that there is a shared authority between teacher and learner in the formulation of curriculum. These assumptions about adult learners became the foundation on which adult learning principles was grounded (Knowles et al., 1998).

As research into adult learning continued, Malcolm Knowles, in 1968, proposed a term for differentiating between learning done by students in grammar and secondary school and learning done by adults. The term he suggested was andragogy, which he defined as "the art and science of helping adults learn" (Knowles, 1980). This was in contrast to the term

pedagogy, meaning the science of how children learn. The use of this term united those researchers focused on the field of adult learning.

The andragogical model presents core principles of adult learning and important assumptions about adult learners. These core principles of adult learning are believed to enable those designing and conducting adult learning to design more effective learning processes for adults (Holton, Swanson, & Naquin, 2001). The model is a transactional model in that it speaks to the characteristics of the learning transaction (Brookfield, 1986). As such, it is applicable to any adult learning transaction, from community education to human resource development.

There are six core assumptions or principles of andragogy (Knowles et al., 1998):

- 1) Adults need to know why they need to learn something before learning it. Adults want to learn things that seem relevant and applicable to their current lives, including work and family matters.
- 2) The self-concept of adults is heavily dependent upon a move toward self-direction. Adults prefer learning situations that promote their positive self-esteem. These professional development activities include a plan to build success incrementally to help learners become more effective and competent.
- 3) Prior experiences of the learner provide a rich resource for learning. Adult learners bring personal experiences, work experiences, and social experiences to the learning environment. These experiences make valuable contributions to the learning process.

- 4) Adults typically become ready to learn when they experience a need to cope with a life situation or perform a task. Pratt (1988) suggested that life's situations could have a direct effect on the learner's readiness to learn. One situation may result in the learner being confident and self-directed where another situation may put the learner in a being confident and self-directed where another situation may put the learner in a more dependent role. Different situations require different types of support. Research studies (Hendricks, 2001) have shown that adults became increasingly self-directed and that their readiness to learn was stimulated by real-life tasks and problems.
- 5) Adults' orientation to learning is life-centered, and they see education as a process of developing increased competency levels to achieve their full potential. By presenting information based on real-life situation, opportunities for practicing problem-solving skills are increased. Adult learners want to be able to connect the content being learned to specific contexts they are experiencing in their lives.
- 6) The motivation for adult learners is internal rather than external. Wlodkowski (1985) identified four affective factors that contribute to adult motivation. These four factors are feeling successful as a learner, feeling a sense of choice in the learning, feeling the learning is something one values, and feeling that the learning is enjoyable. When these factors are in place, adults want to learn and make decision to spend extra time for learning.

Considering that andragogy has been the primary model of adult learning for more than three decades, relatively little empirical work has been done to test the validity of its assumptions or its usefulness in predicting adult learning behavior (Merriam & Caffarella, 1999). Few

studies have focused on the relationship between andragogical assumptions and instruction. There has not been much direct testing of the validity of andragogy, but it is important for instructors to be aware and adapt the instruction to serve the diverse and individual abilities, styles, and preferences found in the make-up of the groups that they lead. The research investigated that trainers have a variety in their awareness of those adult learning principles, and the application of the knowledge trainers have of adult learning principles in their training (McGrath, 2005). Understanding how adults learn can give confidence to trainers. Trainers should use more specific instruction on implementing practices that incorporate adult learning principles. For example, Brookfield (1986) lists principles of effective practice in facilitating learning in adults:

- 1) Adults engaged in learning should do so of their own volition. While the circumstances prompting the learning may be external, the decision to learn belongs with the learner. Brookfield terms this voluntary participation.
- 2) Effective learning in adult groups is characterized by mutual respect among participants.
- 3) There should be a sense of collaborative spirit among the members of the learning group, so those learners are engaged in a cooperative enterprise where different group members may assume leadership and facilitations roles. The collaboration is such that group process involves a continuous renegotiation in which competing claims are explored, discussed and negotiated.
- 4) Praxis, or practice unrelated to theory, is at the heart of the learning process, and there should be a continual process of activity, reflection, analysis followed by new activity.
- 5) Critical reflection and self-direction should be nurtured.

Adult learners have also been described as non-traditional students who are highly motivated, self-directed, self-reflective, independent, willing to collaborate with others, and willing to participate in group-decision-making processes (Morrison, Ross, & Kemp, 2001). Such learners tend to have a task-centered, problem-solving approach to learning and to bring a wealth of real-life experience as a powerful learning resource.

According to Knowles (1980), adult learning should involve a process of guided interaction in which learners engage in activities and tasks as part of self-directed inquiry. Therefore, an adult educator perceives the locus of responsibility for learning to be in the learners themselves. Kasworm (2003) conceptualizes the knowledge-construction process for adult-learners as a “constructivist, self-regulatory, socially and culturally mediated process” in which adult learners individually construct new representations and meanings through cooperative social practices, such as discourse or debate.

Garrison and Archer (2000) have introduced a transactional approach to adult learning according to which educational transactions grounded in the general characteristics of adult learners allow those learners to create meaning in the context of their work and life experiences. In this view, collaborative learning environments allow adult learners not only to confirm their ideas and interpretations but also to develop their critical thinking and self-regulation abilities in relation to specific educational goals. Personal meaning making and reciprocal confirmation are iterative phases of an interdependent teaching-learning transaction.

Experience and reflection also play an important role in the adult learning process. Facilitators need to recognize the considerable and unique experiences and expertise that adults bring to a learning situation--and to organize learning activities that take advantage of that experience. The emphasis on experience as a defining feature of adult learning was



expressed in Lindeman's frequently quoted aphorism that "experience is the adult learner's living textbook" and that adult education was, therefore, "a continuing process of evaluating experiences" (Brookfield, 1995). Adult teaching should be grounded in adults' experiences, and that these experiences represent a valuable resource.

Collins (1991) also agrees that self-directed learning and experience are the key points in the field of adult education, but he is concerned that much of adult education has become technocratic, subverting the ideal of adult education to that of serving the interest of the particular industry directed training. He claims that self-directed learning may have become "directed self-directed learning" in the organizational settings.

### **2.3. Cooperative Learning**

Cooperative learning is defined as the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson & Johnson, 2003). Cooperative learning is also defined as "a strategy for the classroom that is used to increase motivation and to provide a way for critical thinking, problem solving and to encourage collaborative social skills" (Johnson & Johnson, 1999). A basic premise of cooperative learning is that a learner's mind is not the blank state that John Locke envisioned – waiting to be inscribed by knowledgeable instructors. Instead, the collaboration of learners' thoughts and experiences provides vast resources for the construction of new knowledge and understanding when teachers create the appropriate learning conditions (Johnson, Johnson, & Holubec, 1998). Cooperative learning is what the learner does than what is done to the learner. Learners work together to accomplish shared goals and to maximize their own and others' productivity and achievement (Johnson & Johnson, 1989; Slavin, 1990).

Cooperative learning is one of the most abundant areas of theory, research, and practice in education. Over the past 90 years 550 studies have been conducted comparing the relative effectiveness of cooperative, competitive, and individualistic learning. Since the first research study in 1898, nearly 600 experimental studies and over 100 correlational studies have been conducted (Johnson, Johnson, & Stanne, 2000; Johnson & Johnson, 1989). The multiple outcomes studied can be classified into three major categories: achievement/productivity, positive relationships, and psychological health. The research clearly indicates that cooperation, compared with competitive and individualistic efforts, typically results in (a) higher achievement and greater productivity, (b) more caring, supportive, and committed relationships, and (c) greater psychological health, social competence, and self-esteem. The positive effects that cooperation has on so many important outcomes makes cooperative learning one of the most valuable tools educators have.

In the past four decades, cooperative learning has become a widely used instructional procedure in all grade levels and subject areas. In the past three decades, modern cooperative learning has become a widely used instructional procedure in preschool through graduate school levels, in all subject areas, in all aspects of instruction and learning, in nontraditional as well as traditional learning situations, and even in after-school and non-school educational programs.

The widespread use of cooperative learning is due to multiple factors (Johnson, Johnson, & Stanne, 2000). Three of the most important are that cooperative learning is clearly based on theory, validated by research, and operationalized into clear procedures educators can use.

Second, the amount, generalizability, breath, and applicability of the research on cooperative, competitive, and individualistic efforts provides considerable validation of the use of cooperative learning, perhaps more

than most other instructional methods. There are over 900 research studies validating the effectiveness of cooperative over competitive and individualistic efforts. The research on cooperative efforts, furthermore, has unusual breath, that is, it has focused on a wide variety of diverse outcomes. Over the past 100 years researchers have focused on such diverse outcomes as achievement, higher-level reasoning, retention, time on task, transfer of learning, achievement motivation, intrinsic motivation, continuing motivation, social and cognitive development, moral reasoning, perspective-taking, interpersonal attraction, social support, friendships, reduction of stereotypes and prejudice, valuing differences, psychological health, self-esteem, social competencies, internalization of values, the quality of the learning environment, and many other outcomes.

The third factor contributing to the widespread use of cooperative learning is the variety of cooperative learning methods available for teacher use, ranging from very concrete and prescribed to very conceptual and flexible. Almost any teacher can find a way to use cooperative learning that is congruent with his or her philosophies and practices.

### **2.3.1. Theoretical Background of Cooperative Learning**

Cooperative learning is framed in the theory of social interdependence, grounded in the work of Koffka, Lewin, and Deutsch (Johnson, Johnson, and Smith, 1998). Additional theoretical support for cooperative learning is found in the cognitive learning theory, which emphasized that learning is based on intrinsic motivation and is constructed by the learner. In the cooperative classroom, learners jointly construct knowledge, reinforcing resource and role interdependency. The behavioral perspective provides the structure for group work, in that it must be reward and task oriented, providing extrinsic motivation for learning (Johnson, Johnson, & Smith, 1998).

The nature of cooperative learning is placed within the broader context of social interdependence theory. The basic premise of social interdependence theory is that the ways in which participants' goals are structured determine how they interact, and the interaction pattern determines the outcomes of the situation (Deutsch, 1949 as cited in Johnson & Johnson, 2003).

When individuals take action there are three ways what they do may be related to the actions of others. One's actions may promote the success of others, obstruct the success of others, or not have any effect at all on the success or failure of others. In other words, individuals may be (Johnson & Johnson, 1989):

1. Working together cooperatively to accomplish shared learning goals. When a situation is structured cooperatively, individuals' goal achievements are positively correlated; individuals perceive that they can reach their goals if and only if the others in the group also reach their goals. Thus, individuals seek outcomes that are beneficial to all those with whom they are cooperatively linked.
2. Working against each other to achieve a goal that only one or a few can attain. When a situation is structured competitively, individuals work against each other to achieve a goal that only one or a few can attain. Individuals' goal achievements are negatively correlated; each individual perceives that when one person achieves his or her goal, all others with whom he or she is competitively linked fail to achieve their goals. Thus, individuals seek an outcome that is personally beneficial but detrimental to all others in the situation.
3. Working by oneself to accomplish goals unrelated to the goals of others. When a situation is structured individualistically, there is

no correlation among participants' goal attainments. Each individual perceives that he or she can reach his or her goal regardless of whether other individuals attain or do not attain their goals. Thus, individuals seek an outcome that is personally beneficial without concern for the outcomes of others.

The research on social interdependence has an external validity and generalizability rarely found in the social sciences (Johnson & Johnson, 2003). Deutsch (1949, as cited in Johnson & Johnson, 2003) conceptualized two types of social interdependence—positive and negative. *Positive interdependence* exists when there is a positive correlation among individuals' goal attainments; individuals perceive that they can attain their goals if and only if the other individuals with whom they are cooperatively linked attain their goals. *Negative interdependence* exists when there is a negative correlation among individuals' goal achievements; individuals engaged in such processes perceive that they can obtain their goals if and only if the other individuals with whom they are competitively linked fail to obtain their goals.

In the practice of cooperative learning, positive interdependence creates promotive interaction – which occurs as individuals encourage and facilitate each other's efforts to reach the group's goals, and in turn, maximizing each member's learning (Johnson & Johnson, 1998). Group members can promote each other's success by: (a) giving and receiving help and assistance – both task-related and personal; (b) exchanging resources and information – orally explaining, elaborating and summarizing information, and teaching one's knowledge to others; (c) giving and receiving feedback on task work and teamwork behaviors – monitoring each other's effort; (d) challenging each other's reasoning through intellectual controversy, promoting curiosity and motivation to learn; (e) advocating increased efforts to achieve – encouraging others to achieve increases one's

own commitment to do so; (f) mutually influencing each other's reasoning and behavior; (g) engaging in the interpersonal and small group skills needed for effective teamwork; and (h) processing how effectively group members are working together and how the group's effectiveness can be continuously improved.

According to cognitive – developmental theory, cooperation is paramount for cognitive growth. Jean Piaget theorized that when individuals interact with society, positive sociocognitive contradictions occur that induce a state of cognitive disequilibrium (Johnson & Johnson, 1998). This disequilibrium, in turn, promotes perspective-taking ability and, hence, cognitive development. Dialectical theories, also cognitive – developmental in nature, assert that knowledge is social, constructed by society and conveyed to the individual.

Behavioral-learning theorists posit that students will improve their performance levels on tasks for which a reward of some sort follows; conversely, students will reduce their efforts on tasks that yield minimal or no reward, or even punishment (Johnson & Johnson, 1998). B. F. Skinner, considered by many as the person who instigated the behavioral-learning theory movement and who developed the theory of operant conditioning, advanced the use of group contingencies to promote learning. Cooperative learning involves the provision of incentives such as better quality of output for members of a group to collaborate with their group colleagues. Moreover, behavioral learning theorists contend that when cooperative learning improves overall performance levels of each group member, this technique serves as a positive reinforcer (Johnson & Johnson, 1998).

As summarized by Johnson and Johnson (1998), social interdependence theorists believe that cooperation is based on intrinsic motivation induced by interpersonal components, with a collaborative desire

to achieve being central toward achieving cooperative goals. Cognitive-developmental theorists assert that cooperative efforts lead to disequilibrium and cognitive reorganization, which promote group goals. Finally, proponents of behavioral-learning theory posit that cooperative efforts are influenced by extrinsic motivation to achieve rewards and positive reinforcement. All theories posit that cooperative-learning environments foster higher academic achievement levels than do competitive or individualistic settings (Johnson et al., 1998).

In the interactive classroom, the environment consists of cooperatively created goals, democratic structure, and group problem solving when concerns occur. Conflict provides opportunities for further learning, rather than frustrating teachers and students. Consequently, through CL, students become accountable, not only as individuals but also as members of a group. At the heart of the interactive learning classroom is an atmosphere of caring that is encouraging and supportive for each student (Johnson & Johnson, 1989). The teacher acts as a facilitator of learning, approaching the group when necessary.

Cooperative group work fosters purposeful, task-oriented communication. The task to be completed or the problem to be solved is the student's main focus, but the information sharing and discussion process assists students in acquiring more knowledge and skills. All students take opportunities for peer group interaction on learning tasks to obtain new knowledge and apply it in future lessons. The more opportunities students have to listen, talk, practice or experience, the better the retention of new information and ideas in the classroom (Johnson & Johnson, 1989). In other words, by using CL techniques in classrooms, students can experience academic success and positive self-esteem. Therefore, many cooperative learning activities and approaches result in students taking responsibility for creating a real life for themselves.

### **2.3.2. Five Essential Elements of Cooperative Learning**

According to Johnson and Johnson (1989), most teachers believe that they are implementing cooperative learning, when in fact they are missing the essence. Cooperation is much more than being physically-near other learners, discussing and helping or sharing material with other students in the classroom. Knowing that cooperative learning can significantly increase student achievement (compared with competitive and individualistic learning) when properly implemented does not mean, however, that all operationalizations of cooperative learning will be effective or that all operationalizations will be equally effective. "The learning together method asserts that five basic principles are necessary for successful cooperative groups" (Johnson, Johnson & Holubec, 1993).

#### ***Principle 1: Positive Interdependence***

The first and most important element in structuring CL is positive interdependence. According to Johnson and Johnson (1989), students of all ages must perceive themselves as being linked with each other in a way that one cannot succeed unless everyone succeeds. Positive interdependence is the heart of cooperative learning; therefore, students must believe that they "sink or swim together" (Johnson & Johnson, 2003). Within every cooperative lesson, positive goal and role interdependence is structured by group members (a) "agreeing on the answer and the strategies for solving each problem," and (b) "fulfilling assigned role responsibilities" (Johnson, 1992).

In order to strengthen positive interdependence, joint rewards, divided resources and complementary roles may also be used. Joint rewards refer to offering students rewards for meeting certain criteria. Divided resources give each group member a part of the total information required for completing an assignment. Complementary roles refers to giving each group member different roles, such as a reader, who reads the problem aloud to the group,



checker of understanding, encourager of participation, and elaborator of knowledge. Role assignments are varied and are rotated, thus giving each student opportunities to learn and practice many different social skills. With these social skills, students strengthen weaker skills, reinforce stronger skills, and learn new skills. However, new roles must be taught and modeled. Having a badge or paper nameplate for each role assigned with a description of the role is helpful. This is particularly useful when learners first begin to work in learning groups. If there is no positive interdependence, there will be no cooperation.

### ***Principle 2: Individual Accountability***

Each individual learner's performance is assessed by the teacher, and the results are given back to the group and individual. The group must know who needs more assistance, support, and encouragement in completing the assignment, but also that to "hitchhike" onto the work of others is unacceptable. The purpose of CL groups is to make each member a stronger individual. The methods that use only a group grade or a group product without making each member accountable, do not consistently produce achievement gains (Slavin, 1995). To ensure that each member is strengthened, learners are held individually accountable to complete their share of the assignment. Common ways to structure individual accountability include the following: (a) giving an individual test to each learner; (b) randomly selecting one learner's product to represent the entire group; and (c) having each learner explain what has been learned to a classmate (Johnson, Johnson, & Holubec, 1993).

### ***Principle 3: Face-To-Face Interaction***

There are important cognitive activities and interpersonal dynamics that only occur when learners promote each other's learning. This activity includes orally explaining how to solve problems, teaching one's knowledge

to classmates, checking for understanding, discussing with each other the nature of the concepts and strategies being learned, and connecting between present and past learning. Accountability to peers, ability to influence each other's reasoning and conclusions, social modeling, social support, and interpersonal rewards all increase as the face-to-face interaction among group members increases. To obtain meaningful face-to-face interaction, the size of the groups needs to be small, about two to six members. However, four members are best for paired work. Each of these activities can be structured into group task directions and procedures. Positive interdependence creates the conditions for students to work together to promote learning interest and assist and encourage each other.

#### ***Principle 4: Social Skills***

Social skills include ways students interact with each other to achieve activity or task objectives and the ways learners interact as teammates. The social skills behavior may not occur spontaneously with all learners, and teaching those individuals can have a profound impact on attentiveness, spirit, and motivation (Johnson & Johnson, 1999). Cooperative learning is inherently more complex than competitive or individual learning. However, social skills must be taught to learners just as purposefully and precisely as academic skills. Most learners have never worked together in learning situations and thus lack the needed social skills. In addition, leadership, decision-making, trust-building, communication, and conflict-management skills enable learners to interact effectively with their colleagues in their organization.

#### ***Principle 5: Group Processing***

Group processing exists when group members discuss how well goals are being achieved as well as maintaining effective working relationships. Groups need to describe what member actions are helpful and unhelpful and make decisions about what behaviors to continue or change. Learners must also be given the time and procedures for analyzing how learning groups are

functioning and the extent to which learners are employing social skills to help all group members. The process includes the following: (a) enabling learning groups to focus on group maintenance; (b) facilitating the learning of social skills; (c) ensuring that members receive feedback on participation; and (d) reminding students to practice collaborative skills consistently. When difficulties in relating to each other arise, learners have to engage in group processing and identify, define, and solve the problems to work together effectively.

Cooperative learning is an effective instructional method and worldview (Cohen, Brody, & Sapon-Shevin, 2004). In order to effectively use cooperative learning, trainers should understand the nature of cooperation and the essential components of a well-structured collaborative lesson. The essential elements of cooperative learning also allow trainers to adapt to unique circumstances, needs, and learners and fine-tune when implementing cooperative learning in classrooms for learners of all ages.

### **2.3.3. Adult Learning and Cooperative Learning**

The philosophies and theories of adult learning, beginning in the early 1900's, have been directed toward improving instructional effectiveness, and thus, learning. Several theories provided the foundation for group dynamics that initiated the team-based work environment in the late 1940's and 1950's (Gilliam, 2002). Dewey, Lindeman, and Knowles provided key philosophical and theoretical foundations for cooperative learning in the adult setting. Democracy, interactive learning, and learner-centered education are a few of the themes established by these founding fathers in the adult education arena that are also found in the cooperative learning philosophy. While the current emphasis on cooperative learning originated at the elementary and secondary educational levels, there are strong philosophical and theoretical ties between cooperative learning and

adult learning, creating an easy transition and adaptation of the learning model to the training of adults.

Theoretically, cooperative learning is unique in comparison to other adult learning models. The result of Thompson and Chapman's (2004) study suggest that cooperative learning procedures can be used effectively within adult education classes, but that their efficacy may depend heavily on the classroom management skills of the trainer. For example, Galbraith (1990) identified specific responsibilities for teachers of adults. These include establishing a climate that fosters adult learning, involving learners in the planning of the curriculum and the setting of objectives, helping learners identify their learning needs, facilitating the use of resources to accomplish their identified goals, and involving learners in evaluating their learning.

The impact of cooperative-learning environments and peer orientations on student performance has been investigated widely by educational researchers. However, virtually all of the cooperative-learning studies undertaken on adults have been at the associate or baccalaureate levels, or the like (Onwuegbuzie, Collins, & Elbedour, 2003).

Since 1924, there have been more than 168 studies conducted that have compared the relative efficiency of cooperative, competitive, and individualistic learning on the achievement of individuals in college and in adult settings (Johnson & Johnson, 1998). These investigations indicate that cooperative-learning techniques lead to higher levels of academic achievement than do either competitive (effect size = .49) or individualistic (effect size = .53) methods (Johnson et al., 1998). Also, Qin, Johnson, and Johnson (1995), in a review of 46 studies at the postsecondary level, found positive effects on problem solving associated with the cooperative-learning model in 55 of the 63 outcomes.

Springer, Stanne, and Donovan (1999) also conducted a meta-analysis of 39 studies in undergraduate science, mathematics, engineering, and technology (SMET) instruction, and found that various forms of small-group learning are effective in promoting greater academic achievement, more favorable attitudes toward learning, and increased persistence through SMET courses and programs.

In his research, Doymus (2008) found that cooperative learning is also viewed as a tool for preparing students to work in teams as required in various employment settings, in the home, and in the community when there is a need to combine energies and work towards a common goal. In today's information age employees need to be able to think creatively and critically, solve problems, work in teams, and make shared decisions. Accordingly, to improve their professional skills, employees need to enhance their learning of problem solving, interpersonal, cooperative, and technical skills. Five elements of cooperative learning are clearly important aspects of healthy teams in the workforce (Lewis, Tucker, Tsao, Canaan, Bryant, Talbot, King, & Flythe, 2001). Those teams would share common goals and would all have skills from specific trainings to bring to the team (positive interdependence). They would work in the same room creating management plans, operating, and solving other problems and challenges together (face-to-face interaction). Teams would expect each member to make a contribution and be responsible for his or her part of the work (individual accountability). Teams need development in teamwork and group skills (interpersonal and small-group skills). Finally, teams, if they are to function well and improve, need to reflect on what they are doing and look to ways they can function more effectively (group processing). The CL model, since it is a very good match to actual teamwork, can simulate and serve as a vehicle to train functional, real-life interpersonal teams.

Gibson and Campbell (2000) examined the training of junior hospital doctors to identify whether any feature of cooperative learning was present in the way participants work and learn, and, if it was present, assess whether it helped the participants to achieve their goals. Results indicate that participants were positive about working and learning as members of a team and that communication and cooperation were necessary skills. In addition to the different learning situations that occur in hospital, the focus group learning improves patient care and knowledge acquisition.

Team based active learning as a learning experience, can range on a continuum from collaborative learning (least structured) to cooperative learning (most structured) (Laverie, 2006). Both collaborative and cooperative learning is an active, constructive process (Millis & Cottell, 1998) involving a sense of community and is thus inherently social. But, groups exist for a reason. People join groups to achieve goals they are unable to achieve by themselves. In cooperative learning, positive goal interdependence exists when a mutual or joint goal is established so that individuals perceive that they can attain their goals if and only if their group mates attain their goals. The essence of CL is to communicate and negotiate ideas to “improve meaningfulness and retention” and make progress together.

#### **2.4. Individualistic Learning**

Individualistic efforts are working alone to accomplish goals unrelated to and independent from the goals of the others (Johnson & Johnson, 1989). Whether an individual accomplishes his or her goal has no influence on whether other individuals achieve their goals. Within individualistic situations, individuals seek outcomes that are beneficial to themselves. Individualistic learning is working by oneself to ensure one's

own learning meets a preset criterion independently from the efforts of other learners (Johnson & Johnson, 1999).

Each learner has his or her own set of materials, works at his or her own speed, tries not to disturb classmates, and seeks help and assistance only from the teacher. Learners are expected and encouraged to focus on their own goals, have a strict self-interest, see their success as dependent on their own abilities, celebrate only their own success, and ignore as irrelevant the success or failure of others (Johnson & Johnson, 1999).

In individualistic learning, sometimes referred as traditional methods of teaching that have been used in most learning settings, the main source of the learning process in a classroom was the teacher; therefore, learners should deal mainly with the teacher to acquire knowledge. The results of the meta-analysis conducted by Johnson, Johnson, and Stanne (2000) provide evidence that individualistic learning methods have produced lower achievement than cooperative learning, and the more conceptual approaches to cooperative learning may produce higher achievement than the direct methods.

According to Johnson and Johnson (1999), the basic elements of an individualistic goal structure include each learner's working on his or her own materials and space, perceiving the task as relevant and important, tuning out other learners and distractions, and using the teacher as a resource. It is most appropriate to use the individualistic goal structure when the material to be learned is simple, straightforward, and needed for use in the near future. The primary skill necessary to is to be able to work on one's own, ignoring the other learners. The teacher's role in an individualistic learning situation is to arrange the room so that learners will not be distracted by each other, give learners their individual set of materials, explain that students are to work alone and check only with the teacher when they need help, set a clear criterion for success that everyone

could conceivably reach, ask learners to work on their own, circulate among the learners and monitor their work, intervene to teach skills or help learners to refocus on their task, and give learners time to evaluate how well they have learned (Johnson & Johnson, 1999).

## **2.5. The Turkish Context**

As stated earlier, research studies into the training, cooperative learning and adult learning in Turkey are limited. Due to the relevance they bear to the proposed study, some findings of the existing studies carried out by researchers and reports published by several organizations were summarized in the following sections. First, labor market, labor force and working population of Turkey with respect to educational system, and training opportunities were discussed, and training issues in the Turkish Development Plans and several studies related to Turkish labor force were also summarized. Second, some of the cooperative learning studies published in last decade focusing mainly on the elementary, high school and undergraduate levels were summarized. Lastly, EU funded program and plans of Turkish Ministry of Education in adult education were summarized with some research findings related to adult learning.

### **2.5.1. Training**

Shortage of qualified labor force remains to be a problem. This is partly due to the fact that newcomers to the labor market are not offered sufficient guidance in accordance with the needs of the labor market (Toka, 2005).

Although the increase in the working age population represents a unique opportunity for Turkey for both economic and social developments, provided that there is a substantial increase in human resources development through adequate investment in education and training. A continuation of



the recent acceleration of economic growth will increase the need for medium and high skilled workers (ETF, 2006).

The Turkish State Institute of Statistics has made projections until 2020 predicting that, by then, 40 million people will be in the 15 – 44 age group and 10 million in the 45 – 64 age group. This implies that almost 70% of the population will be working age (15 – 64). Despite positive signs of becoming a developing society, Turkey has not been able to take full advantage of this opportunity stemming from its young population.

The overall educational attainment levels of the working population are very low compared to European countries (nearly 60% of the labor force is composed of basic education graduates or people who dropped out from basic education) (ETF, 2006). Besides the newcomers to the labor market are not offered sufficient guidance in accordance with the needs of the labor market (Toka, 2005). Basic education (compulsory education) is 8 years in Turkey and it ends at the age of 14-15. Compulsory education aims to equip individuals with core competencies that will allow them to be active citizens. These competencies do not include any vocational competencies that will prepare them to enter into work life (Corradini & Fragoulis, 2003). Thousands of young people are trained in the fields that are not needed. The content of vocational training courses hardly meets the needs of working life. In higher education the two year diploma program, which aims to develop working skills of young people, does not emphasize learning generic competencies that would assist graduates participate in a changing labor market (ETF, 2006).

Within the non-formal training system, public, non-governmental, and private organizations like public education centers, Non-Governmental Organizations (NGOs) and training centers of companies, offer a variety of social/cultural, vocational, and literacy/numeracy courses in order to overcome the problems stemming from the shortage of skilled workers.

Vocational training centers offer apprenticeship, journeymanship, and mastership programs. Among these, particularly visible are a number of foundations established by affiliates of employers' organizations.

Available information suggests that larger companies do organize training activities for their staff, but since this is done under their own responsibility and funding, it is largely undocumented and therefore not reflected in the official statistics. Besides, there is no data available for on-the-job trainings received by public and private employees on their occupations or on different subjects.

In a study (Aksoy, 2007) focusing on training levels and career development behaviors in small and mid-sized firms in the context of training, employment, and the new economy discourse, the firms' policies and attitudes related to changing training and employment issues were investigated. Subjects of the study were employers and managers within the firms located in the OSTIM Organized Industrial Region in Ankara, Turkey. The interviews indicated that a majority of the managers did not participate in educational or training programs and thus did not focus on life-long education. Most respondents represented positive attitudes about training for their employees. Almost all of the respondents said that their company supports or provides in-service training for their employees, focusing directly on-the-job requirements. The findings also supported the previous notions about the gap between what Turkish Vocational Education System provides in the way of work skills and what small business managers expect.

Another study conducted by Dönmez (2005) focused on evaluation of a training program in a private company. The study also aimed at exploring the learning level of the staff, measuring staff's reaction to the training program, finding out behavioral changes of the staff, which may positively affect the company. In the study, one-day training program was

conducted in order to improve staff's communication skills, to define and solve the existing communication problems, to assist staff to select appropriate basic communication strategies in their relationships, and to support them to reflect on their own practice for the working environment. The researcher used the case study research method to examine the effectiveness through the perceptions of the staff related to the training program. Data was analyzed both qualitatively and quantitatively, and the results indicated that the staff had acquired the skills that the training program had aimed. On the other hand, the participants complained about the instructional materials, physical conditions of training, and the instructional techniques used.

### **2.5.2. Adult Learning**

The Ministry of National Education (MoNE) has the responsibility for planning, development, execution, monitoring and supervision of all types and levels of education and training with the exception of higher education. Compulsory education has been extended to 8 years in 1997 by combining elementary school and lower secondary school into basic education. The Law 4702 enacted in 2001 provides the framework for extending basic education to 12 years from 2004. Vocational and technical high schools provide training in more than 130 occupations and giving access/leading to the qualification of specialized worker and technician respectively. Participation rate in vocational programs at upper secondary education was of 19.4% in the age group 15-19 in 2001 (Corradini & Fragoulis, 2003).

Turkish legislation conceives vocational training as a system of dual inspiration, with its theoretical (school training) and practical (in-company training) dimensions. Vocational training policies and activities are mostly carried out by the MoNE with the responsibility of laying down the principles regarding the training of apprentices, journeymen and masters

and the vocational training to be organized in schools and enterprises (Corradini & Fragoulis, 2003).

The National Education Basic Law (no. 1739) defines non formal education and training (NFE&T) as the collection of education, training, production, guidance and implementation activities offered throughout one's working life. Those have not completed formal vocational education and training is the main target.

The EU funded program for “Strengthening of Vocational Education and Training” conducted between the years of 2002 and 2007 with the aim of assisting the Turkish Government through MoNE (Ministry of National Education) in the process of modernization and adaptation of the VET system to the socio-economic needs of the country and to the principles of life-long learning. Among its main objectives was the strengthening of the institutional capacity at national, regional and local levels of public administration, social partners' representatives and companies.

Another EU funded program for “The Modernization of Vocational Education and Training” conducted between 2003 – 2007. The objective of this program, which was complementary to the previous one, was to strengthen the capacity of Turkish authorities in organizing and delivering a modern and efficient system of pre-service and in-service teachers training.

Yıldız (2004) analyzed university-based adult education research perspectives in terms of contents, methodological aspects, quantity and continuity of survey based on the documentary reviewing of the 110 thesis which were carried out as graduate research at the Bosphorus University and Ankara University from 1978 to 2001. The studies with the name including “adult education/public education” and/or advisor specialized in the area of Public Education were selected as the sample of the study. The limited number of studies within the time period mentioned was evaluated, as there

is a need for more research in adult education area in Turkey. In addition to limited number of studies, researchers focused more descriptive types of studies like needs assessment and program evaluation. More research studies in adult education especially focusing on cause-effect relationships are needed in order to guide practitioners working for both economic and social development of Turkey.

### **2.5.3. Cooperative Learning**

Acar and Tarhan (2008) studied the effectiveness of cooperative learning as opposed to a traditional lecture approach, on 57 ninth grade high school students' understanding of metallic bonding and on preventing misconceptions related to this subject. The results of the achievement test used to identify students' understanding of metallic bonding indicated that the cooperative learning group had higher scores compared to traditional teacher centered group.

In other study in elementary level, cooperative concept mapping was found as more effective on learning strategy use than individual concept mapping, which is supporting the issue of that the cooperative learning promotes use of effective learning strategies (Guvenc, & Acikgoz, 2007). Similarly, in several other studies of comparing the cooperative learning and traditionally designed instruction, cooperative learning groups outperformed the group in traditional learning condition in terms of achievement (Gumus, & Buluc, 2007; Erdemir, 2006). Additionally, students in cooperative learning groups enjoyed learning and working in groups, students became more active in learning activities and preferred cooperative learning activities in other courses (Gumus, & Buluc, 2007). Cooperative learning method was also tested as a social skill instruction program for children with hearing disability in learning the basic social skills (Avcioğlu, 2007). Results indicated that those students were able to learn basic social skills through cooperative learning.

Another study conducted in the undergraduate level, the effect of cooperative learning versus individual learning methods on 68 undergraduates' understanding of chemical equilibrium was carried out in a first-year general chemistry course (Doymus, 2008). Students participating in the cooperative learning group were divided into four "home groups", and each of these home groups contained four students. Achievement test containing multiple-choice and open-ended questions applied to both groups at the end of the study. The results indicated that the cooperative learning group was more successful than the individualistic learning group; they developed an easier understanding chemical equilibrium.

In order to investigate the effectiveness of cooperative learning activities and STAD technique on students' vocabulary retention, Duzan (2006) conducted a study with 22 first year university students at Başkent University. Their ages ranged between 18 and 20. Two of the 4 reading lesson plans implemented cooperative learning group work activities, and a post-test was given to investigate the retention levels. Cooperative learning activities produced better retention results than group work activities.

In another study (Gomleksiz, 2007), the effects of cooperative learning method and traditional teacher-centered instruction on 66 engineering students' achievement in learning vocabulary and active-passive voice in English as a foreign language were studied and their attitudes towards learning English was explored in the Faculty of Engineering. The study was designed in such a way as to compare the students' performance and attitudes towards learning English before and after experiment. The results revealed statistically significant differences in favor of the cooperative learning group on the dependent variables of improving vocabulary knowledge and learning active-passive voice in English. The attitude scale results showed that the cooperative learning experience had a significant positive effect on engineering students' attitudes towards learning

English and promoted better interactions among students as well. Although cooperative learning has been proven to be a successful method of instruction in primary to university level, Tatar and Oktay (2008) proposed that the effect of Relative Evaluation System (RES) in Turkish educational system on the interaction among students could be an obstacle to the cooperative learning. Because, in RES, the success of a student is appraised with a relational way with the success rates of other students in the class (Keskin, & Ertan, 2001); the potential, which the student has individually is not important. The excessive competition in the class would affect students' learning behaviors. Students who believe that their friends' success may result to their failing stay away from cooperative activities.

## **2.6. Summary of Review of Literature**

Training is crucial to maintaining optimal performance and adapting to change in today's dynamic business world. Turkey has developed certain policies and initiated particular programs in recent years with regard to the development of human resources through training, too. Training, however, is only useful to the employee and organization when it promotes the true learning and retention of relevant KSAs (Knowledge, Skills, and Abilities), and assists employees in translating these newly learned KSAs into improved performance within the work environment. Among the training design factors, instructional methods and consideration of relevant learning principles are the most important factors affecting learning, retention, and transfer of trained material. In order for trainers to be effective in their role as support to employee development through training, they need to know how to support adult learners and understand the impact of instructional methods on the training effectiveness like training reactions and learning outcomes. Research has found that cooperative learning when compared to individualistic learning enhances learner achievement, promotes self-esteem, and improves interpersonal relations. However, cooperative-

learning studies undertaken on adults have been mostly at the associate or baccalaureate levels, or the like, not at the organizational settings with older adults. Similarly, there is limited study focusing on training, adult learning and cooperative learning in Turkish training organizations. Within this context, the present study whose method was defined in the subsequent part in detail was conducted in order to increase the effectiveness of training programs conducted in the Bank and contribute to the relevant research in Turkey.



## **CHAPTER III**

### **METHOD**

The purpose of this chapter is to present overall research design and provides demographic information about the sample investigated in this study. The description of training program, research design and types of instruments used are explained, and the procedures followed to carry out the study are also presented. Finally, the data analysis method is explained.

#### **3.1. Research Design**

Throughout the study, an experimental research design was followed in order to investigate the effect of cooperative and individualistic learning methods on learning outcomes and training reactions of learners. A randomized post-test only comparison group design for the main independent variables was used in this study (Fraenkel & Wallen, 2000). Experimental group was instructed by cooperative learning method; comparison group was instructed by individualistic learning method. Then both groups were posttested on the dependent variables. A pretest was not used in the study in order to prevent testing effect. Because the treatment lasted only five days. Usually a pretest is used in order to determine whether groups are comparable prior to the program, but since random assignment was used in this study it was assumed that the two groups were probabilistically equivalent to begin with.

#### **3.2. Research Questions**

The purpose of this study was to compare the effects of cooperative learning method and individualistic learning method on learning outcomes and reactions to training. This study sought to build on and extend previous research by examining the effect of utilizing the cooperative learning

method in comparison to the use of the individualistic learning method with adult learners.

The major questions and hypotheses the study sought to answer were:

1. Is there a statistically significant difference between individual learners and cooperative learners in terms of learning outcomes (LOT) controlling for age?

H 1. There is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of overall learning outcomes (LOT) controlling for age.

2. Is there a statistically significant difference between individual learners and cooperative learners in terms of training reactions controlling for age?

H 2. There is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of training reactions controlling for age.

3. To what extent do trainees like or dislike the training program?

### **3.3. Description of Variables**

In the study, the dependent variables (DVs) used were the Learning Outcomes and Training Reactions. The independent variable (IV) was the method of instruction: the levels were individualistic learning method and cooperative learning method. A number of extraneous variables were selected to compare the two samples. These were age, job tenure (number of years worked in the Bank) and educational level. But, number of subjects in high school was much higher than other subjects. Hence, this variable was not included in statistical analysis. Additionally, job tenure variable was

found to be correlated almost perfectly with the age, so this variable was not included in the analysis either.

### **3.4. Subjects of the Study**

The study involved 92 employees working in the Printing Department of Central Bank of Republic of Turkey (CBRT). Assignment procedure and characteristics of subjects are given in the following sections.

#### **3.4.1. Assignment Procedure of Subjects**

Total number of currency inspection and processing clerks was 148 women in the Bank. All employees were planned to participate the study. Group sizes were fixed as 24 or 25 subjects for each of six groups. Human Resource Division of Printing Department assigned those employees to one of the groups randomly according to their organizational ID. But, 5 employees were quitted from the study before trainings started because of personal and work related problems like workload or annual leave. 4 employees had sick leave during training. Management called back 5 subjects due to workload during the training. As a result, 14 subjects quitted from the study. Additionally, before starting the trainings, 15 subjects changed their group due to workload or personal problems. Finally, 134 subjects, 42 in pilot study and 92 in main study fully participated to the study and completed all instruments. The number of subjects in main study groups was given on Table 1.

**Table 1**

Number of Subjects in Main Study Groups

	Cooperative Learning Groups	Individualistic Learning Groups
Morning	23	24
Afternoon	22	23
Total	45	47

**3.4.2. Characteristics of Subjects**

Subjects work as “currency inspection and processing clerk”, and are responsible for doing routine tasks in the Printing Department. They examine banknotes to detect defects, determine whether these defects are within allowable standards, and obtain verification of authorizations to release items for production usage. All subjects are women. Most of currency inspection and processing clerks have at least high school degree, because required educational background for this position is vocational high school.

There were 45 subjects in Cooperative Learning Groups, and 47 in Individualistic Learning Groups. The mean age of the subjects was 29.15 with the standard deviation of 9.08 and the range of 21 – 54 (Table 2). The mean job tenure of the subjects was 8.77 with the standard deviation of 8.62 and the range of 3 – 31 (Table 3). In Main Study Groups, 75 subjects had a high school degree, 16 subjects had two-year higher education degree, and 1 subject graduated from university (Table 4).

**Table 2**

Characteristics of Subjects in Terms of Age

	M	SD	Min	Max
Cooperative Learning Groups (n=45)	27.98	8.31	21	52
Individualistic Learning Groups (n=47)	30.28	9.72	21	54
Both Groups	29.15	9.08	21	54

**Table 3**

Characteristics of Subjects in Terms of Job Tenure

	M	SD	Min	Max
Cooperative Learning Groups (n=45)	7.76	8.04	3	31
Individualistic Learning Groups (n=47)	9.74	9.13	3	28
Both Groups	8.77	8.62	3	31

**Table 4**

Characteristics of Subjects in Terms of Educational Level

	High School	2-year Higher Education	University	Total
Cooperative Learning Groups (n=45)	34	11	—	45
Individualistic Learning Groups (n=47)	41	5	1	47
Both Groups	75	16	1	92

### 3.5. Description of Training Program

The name of the training program was “Training of On-the-Job Trainer” offered by the Training and Development Department in CBRT for “currency inspection and processing clerks”. Training Program was developed by the researcher, in response to the need reported by the Printing Department. The aim of the training program was to provide knowledge and techniques about how to teach their job to new clerks in the Printing Department. The content and length of the training programs taught to the cooperative learning and individualistic learning groups were held constant, and duration of training was totally 15 hours (3 hours in each of the five days).

Specifically two different training programs were developed, one for individualistic learning, and the other for cooperative learning in order to test the effect of each method on learning outcomes and training reactions. Each training program consisted of five units. First unit, small-group skills development, was same for both groups. In order for cooperative learning groups function effectively, group members must be taught cooperative skills or small group skills, like *sharing ideas and opinions, asking for facts and reasoning, directing group’s work, encouraging other’s participation, paraphrasing other’s statements, and energizing group*. The aim of teaching small group skills to both groups was to equalize the experimental conditions in terms of duration. Rest of the trainings was differentiated in terms of the methods used for same objectives.

The rest of the program consisted of four units, one unit for a day. Training focused on Structured On-the-Job Training (SOJT), which is defined as “The planned process of developing competence on units of work by having an experienced employee train a novice employee at the work setting or a location that closely resembles the work setting”. All groups had the same content materials on SOJT translated and summarized from R.

Jacobs's book of Structured On-The-Job Training (2002) and G. Sisson's book of Hands-On Training (2001). The name of units of each day was given on Table 5.

**Table 5**  
Training Program Details

Day	Name of Lesson	Lesson Details	Duration – Hours
1	Preparation	Small-group Skills Development	3
2	Unit 1	Developing Employee Expertise and Competence Through Training	3
3	Unit 2	SOJT Steps: Prepare for Training, Open the Session and Present the Subject	3
4	Unit 3	SOJT Steps: Practice the Skills, Evaluate Performance and Review the Subject	3
5	Unit 4	Tools to Enhance SOJT and Types of SOJT	3

Researcher developed minutely planned lesson scripts for individualistic learning classes and cooperative learning classes. Comprehensive lesson plans structured for the experiences of both individualistic and cooperative learning groups. The lesson plans contained specific objectives and were designed to facilitate on the job training knowledge of trainees. An experienced training specialist responsible for training program development in the Bank, examined the lesson plans, according to her suggestions, changes were made in the lesson plans.

The researcher also acted as trainer, instructed all groups. Researcher has an Adult Education Certificate, and participated courses and training programs focusing on cooperative learning, and experienced this method for more than 2 years in the institution where she works.

In both groups, trainer behaved as a facilitator in order to accelerate participants' learning by appropriate classroom activities and problems that have relevance and meaning to participants. Trainer used constructivist approach in both training groups. Trainees were encouraged to think, ask questions, test ideas, and explain concepts. Trainees were also encouraged to build connections between daily work life and the concepts they are learning. Classroom climate was created to encourage discussions and negotiation of ideas. At the beginning and end of each day, and when necessary, trainees had given an opportunity to change and organize their cognitive structure related to SOJT concepts. But, for example, questions were directed to individuals in individualistic learning method groups, and to groups in cooperative learning method groups. Similarly, responding to questions, brainstorming possible alternatives, looking for information, discussing solutions, reviewing and critiquing solutions, integrating a solution with existing knowledge and experiences, and asking new questions were directed to individuals in individualistic learning groups, and to groups in cooperative learning method groups. The sample lesson plans of first and second units of both groups were given in Appendix A. The summary of each treatment was given in the following sections.

### **3.5.1. Cooperative Learning Group**

Basically five essential elements of cooperative learning were used to structure lesson plans of CL. In the CL lesson plans, both academic and social skill objectives were specified, the tasks and goals structures, and assigned roles within groups were explained, and the procedures for the



learning activities were described in minute base. Group members often sat in groups on the floor as they worked on their mutual group goal.

Many different types of cooperative-learning group interactions were experienced. Base groups, Jigsaw II groups and pair reading groups were formed for some lessons as participants worked together on their specified tasks. Examples of those tasks included (a) problem solving – groups organized to develop solutions to problems given by trainer, and (b) learning/instruction – groups were given to learn about a particular content unit and instructing the rest of the learning group. Informal cooperative learning groups were also formed for rehearsing the information, responding to questions, and brainstorming possible alternatives for responses.

During the cooperative learning lessons, trainer followed the cooperative learning lesson plans and guidelines explained in *Cooperation in the Classroom* of Johnson, Johnson, and Hollubec (1998) for structuring heterogeneous cooperative learning groups. Cooperative learning lesson plans incorporated the basic elements of cooperative learning into the group experience: positive interdependence, individual accountability, group processing, small group skills, and face-to-face interaction. How these basic elements were incorporated in cooperative learning classes explained in the following sections.

### **Positive Interdependence**

At the beginning of each day (or session or task), the cooperative elements were explained and made them believe that they are linked in such a way that they must sink or swim together. They feel responsible for other group members' success as well as their own. Positive interdependence was structured by asking group members to agree on an answer, by making sure each group member can explain a group's answer, or by each member

fulfilling a role that the group needs in order to complete a group task. Other ways of structuring positive interdependence were used like shared resources and a division of labor. Group members were assigned roles to ensure positive interdependence. In addition to their own responsibility to learn, group members were assigned a role to help group members to work together effectively. The roles assigned to group members were as follows:

1. Summarizer: Restates the group's major conclusions or answers,
2. Checker of Understanding: Ensures that all group members are able to explicitly explain how to arrive at an answer or conclusion,
3. Recorder: Writes down the group's decisions and edits the group's report,
4. Encourager of Participation: Ensures that all members are contributing.

### **Individual Accountability**

Individual accountability is the key to ensuring that all group members are strengthened by learning cooperatively and that they have a good chance to effectively transfer what they have learned to situations in which they may be without a group support. In order to enhance individual accountability,

(1) sizes of groups were kept small (2-4 members), (2) the role of each learner was kept distinct from other members of the group, (3) learners were assessed individually, (4) groups were observed while working, (5) individuals were requested randomly to present what they are learning, either to trainer or other group members, and (6) trainees were randomly or systematically asked to teach someone else or whole class what they have learned.

### **Group Processing**

Cooperative learning benefits from group processing –that is, members’ reflecting on their group experience to describe actions that were helpful and to make decisions about what actions to continue or change. Adults need to have a dialogue about the quality of their cooperation, to reflect on their interactions, and to learn from how they work together (Wlodkowski, 1999). The processing time was given learners in order for them receive feedback on their participations, understand how their actions can be more effective and cohesive, plan more helpful and skillful interaction for the next group session, and celebrate mutual success.

### **Small-group Skills**

One of the five essential elements of cooperative learning is the appropriate use of interpersonal and small-group skills. In order to coordinate efforts to achieve mutual goals, people must: 1) get to know each other, 2) communicate accurately and unambiguously, and 3) accept and support each other (Johnson & Johnson, 2003). Placing socially unskilled people in a group and telling them to cooperate does not guarantee that they have the ability to do so effectively. People must be taught the social skills required for high quality collaboration and be motivated to use them if cooperative groups are to be productive (Johnson & Johnson, 2003). The first day of lesson plans focused on developing small-group skills of trainees, and ground rules were also discussed in order to create a learning climate that significantly reduces aggressive conflict. Active listening behaviors described and asked trainees use those behaviors during their group mates speaking. When appropriate, trainer intervened in a group to suggest more procedures for working together.

### **Face-to-Face Promotive Interaction**

Face-to face promotive interaction is demonstrated when students explain each other how to solve a problem, or when they discuss a concept or teach their knowledge to a class mate (Johnson & Johnson, 1999). It happens as well when students explain to each other the connections between present and past learning, or when they encourage and support each other in their learning. Johnson and Johnson (1999) claim that face-to-face promotive interaction, fostered by positive interdependence, is a powerful influence both on efforts to achieve and on the provision of a personal support system of a group. During group works, members of groups were asked to encourage and assist each other with information and emotional support and also deliberate to reach relevant goals, they are engaged in promotive interaction.

#### **3.5.2. Individualistic Learning Group**

While the cooperative-learning classes studied SOJT reading materials using group interaction, individualistic learning classes learned the same content from SOJT reading materials through instruction in a whole-class and teacher-directed approach. Participants in individualistic learning classes listened the instructions of trainer, read the assigned material silently, completed worksheets independently or engaged in discussions with the trainer in response to trainer's questions. They avoided interaction with other participants, sought help only from the Trainer, worked at a self-regulated pace, and completed as much work as possible. Interaction among participants was discouraged. They sat as far apart from each other as the classroom would allow.

As mentioned before, trainer used constructivist approach during individualistic learning groups except group work and mediation, which are frequently used for constructivist learning approach. The theory of

constructivism maintains that knowledge is acquired an active process in which individual continually structures and restructures experience through self-regulated mental activity (Spigner-Littles, & Anderson, 1999). It is through this interpretive activity that knowledge is created, differentiated and integrated into more comprehensive forms (Mascolo, Pollack, & Fischer, 1997). The constructivist learning makes the learner more central to the overall process. So, in this study, trainees were encouraged to think, ask questions, test ideas, and explain concepts without creating any social interdependence among participants. Trainees were encouraged to build connections between daily work life and the concepts they are learning. Classroom climate was created to encourage discussions and negotiation of ideas. At the beginning and end of each day, and when necessary, trainees had given an opportunity to change and organize their cognitive structure related to SOJT concepts. But, questions were directed to individuals. Similarly, they responded questions, brainstormed possible alternatives, looked for information, reviewed and critiqued solutions, encouraged to integrate a solution with their existing knowledge and experiences, and ask new questions individually.

### **3.6. Procedures of the Study**

The study was constituted of two parts, pilot and main study. In the piloting part, two training programs were held, one cooperative learning group and one individualistic learning group. In the main study part, two cooperative learning groups and two individualistic learning groups were instructed. Details of those parts were explained in the following sections.

#### **3.6.1. Pilot Study**

In order to check the training program and instruments, pilot study was conducted prior to main study. Piloting enabled the researcher to evaluate the training program, and test instruments and training program

lesson plans for both instructional methods. Human Resource Division of Printing Department assigned those employees to one of the groups randomly according to their organizational ID. 42 subjects fully participated to the study and completed all instruments. 24 subjects were in individualistic learning group, and 18 subjects were in cooperative learning group. In the morning, individualistic learning group was trained, and in the afternoon, cooperative learning group was trained. 29 subjects had high school degree, 12 had two-year higher education degree and one subject graduated from university. Mean age of subjects in pilot group was 30.74 with the standard deviation of 11.23 and the range of 21 – 53. Mean of subjects' job tenure was 10.19 with the standard deviation of 10.2 and the range of 3 – 28.

Trainings were conducted by using the lesson plans of each group, Learning Outcomes Tests and Training Reactions Questionnaires were administered at the end of trainings. Pilot study enabled the researcher to evaluate the training program and check the training program lesson plans of both instructional methods and instruments. Several changes in lesson plans especially in the duration of lessons were made as a result of piloting the program. Some items in learning outcomes test and Training Reactions Questionnaire were deleted. The changes made to instruments according to the results of piloting were explained in Data Collection Instruments Part.

### **3.6.2. Main Study**

In the main study, two cooperative learning groups and two individualistic learning groups were instructed. Trainings were conducted on May 2007. First week, during morning sessions cooperative learning training was conducted; and in the afternoon, individualistic learning group training was conducted. Second week, time of groups was shifted in order to control the effect of morning-afternoon effect coming from both trainer and subjects. The schedule of Groups was given on Table 6.

**Table 6**

Time Schedule of Four Groups

Time	First Week	Second Week
Morning 9:00 – 12:00	Cooperative Learning Group 1	Individualistic Learning Group 2
Afternoon 13:30 – 16:30	Individualistic Learning Group 1	Cooperative Learning Group 2

The researcher informed management of the department and got permission to use different instructional methods and instruments. Additionally, management was informed about the design of the study and measurement of learning outcomes and training reactions at the end of training. Management provided the information about the age, educational level, and date of beginning to work in the Bank of the subjects.

Standard procedures of training implementation in the Bank were held for this study. First, training dates were arranged with top management considering the workload of the department. Then, managers were sent an e-mail notification of the dates and times of the training sessions through Learning Management System of the Bank. Besides subjects of six groups were assured to get a copy of Training Program Schedules including the aims and content which are same for both conditions (Appendix B). Program schedules were also delivered to the subjects' supervisors. In order to minimize the subject loss, follow-up calls were made to administrative manager reminding the dates, times and organization schedule of the trainings and confirm participation of subjects. Management of Printing Department allocated the training location and provided the refreshments.

At the end of each day except first day of training, learning outcomes test related to the content of the lessons of the day was given and subjects were asked to do it individually. Subjects were monitored during the test taking in order not to let them cheat from each other. Training Reactions Questionnaire was administered at the end of fifth day after the last learning outcomes test's administration.

### **3.6.3. Approval of Ethical Committee**

A requirement of all dissertation studies is the submittal of the study to the Ethical Committee of Human Researches (ECHA) for the protection of human participants in the Research. The intent and purpose of the Ethical Committee of Human Researches (ECHA) is to protect the rights and safety of participants in research studies. The METU established a research protocol for all undergraduate, graduate, and faculty research projects. To effectively administer the program, ECHA and Applied Ethical Research Center were appointed to ensure the University meets the requirements for review and documentation of all research activities involving human participants. Each researcher is required to complete and submit the application for ECHA Approval and Research Protocol. This application verifies that the researcher has completed the review of ECHA. Approval for the study was granted prior to experiment (Appendix C).

### **3.7. Data Collection Instruments**

The data collection instruments were Training Reactions Questionnaire and Learning Outcomes Test. In the following sections, further information about the instruments is provided.

#### **3.7.1. Training Reactions Questionnaire**

Level I of Kirkpatrick's framework for training evaluation represents the reactions of participants to training, usually collected through



questionnaires administered at the end of the training program. Reaction measures of trainees were described as indicants of how well they liked the training, perceptions of how well organized the training program was, and whether trainees found the training useful (Kirkpatrick, 1987). These measures provide feedback on the quality of training delivery.

The Training Reactions Questionnaire used to collect trainee reactions was developed by Training Department in the Bank. The intent was to develop a standard form relevant to all courses in Training Center of the Bank. Questionnaire consisted of the 24 items. Items asked respondents to rate their overall perceptions of training, the training management and administration, the Trainer and training materials. Responses to all of the items on the questionnaire were given on five-point Likert-type scale (1=“Strongly Disagree”, 5=“Strongly Agree”), and higher scores indicated greater levels of more positive reactions. The reaction form also included a section of written comments in response to the open-ended questions.

The psychometric properties of Training Reactions Questionnaire were not determined prior to the study. It was piloted in the Pilot Training Groups with 42 subjects. On the basis of the piloting, internal consistency coefficient and item-total correlations were computed and 4 items with  $r = .20$  or below deleted. The Questionnaire (Appendix D) with 20 items was administered in the Study Groups with 92 subjects, and factor analysis, internal consistency coefficient and item-total correlations were computed as described below.

Principle component analysis with Varimax rotation was performed on the 20 items. The Kaiser criterion was applied to the initial solution, suggesting that five factors with eigenvalues greater than one should be extracted. Examination of the initial extraction shows that the first five factors accounted for a total of 71.1 % of the variance. Eigenvalues and percent of variance accounted for by each of the factors are presented in

Table 7. In order to guide examination of weights in the pattern matrix, a .40 cutoff for the loading was required to retain the item with the factor. Finally, all the items that loaded on a given factor were examined in an attempt to discern what latent construct was underlying each factor. 20 items that were retained from the factor analysis categorized into five factors. The means, and standard deviations for items, and the factor loadings were given in Appendix E.

Factor 1, which appears to represent a “Trainer” dimension, has seven items that load on it. Trainer also performed as administrator of the program, so this item naturally loaded on this factor. Seven items appear to load on factor 2. Examination of these items suggests this factor represents “training”. Two items load on factor 3, which appears to represent “administration”. Two items load on factor 4, which appears to represent a “materials” factor. Finally, two items load on factor 5, which appears to represent “training environment”.

**Table 7**

Eigenvalues and Percent of Variance Accounted for the Training Reactions Questionnaire Factors

	Description	Eigenvalues	% of Explained Variance	r
Factor 1	Trainer	7.72	38.59	0.92
Factor 2	Training	2.79	13.95	0.86
Factor 3	Administration	1.38	6.92	0.75
Factor 4	Materials	1.33	6.63	0.77
Factor 5	Training Environment	1.00	5.02	0.64
	Total		71.01	0.89

The internal consistency coefficient for each dimension was calculated separately and was found to be 0.92 for Trainer, 0.86 for Training, 0.75 for Administration, 0.77 for Materials, and 0.64 for Training Environment. The internal consistency coefficient for the whole test was found to be 0.89.

Two open-ended questions were asked at the end of the Training Reactions Questionnaire in order to learn the trainees' thought about the training. The trainees were given the following questions:

- 1. Please write down the aspects of training program that you liked most.*
- 2. Please write down the aspects that can be considered inadequate in the training program.*

### **3.7.2. Learning Outcomes Test**

Level II of Kirkpatrick's framework for training evaluation consists of learning outcomes, measures of actual learning in the training program. This usually involves post-training measures of knowledge, skill, or attitude change. In this study, cognitive learning outcomes of training have been assessed by Learning Outcomes Tests administered at the end of each unit.

Cognitive learning outcomes include verbal knowledge representing the first to be acquired and which serves as the foundation for efficient and accurate cognitive organization and strategies. Verbal knowledge include declarative, factual, procedural, strategic, and tacit knowledge, or in other words, refer to information about what, how, which, when, or why (Kraiger et al., 1993). Verbal knowledge is typically measured using multiple-choice, free recall, or true/false tests. In this study, trainees were presented with a series of questions and were required to indicate whether each stimulus exists in memory. The test had multiple-choice, true-false, matching or fill-in-the-blanks with one-word formats, which are best suited for testing the retention of verbal knowledge (Gagne, 1977). If the answer of the question

was correct, it was scored as 1. If not, it was scored as 0. The section below explains the design procedure and the process used in developing the instrument.

Training program content was determined according to the content of Structured On-the-Job Training (SOJT) translated and summarized from R.Jacobs's book of Structured On-The-Job Training (2002) and G. Sisson's book of Hands-On Training (2001). Objectives were written at the knowledge and comprehension levels as defined by Bloom's taxonomy.

A table of specifications was prepared and 90 questions were written in accordance with the table of specifications in the comprehension category. For providing content related validity evidence for questions, as adequacy of the sampling and the format of the instrument, Test was reviewed by three judges working as training specialist in the institution. Judges determined the validation for the content if the instrument contains an adequate sample of the domain of content it is supposed to represent, training objectives and table of specifications. Besides, they evaluated the format of the test in terms of the clarity of printing, size of type, adequacy of workspace, appropriateness of language and clarity of directions. On the basis of their recommendations, the questions and their instructions, which were identified to be unclear, too long or too general were reworded.

The Learning Outcomes Test had a mixed format consisting of multiple-choice, true-false, short answer, matching, and ordering. Details of Learning Outcomes Test are explained in Table 8.

**Table 8**

Number and Types of Questions in Learning Outcomes Tests with Cronbach-Alpha ( $\alpha$ ) Scores

Types of Items	Unit 1	Unit 2	Unit 3	Unit 4	LOT
Multiple Choice	8	13	4	6	31
True-False	3	4	2	2	11
Short Answer	1	3	—	10	14
Matching	5	—	12	—	17
Ordering	—	3	—	—	3
Total	17	23	18	18	76
Cronbach-Alpha ( $\alpha$ )	.80	.82	.82	.80	.93

The responses are either correct or incorrect. Scoring was applied as correct-for-guessing scoring (+1 for correct answer, 0 for blank statement and incorrect answer) so all items are equally weighted. The learner's total score is then the sum of correct responses.

The Learning Outcomes Test (including 90 items) was piloted in the Pilot Training Group with 42 subjects. On the basis of the piloting, internal consistency coefficient and item-total correlations were computed and items with  $r = .20$  or below deleted. Finally 76 items constituted the Learning Outcomes Test (Appendix F). Judges again determined the validation for the content if the remaining items represent an adequate sample of the domain of content it is supposed to represent, training objectives and table of specification (Appendix G).

The internal consistency coefficient for LOT was calculated and was found to be 0.93. The means of discrimination ( $r$ ) and difficulty ( $p$ ) values

of items were  $r = 0.46$  and  $p = 0.65$ . The results of item-total correlations, and  $r$  and  $p$  values of items were given on the Appendix H.

### **3.8. Data Analysis**

The data collected for this study were posttest scores from participants in cooperative learning and individualistic learning groups. These scores were recorded as interval scale measures, and the group means became the unit of analysis used to obtain both descriptive and inferential statistics.

Firstly, descriptive and correlational statistics were calculated in order to provide the statistical foundation for hypotheses testing. The preferred statistical methods for analyzing dependent variables (learning outcomes and training reactions) were ANCOVA and MANCOVA. These methods are used to determine whether the difference between the mean scores of two or more groups is statistically significant, after controlling for initial differences between the groups (Gall, Borg, & Gall, 1996). Using a covariate increases statistical power by removing any bias that may result from comparing unequal groups and provides control over many threats to internal validity.

Confirming the assumptions underlying analysis of covariance is necessary to prevent a misapplication of this test. These assumptions include independence of observations, normality of residuals, homoscedasticity, homogeneity of regression, accurate measurement of covariate and the dependent variable. If there is a problem satisfying these assumptions, another more appropriate test must be used.

The means of dependent variables were compared, using the age as a covariate, to determine if there were any significant differences at the .05 alpha level. Testing for significance provided the researcher with the support to draw inferences and make recommendations. An effect size was

calculated to report the differences in means using standard deviation units and to estimate power. Effect sizes are useful for making inferences about the practical significance of research results, for comparing results of different studies, and for communicating results in percentiles.

Finally, open-ended questions were analyzed by using content analysis. The answers to open-ended questions were categorized manually under broader categories, and organized in lists. Next, they were scanned for and reorganized for relevance to the research questions and category. Two training specialists with considerable coding experience examined the codes and categories for validity purposes. Finally, the emerging themes helped to provide answers to the research questions.

### **3.9. Limitations**

Limitations are factors which cannot be adequately controlled in the design of the study and which cannot be accounted for when analyzing, interpreting and generalizing the data. The following were considered limitations of this study:

- At the beginning of the study, random assignment of the subjects to conditions was aimed, but there were subject loss before and during the trainings, besides, some subjects changed their training group due to several reasons. This condition might threaten the randomization of the conditions.
- The present study only involved the female adults working in the Bank, which may not be applicable for learners with different gender, organization and job. Caution should be exercised in generalizing these conclusions to different populations and to conditions different than those in the study.

- One trainer instructed all groups, and this may affect the external validity of this study.
- The generalizability of the findings to some types of training may be limited by the subject of training. The training subject, SOJT, is not directly related to their work and job performance. The knowledge they had gained during the training will help them teach the KSA's of the job to newcomers more efficiently and rapidly.
- The cooperative learning groups tended to be more similar in their group compositions than the diverse groups recommended by Johnson and Johnson (1999). All participants knew each other prior to beginning their study group. Many worked together in the same plant, which made it possibly coordinate certain efforts with less conflict.

### **3.10. Assumptions**

For the purpose of the current study, the following assumptions were made:

- The researcher made a conscientious attempt to deliver content material in both groups in order to not bias the results or findings of the study.
- Participants understood that their participation in the training was voluntary.
- The participants in the training reported their reactions openly and honestly on Training Reactions Questionnaire.
- The participants did their best to get high scores on the tests.
- The participants understood their responses would remain strictly confidential.



## **CHAPTER IV**

### **RESULTS**

The purpose of this study was to compare the effects of cooperative learning method and individualistic learning method on learning outcomes and training reactions of employees in an in-service training course. Two out of four study classes were instructed with the cooperative learning method, and the other two classes were instructed with the individualistic learning method to teach the same training content, which covered the subject of structured on-the-job training. The dependent variables used were the Learning Outcomes and Training Reactions. The independent variable was the method of instruction: the levels were individualistic learning method and cooperative learning method. Age and job tenure were selected to compare the two samples. This chapter first presents descriptive and correlational statistics and then the results of the data analysis based on the statistical hypotheses and the research questions.

#### **4. 1. Descriptive Statistics**

In this section, preliminary statistical analysis was used to lay groundwork for hypotheses testing by establishing the measures of central tendency of each of the variables in the study. Descriptive statistics with the correlational statistics provided the statistical foundation for hypotheses testing.

Descriptive statistics explained each of the independent variables in terms of measures of central tendency (mean) and measures of variability (standard deviation) (Table 9). To assess normality, the Kolmogorov-Smirnov statistic was used to test the null hypothesis that the population was normally distributed. For the majority of the items, standardized skewness and kurtosis values on all dependent variables and covariate were in the excellent range, with values between  $\pm 1.0$ , indicating a normal

distribution of the data. Although there are a few items (trainer, training and materials) that slightly violated the assumption of normality, the large sample size and robustness of the chosen analytical procedures indicate that it was still appropriate to proceed with data analysis as planned.

**Table 9**

Descriptive Statistics of Learning Outcomes and Training Reactions with respect to Instructional Method

Scale/Subscale	Mean	SD
Cooperative Learning Group (n=45)		
LOT	53.02	11.26
Overall Training Reactions	20.57	2.73
Trainer	4.59	0.56
Training	4.14	0.71
Administration	3.49	1.18
Materials	4.47	0.73
Training Environment	3.88	0.97
Individualistic Learning Group (n=47)		
LOT	46.66	14.57
Overall Training Reactions	21.12	2.78
Trainer	4.69	0.41
Training	4.17	0.67
Administration	3.56	1.28
Materials	4.55	0.61
Training Environment	4.15	0.74

The higher the mean score, the more common the phenomenon was observed. In comparing the CL (Cooperative Learning) group and IL (Individualistic Learning) group, the mean score was typically higher for Learning Outcomes Test (LOT) in the CL Group ( $M=53.02$ ,  $SD=11.26$ ) than IL Group ( $M=46.66$ ,  $SD=14.57$ ). The lower the standard deviation, the less the variance occurred among the distribution of the scores.

The mean of overall training reactions was 20.85 on total score of 25. When the reactions of subjects were examined in terms of subscale, subscale with highest mean and lowest standard deviation was “Trainer”,  $M = 4.64$ ,  $sd=0.48$ . The second highest mean and lowest standard deviation was belong to “Training”,  $M = 4.51$ ,  $SD= 0.67$ . The next were “Materials” with  $M=4.16$ ,  $SD= 0.69$ , and “Training Environment” with  $M= 4.02$ ,  $SD= 0.85$ . The lowest mean and highest standard deviation was belong to “Administration”,  $M=3.48$ ,  $SD= 1.23$ .

#### **4. 2. Correlational Statistics**

As a second part of the preliminary analysis, correlational relationships of the variables used in the study indicated comparative associations (direction and significance) and established the foundation for variance analysis used for hypothesis testing. In order to determine which data need to serve as covariates, the relationship between independent variables (age and job tenure) and dependent variables (LOT and Training Reactions) were tested.

There was a statistically significant relationship between the dependent and independent variables explored in the study at least .05 alpha level, as indicated in Table 10. The p-value of a number of the variables was below the alpha level 0.05, and some were measured at less than the alpha level 0.01. A highly significant association was found between Learning Outcomes, Training Reactions, age and job tenure of the subjects. The

relationships of LOT with age and job tenure were significant at the alpha level .01. The relationships of overall training reactions, age and job tenure variables were statistically significant at the alpha level .05.

**Table 10**

Correlations of the Dependent Variables (LOT and Training Reactions) and the Independent Variables (Age and Job Tenure)  
(n= 92)

Scale/Subscale	Age	Job Tenure
LOT	-.39**	-.39**
Overall Training Reactions	.25*	.24*
Trainer	.24*	.22*
Training	.09	.09
Administration	.23*	.24*
Materials	.19	.16
Training Environment	.11	.10

\*p < .05. \*\* p < .01.

The directions of the correlational relationships are different for learning outcomes and training reactions. The learning outcomes test scores are increasing while the age and job tenure decreasing. On the contrary, training reaction scores, age and job tenure are positively correlated.

Although the job tenure and its relationships with other variables were explored, age was highly colinear with job tenure ( $r=.98$ ,  $p<.01$ ) and did not contribute anything unique beyond duration of working in the Bank, and therefore only one independent variable, age, was used as covariate in subsequent analyses or in the final model.

In addition, correlations were conducted on training reactions and learning outcomes to determine whether they were significantly related before proceeding to analyze the differences between groups. The results of the analysis corresponded to the pattern predicted that all of the dependent variable correlations were significant except for learning outcomes (Table 11).

**Table 11**

Intercorrelations Between Training Reactions and Learning Outcomes

(n = 92)

Scale/Subscale	1	2	3	4	5	6	7
1. Learning Outcomes	—	-.12	-.02	-.02	-.19	.01	-.08
2. Overall Training Reactions		—	.76**	.63**	.78**	.75**	.57**
3. Trainer			—	.36**	.49**	.65**	.36**
4. Training				—	.35**	.42**	.16
5. Administration					—	.42**	.17
6. Materials						—	.31**
7. Training Environment							—

\*p < .05. \*\* p < .01.

### **4. 3. Hypotheses Testing**

The major questions and hypotheses the study sought to answer were given and analyses were explained in the following parts.

#### **4.3.1. Research Question One**

Research question one investigated the impact of instructional methods (cooperative learning or individualistic learning) on learning outcomes controlling for age.

#### **The Hypotheses One**

The Hypotheses One (H.1.) (alternative –  $H_1$ ) stated that there is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of learning outcomes (LOT) controlling for the age.

In the preliminary analysis, correlational relationships were found to be negative and significant between LOT and age as noted in Table 10. The strength of the associations and the significance at the .01 and .05 level were very positive indicators of the strong relationship between the Learning Outcomes Tests and age. Therefore, age was used as the covariate for testing the differences between groups in order to eliminate systematic bias and reduce the within group error variance.

The preferred statistical method for analyzing the learning outcomes test was Univariate Analysis of Covariance (ANCOVA) using the age as covariate. This method is a test to determine whether the difference between the mean scores of two or more groups is statistically significant, after controlling for initial differences (i.e. age) between the groups. The LOT means were compared in terms of instructional methods, using the age as a covariate, to determine if there were any significant differences at the .05 alpha level.

The appropriate use and interpretation of ANCOVA required an assessment of whether the assumption of homoscedasticity was valid for the analysis. Homoscedasticity refers to the assumption that the variability in the scores for one continuous variable is similar to the variability in scores for other continuous variables, in other words, the assurance that the variance of errors is the same at all levels. Homoscedasticity was confirmed with the results of Levene's test ( $F=0.77$ ,  $p=.38$ ). This test indicated that there was no significant difference in variances ( $p > .05$ ).

Support for the assumption of homogeneity of regression came from the lack of a significant interaction between the age (covariate) and the method of instruction for the LOT ( $F= 1.58$ ,  $p=.21$ ). This important assumption requires that the regression slopes for each of the groups is the same and is satisfied when it has been established that a common regression coefficient was used to determine the differences between means. If the interaction between the covariate and the group factor in the prediction of the dependent variable is significant, the interpretation of main effect of ANCOVA will not be helpful.

With the confirmation that an ANCOVA was the appropriate test for determining if an observed difference in learning outcomes between cooperative learning and individualistic groups was statistically significant, these groups' LOT means were compared with the age used as a covariate. A difference in group means was considered statistically significant if it exceeded the .05 alpha level. Table 12 contains the results of the ANCOVA for the LOT in terms of instructional method.

**Table 12**

Analysis of Covariance for Learning Outcomes Test – LOT  
(Instructional Method)

Source	SS	df	MS	F	p
Age (Covariate)	2110.29	1	2110.29	14.20	.00 **
Instructional Method (Between Groups)	596.08	1	596.08	4.01	.048 *
Error (Within Group)	13225.24	89	148.60		

\* $p < .05$ . \*\*  $p < .01$ .

It is apparent from Table 12 that the difference in group means on the LOT between the cooperative learning groups and individualistic learning groups was statistically significant,  $F(1, 89) = 4.01$ ,  $p = .048$  ( $p < .05$ ), with the cooperative learning method producing the higher group means.

To better convey the magnitude of the difference, the effect size was computed using specific test results from the ANCOVA. Several important factors influence the magnitude of the effect size: the measures used, the absolute difference among group means, the shape of the score distribution, and the individuals included in the sample (Gall et al., 1996). A positive effect size indicates that the average learner receiving the experimental treatment did better than the average learner not receiving it. Cohen (1988) defined effect sizes as "small,  $d = .2$ ," "medium,  $d = .5$ ," and "large,  $d = .8$ ". The effect size for the difference in LOT means between cooperative learning and individualistic learning groups was computed at .48. This effect size supports findings in earlier meta-analysis conducted on cooperative learning (Johnson, & Johnson, 1989).



The Cooperative Learning and Individualistic Learning groups were instructed in the morning or afternoon, and then time of trainings were shifted next week in order to control the effect of timing coming from morning or afternoon. Although time of trainings were shifted, as a second check the effect of training time was tested by using statistical methods too. The statistical method was 2 (instructional methods) x 2 (time of training) ANCOVA using the age as covariate. The LOT means were compared in terms of instructional methods (cooperative learning and individualistic learning) and time of training (morning and afternoon), using the age as a covariate, to determine if there were any significant differences at the .05 alpha level.

Homoscedasticity for ANCOVA was confirmed with the results of Levene's test ( $F=1.90$ ,  $p=.14$ ). This test indicated that there was no significant difference in variances. Support for the assumption of homogeneity of regression came from the lack of a significant interaction between the age and the method of instruction ( $F=.70$ ,  $p=.41$ ) and between the age and time of training ( $F=1.03$ ,  $p=.31$ ) for the LOT.

With the confirmation that an ANCOVA was the appropriate test for determining if an observed difference in LOT between instructional methods and time of training was statistically significant, these groups' LOT means were compared with the age used as a covariate. A difference in group means was considered statistically significant if it exceeded the .05 alpha level. Table 13 contains results of the Analysis of Covariance for the LOT in terms of instructional methods and time of training.

**Table 13**

Analysis of Covariance for Learning Outcomes Test– LOT  
(Instructional Method x Time of Trainings)

Source	SS	df	MS	F	p
Age (Covariate)	2170.75	1	2170.75	17.80	.000*
Instructional Method (Between Groups)	540.23	1	540.23	4.43	.038**
Time of Trainings (Between Groups)	299.88	1	299.88	2.46	.12
Error Within Group	10610.48	87	121.96		

\* $p < .05$ . \*\*  $p < .01$ .

It is apparent from Table 13 that the difference in group means on the LOT between the cooperative learning groups and individualistic learning groups was statistically significant,  $F(1, 87) = 4.43$ ,  $p = .038$ , with the cooperative learning methods producing the higher group means. But, the difference in group means on the LOT between the morning and afternoon groups was not significant,  $F(1, 87) = 2.46$ ,  $p = .12$ .

#### **4.3.2. Research Question Two**

Research Question Two investigated the difference between the two groups, Cooperative Learning and Individualistic Learning, with regard to training reactions by using the age variable as covariate.

#### **The Hypotheses Two**

The Hypotheses Two (H.2.) (alternative –  $H_1$ ) stated that there is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of training reactions controlling for

age. Correlations determined whether independent variables were significantly related before proceeding to test differences between groups (Table 11). The results of correlations indicated that a separate ANCOVA should be performed on the dependent variable of Training Reactions.

The preferred statistical method for analyzing the Training Reactions Questionnaire was Univariate Analysis of Covariance (ANCOVA) using the age as covariate. The Training Reactions means were compared in terms of instructional method, using the age as a covariate, to determine if there were any significant differences at the .05 alpha level. The results of descriptive statistics related to Training Reactions with regard to Instructional Methods were given on Table 9.

Homoscedasticity, the assurance that the variance of errors is the same at all levels, was confirmed with the results of Levene's test ( $F=.01$ ,  $p=.94$ ). This test indicated that there was no significant difference in variances. Support for the assumption of homogeneity of regression came from the lack of a significant interaction between the age (covariate) and the method of instruction for the Training Reaction Questionnaire ( $F=.05$ ,  $p=.83$ ). As mentioned before, this important assumption requires that the regression slopes for each of the groups is the same and is satisfied when it has been established that a common regression coefficient was used to determine the differences between means.

With the confirmation that an ANCOVA was the appropriate test for determining if an observed difference in Training Reactions between cooperative learning and individualistic groups was statistically significant, the Training Reactions means were compared with the age used as a covariate. A difference in group means was considered statistically significant if it exceeded the .05 alpha level. Table 14 contains results of the Analysis of Covariance for Overall Training Reactions. It is apparent from the Table that the difference in group means on the Training Reactions

between the cooperative learning groups and individualistic learning groups was not statistically significant,  $F(1, 89) = .46, p=.50$ .

**Table 14**

Analysis of Covariance for Overall Training Reactions

(Instructional Method)

Source	SS	df	MS	F	p
Age (Covariate)	39.61	1	39.61	5.49	.02*
Instructional Method (Between Groups)	3.34	1	3.34	.46	.50
Error Within Group	642.57	89	7.22		

\* $p < .05$ . \*\*  $p < .01$ .

To better convey the magnitude of the difference, the effect size was computed using specific test results from the ANCOVA. The effect size for the difference in overall training reactions means between cooperative learning and individualistic learning groups was computed at .20.

In order to analyze the differences on subscales of training reactions, MANCOVA was conducted by using age as covariate to determine if there were any significant differences at the .05 alpha level. Homoscedasticity for each factor was confirmed with the results of Levene's test; homogeneity of regression of each factor was supported by the lack of a significant interaction between the age (covariate) and the method of instruction for each subscale ( $p < .05$ ). Support for the assumption of homogeneity of regression came from the lack of a significant interaction between the age (covariate) and the method of instruction for each subscale ( $p < .05$ ).

With the confirmation that a MANCOVA was the appropriate test for determining if an observed difference in Training Reactions Subscales between cooperative learning and individualistic groups was statistically significant, the means of instructional groups were compared by using the age as covariate (Table 15).

**Table 15**

MANCOVA of Training Reactions Subscales by Cooperative Learning and Individualistic Learning Groups

Multivariate ANCOVA <sup>a</sup>			Univariate ANCOVA <sup>b</sup>				
Source	F <sup>c</sup>		TR	TRG	ADM	MT	TE
Groups	.39	F	.41	.01	.00	.13	.17

<sup>a</sup> df's=(5,85); <sup>b</sup> df's=(1,90); <sup>c</sup> = Pillai's Trace; \* p < .05. \*\* p < .01.; TR=Trainer; TRG=Training; ADM= Administration; MT=Materials; TE= Training Environment

A difference in group means was considered statistically significant if it exceeded the .05 alpha level. It is apparent from Table 15 that the differences in group means between the cooperative learning groups and individualistic learning groups were not statistically significant.

#### 4.3.1. Research Question Three

Research Question three investigated the subjects' responses to open-ended questions in the Training Reactions Questionnaire related to *"the aspects of training program that you liked most"* and *"the aspects that can be considered inadequate in the training program"*. A content analysis was used to examine responses to the open-ended questions about the training reactions of participants. The researcher categorized each response according to the themes represented. A training researcher checked theme–

response match and several changes made according to those results. Then, frequencies in each theme were computed for cooperative learning and individualistic learning groups. It should be noted that there was missing data for the open-ended responses when compared to the quantitative measures. About 70 subjects out of 92 responded to either one of two questions. Answering open-ended questions may place greater cognitive demands on the respondent and takes additional time.

The first question was about the aspects of training program that they liked most. There were 127 responses from 77 subjects about this question totally. 36 subjects in cooperative learning group identified 70 most liked aspects; 41 subjects in individualistic learning group identified 57 most liked aspects. Eight themes were identified from their responses by using content analysis. The names and explanations of each theme are given on Table 16; several sample responses related to those themes were given on Table 17.

**Table 16**

Themes and Frequencies of Responses Related to the Most Liked Aspects of Training Program

Name of Theme	Cooperative Learning (n=36)	Individualistic Learning (n=41)	Total
1. Method	26	4	30
2. Presentation	10	17	27
3. Trainer	14	10	24
4. Learning	6	8	14
5. Psychological Climate	4	7	11
6. Enjoyment	2	7	9
7. Being Valued	5	3	8
8. Subject of Training Program	3	1	4
Total	70	57	127

**Table 17**

Samples of Responses Related to the Most Liked Aspects of Training Program

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**Theme 1 (Method)**

---

*“Learning exercises done as a group are more enjoyable. People know each other better and methods (subjects) are kept in the mind more. It is very good to explain someone and listen to her presentation. You feel yourself responsible to them. I enjoyed a lot.”*

*“Working as a group and in accordance with others’ ideas and learning were very nice.”*

*“Helping each other to learn.”*

*“Learning as a group was a very good practice. I believe it contributes to understanding and comprehension very much.”*

*“Explaining each other the topic , learning as a group helped our learning and teaching.”*

*“Participation of everyone.”*

*“Coming to a conclusion through discussing openly.”*

---

**Theme 2 (Presentation)**

---

*“I understood more easily because subjects were explained very clearly and fluently.”*

*“... explained in a very simple and understandable way.”*

*“The flow of training, explanation and presentation were very good “*

*“We learned the subjects in this program explained in a simple and clear language.”*

*“... explained by a simple, easy and understandable language.”*

*“I was very content with her presentation style, she presented the lesson very clearly.”*

---

**Table 17 (continued)**

Samples of Responses Related to the Most Liked Aspects of Training Program

---

**Theme 3 (Trainer)**

---

*“She is sensitive to participants’ needs, nice looking, pleasant sympathetic, friendly, active, sincere, speaks fluently and clearly and communicates well.*

*“Naturally, I came to the lessons and participated because our trainer’s nice attitudes and behaviors and friendly manners encouraged me.”*

*“... trainer’s behaviors, methods, and that she listens to what we say.”*

*“That the lessons are carried out in a joyful manner by the trainer.”*

*“Trainer’s friendly and nice behaviors increased our participation during the lessons.”*

*“Trainer’s fluent and accurate talk and friendly manners, the way s/he motivates the participants, conducts the program with ease and peace, manages the class smoothly, and being trustworthy are very important for us.”*

---

**Theme 4 (Learning)**

---

*“We learned our work with its full dimensions and also found out how to transfer it into practice perfectly. “*

*“It was good to be informed about our work.”*

*“I have become fully aware of what we should do in the future. I learned what orientation training and coaching mean, and how they are put into practice. “*

*“I gained the skill of presenting something to others.”*

*“The subject of training will help us teach our job to newcomers adequately.”*

*“I will teach my work to others perfectly, and training an employee perfectly will affect me very positively.”*

---



**Table 17 (continued)**

Samples of Responses Related to the Most Liked Aspects of Training Program

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**Theme 5 (Psychological Climate)**

---

*“Everyone’s speaking about themselves very comfortably, a very cozy environment.”*

*“We were able to speak about our ideas very easily in the classroom.”*

*“Expressing our ideas very explicitly for the first time.*

*“The classroom environment encouraged everyone speak about their ideas, complaints, and criticisms very easily.”*

---

**Theme 6 (Enjoyment)**

---

*“It was the most joyful training that I have ever participated.”*

*“I enjoyed working as a group and entertaining learning environment.”*

*“Examples were very enjoyable. “*

---

**Theme 7 (Being Valued)**

---

*“This training made me remember that I am not an ordinary person in the Bank. It increased my self-esteem.”*

*“It has made us feel that ourselves and what we do are very important.”*

*“This activity was done to teach something and gives us a value. “*

---

The Second Question was about the aspects of training program that can be considered inadequate in the training program. There were 65 responses from 58 subjects about this question totally. Three themes were identified as “physical conditions”, “time of training”, and “other”. 11 subjects in cooperative learning group identified 22 inadequate aspects; 22 subjects in individualistic learning group identified 43 inadequate aspects. 8 subjects of cooperative learning groups and 17 subjects of

individualistic learning group answered the question with indicating “no insufficiency”, “aims and objectives were achieved” or “there wasn’t any drawback.” The names and explanations of three themes are given on Table 18; several sample responses of those themes translated into English were given on Table 19, and original versions were given on Appendix – J.

**Table 18**

Themes and Frequencies of Responses Related to the Inadequacy of Training Program

Name of Theme	Cooperative Learning (n=11)	Individualistic Learning (n=22)	Total
1. Physical Conditions	3	14	17
2. Time of Training	7	4	11
3. Other	4	8	12
Total	22	43	65

**Table 19**

Samples of Responses Related to the Inadequacy of Training Program

Theme 1 (Physical Conditions)
<i>“The room for the training was very small and cramped.”</i>
<i>“Training with group learning activities could be carried out in a larger place.”</i>
<i>“Training room was very small and boring.”</i>
<i>“Physical environment was very bad.”</i>

**Table 19 (continued)**

Samples of Responses Related to the Inadequacy of Training Program

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**Theme 2 (Time of Training)**

---

*“It was a belated training. We were not trained in this way, but we will apply it to the newcomers.”*

*“I think it was late for senior colleagues/friends. We would have been more comfortable during the orientation phase of the job if they had been trained like this.”*

*“Trainings are not insufficient but belated. I think it would have been more helpful if such training and application had been done earlier.”*

*“It would have been more helpful when newcomers started to work three years ago.”*

---

**Theme 3 (Other)**

---

*“The duration of the training is too long, 3 days could be enough. Because, it is not a difficult training.”*

*“Participation was low; there was not a whole active class participation.”*

*“..... the target group was employees. Managers/employers should receive such training as well.”*

*“Using more visual materials could have prevented routine use of similar materials every day.”*

*“Trainer did not know our job very well.”*

---

## **CHAPTER V**

### **DISCUSSION**

In this chapter, the results obtained from the statistical analyses will be discussed along with the general findings, and the implications for practice and research will be presented.

#### **5.1. Discussion**

Discussions are presented under the headings including learning outcomes and training reactions.

##### **5.1.1. Discussions Related to Learning Outcomes**

The first question focused on the difference between cooperative learning and individualistic learning in terms of learning outcomes. The first hypotheses of the study stated that there is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of overall learning outcomes controlling for the age. In order to test this hypothesis, correlational relationships of the variables used in the study were examined firstly. The results of the analyses indicated comparative associations and established the foundation for further analysis used for hypothesis testing. The relationships between independent variables (age and job tenure) and dependent variable-LOT were tested. A highly significant association was found between Learning Outcomes, age and job tenure of the subjects. The relationship of learning outcomes and age was  $r = - 0.388$ ,  $p < .01$ . The correlational relationships between learning outcomes and job tenure are very similar to the relationships between variables with respect to the age of subjects,  $r = - 0.386$ ,  $p < .01$ . Although the job tenure and its relationships with other variables were explored, age was highly colinear with job tenure ( $r = .98$ ) and did not contribute anything unique beyond duration of working in the Bank, and therefore only one independent variable, age, was used as covariate in the final model.

The preferred statistical method for analyzing the learning outcomes was Univariate Analysis of Covariance (ANCOVA) using the age as covariate. The difference in group means on the learning outcomes between the cooperative learning groups and individualistic learning groups was statistically significant,  $F(1, 89) = 4.01$ ,  $p = .048$ , with the cooperative learning methods producing the higher group means. To better convey the magnitude of the difference, the effect size was computed using specific test results from the ANCOVA. The effect size for the difference in LOT means between cooperative learning and individualistic learning groups was computed at 0.48. This result shows that first hypotheses was confirmed by that training of adults in an in-service training program by cooperative learning method has been more effective in learning when compared to individualistic learning method.

These findings were consistent with 168 research studies conducted between 1924 and 1997 comparing the relative efficacy of cooperative, competitive, and individualistic learning on individual achievement of participants 18 years or older (Johnson, Johnson, & Smith, 2007). The results of these studies indicated that cooperative learning promoted higher individual achievement than did competitive (effect size=0.49) or individualistic (effect size=0.53) learning. This large effect size also supports findings in earlier meta-analysis conducted on cooperative learning (Johnson, & Johnson, 1989). Other researches have also reported higher achievement for classes practicing cooperative learning methods than for classes taught with competitive or individualistic learning methods (Slavin, 1990). These results are valid for all age levels, for all subject areas, and for tasks involving concept attainment, verbal problem solving, categorization, spatial problem solving, retention and memory, motor performance, and guessing-judging-predicting (Johnson, Johnson, and Holubec, 1993).

The growing body of support for the effectiveness of cooperative learning in general and the Johnson and Johnson cooperative learning model in particular continues to strengthen the social interdependence theory upon which this study was based, designed, and tested. In the present study, two types of interdependence were used. Cooperative learning groups have been structured using positive interdependence where individuals perceive that they can reach their goals if and only if the other individuals with whom they are cooperatively linked also reach their goals and, therefore, promote each other's efforts to achieve the goals. On the other hand, no interdependence was encouraged in individualistic learning groups, and they tend to function individualistically. Demonstrating the transition from self-interest to mutual interest is one of the most important aspects of social interdependence theory (Johnson, Johnson, & Smith, 2007). No interdependence results in a situation in which individuals perceive that they can reach their goal regardless of whether other individuals in the situation attain or do not attain their goals. No interdependence detaches a person from others; self-interest and the motive to succeed are maintained (Johnson, Johnson, & Smith, 2007).

The duration of cooperative learning activities can be considered as too short to lead the occurrence of the cooperative learning impact on learning. Because, Slavin (1990) stated that over 70 high-quality studies have assessed the impact of cooperative learning strategies on learning over a period of at least four weeks. All these studies compared the impacts of the use of cooperative learning and traditional methods of teaching on students' academic achievement. But, some other researches demonstrated superior learning effects on performance after a very short period of time. For example, Ellison and Boykin (1994) compared the outcomes from differential cooperative and individualistic learning methods in controlled laboratory setting with college students. Cooperative learning group had

higher performance on the vocabulary test after 30-minute word-study when compared to individualistic learning group. As shown in similar studies (Davidson, & Versluys, 1999), if the groups work and learn together efficiently, the time interval may not have an effect on the results because it is for gaining small group working skills. After learners have gained those skills, have some teamwork experience and learned the cooperative procedures they perform better than the participants working individually (Ortiz, Johnson, & Johnson, 1996). Although data concerning the effect of group maturation on member productivity are scarce, most social scientists would predict that only relatively mature and well-developed groups will be able to outperform individuals (Johnson & Johnson, 2003). In the present study, subjects work in the same plant and do the parts of same tasks during the day. Additionally, they have received the small group working skills training on the first day of training. These two factors might be the major factors that affect the effectiveness of cooperative learning method within this period of time. The present study provides direct evidence that cooperative learning groups were able to work and learn together efficiently although time of training is relatively shorter when compared to researches done with one semester or longer duration.

#### *Learning Outcomes and Age*

A highly significant association was found between Learning Outcomes and age of the subjects as mentioned before. The relationship of learning outcomes and age was  $r = -0.39$  ( $p < .01$ ), indicating the older the participant, the lower their Learning Outcomes Tests score. This finding is consistent with the results of research studies on aging and cognitive processes and memory. Cognitive psychologists have been investigating the relationship between age and memory functioning for many decades. The findings from laboratory studies of age-related changes in memory have been unequivocal on one major point-that age related declines are prominent

and practically universal in some situations but insubstantial in others (Chelminski, 1999). For example, older adults typically, perform less well on tasks involving unaided recall of material no longer “in mind”, such as prose or list recall. However, cognitive skills such as regarding and arithmetic decline very little as long as they are practiced. Consequently, since the age-related memory losses are quite variable, it is concluded that some memory functions decline and others remain stable.

Investigations conceived within the information processing framework have typically focused on linking age differences in memory performance to changes in either specific structures or the efficiency of processing and control mechanisms (Hess, 2005). For example, dominant theoretical orientations have linked aging declines in memory to cognitive problem solving, problems in inhibitory functions, reductions in processing resources, and deficits in reflective processes.

Aging also affects the capacity to perform operations or the efficiency of the actual operations, which in turn reduces the functional capacity of working memory (Salthouse, 1996). The age effects are characterized in terms of impairments in controlled processing mechanisms. Specifically, the components of functioning hypothesized to be affected by aging – self-initiation of memory operations, monitoring and controlling the contents of working memory, and performing when resource demands are great – are all characteristics typically associated with controlled processing (Hess, 2005).

Linking aging-related variations in memory to underlying changes in neural systems is gaining attention too. Aging has a disproportionate impact on neural loss in cortical areas supporting those memory functions most adversely affected by aging. Aging related changes in memory performance, to some extent, are based in systematic changes in memory



performance, to some extent, are based in systematic changes in underlying biological mechanisms (Christensen, Mackinnon, Korten, & Jorm, 2001).

In addition to the extension of the information-processing framework, the life span perspective which can be adaptable to the organizational settings like in the present study, has an influence within the study of aging. Age-related changes in behavior are multidimensional and multidirectional, with development characterized at all points of the life span by both gains and losses (Baltes, 1987). Genetics, experience, health, personality, job experience, motivation, vulnerability to depression, and culture all contribute to changes in mental abilities across the adult life span (Shinamura, Berry, Mangels, Rusting, & Jurica, 1995). Implicit in this assertion is the assumption of multiple determinants of performance and behavior change. The life span perspective also emphasizes the adaptive nature of development as individuals adjust their behavior in response to normative and nonnormative changes in life events. Context effects on behavior and behavior change are conceptualized in terms of interactions between an individual's characteristics and the environment in which he or she functions. It is the assumed pluralism of these characteristics and the implication of multiple influences that represent the complementary contributions from adopting a contextual perspective in the study of aging and cognitive functioning. Age differences in memory performance may also be affected by contextual factor that influence the operation of this system, such as motivation, goals, and emotion that energize and direct cognitive system, and the context is defined as the set of variables that affect cognitive performance in a given situation (Hess, 2005). In the present study, subjects are performing manual jobs, and the physical activity the job requires is tiring. Employees working in manual jobs prefer to retire earlier when compared to their counterparts working in the offices. In this context, older subjects do not have any goal related to their career and development

except from retirement, so their motivation and energy to learn might be low, and consequently their learning was affected negatively by being older. They might have motivated to learn less in addition to the effects of decrease in their cognitive processes and memory.

### **5.1.2. Discussions Related to Training Reactions**

The second question focused on the difference between cooperative learning and individualistic learning in terms of training reactions. The Hypothesis Two stated that there is a statistically significant difference between cooperative learning groups and individualistic learning groups in terms of training reactions controlling for age.

Training reactions in this research were described as indicants of how well they liked the training, perceptions of how well organized the training program was, and whether trainees found the training useful (Kirkpatrick, 1987). Training Reactions Questionnaire on five-point Likert-type scale with 20 items was administered and higher scores indicated greater levels of more positive reactions. Principle component analysis with Varimax rotation was performed on the 20 items that were retained from the factor analysis categorized into five factors as trainer, training, administration, materials and training environment.

Two open-ended questions were also asked at the end of the Training Reactions Questionnaire in order to learn the trainees' perceptions related to the training. A content analysis was used to examine responses to the open-ended questions about the training reactions of participants.

In order to test second hypothesis, correlational relationships of the variables used in the study were examined firstly. The results of the analyses indicated comparative associations and established the foundation for further analysis used for hypothesis testing. The relationship between age and training reactions was tested. A highly significant association was found

between training reactions and age of the subjects. The relationship of training reactions and age was  $r = 0.25$ ,  $p < .05$ .

The mean of overall training reactions was 20.85 on total score of 25 with the standard deviation of 2.76. This indicated that subjects had positive reactions to training program. The preferred statistical method for analyzing the difference between group means in terms of training reactions was Univariate Analysis of Covariance (ANCOVA) using the age as covariate. The difference in group means on training reactions between the cooperative learning groups and individualistic learning groups was not statistically significant,  $F(1, 89) = .46$ ,  $p = .50$  ( $p > .05$ ). This result shows that second hypothesis was not confirmed by that training of adults in an in-service training program by cooperative learning method has not created more positive reactions when compared to individualistic learning method.

The first question was about the aspects of training program that they liked most. There were 127 responses from 77 subjects about this question totally. Eight themes were identified, method, presentation, trainer, learning, psychological climate, enjoyment, being valued, and subject of training program.

The second question was about the aspects of training program that can be considered inadequate in the training program. There were 65 responses from 58 subjects about this question totally. Three themes were identified, as physical conditions, time of training and others. 8 subjects of cooperative learning groups and 17 subjects of individualistic learning group answered this question with indicating “no insufficiency”, “aims and objectives were achieved” or “there wasn’t any drawback.”

In order to analyze the difference between two groups in terms of each factor, separate ANCOVAs were performed using the age as a covariate, to determine if there were any significant differences at the .05

alpha level. The results of variance analyses indicated that the differences in group means between the cooperative learning groups and individualistic learning groups were not statistically significant at the .5 alpha level. The F and p values for trainer factor was 0.41 and 0.51 ( $p > .05$ ), for training factor was 0.01 and 0.92 ( $p > .05$ ), for administration factor 0.00 and 0.99 ( $p > .05$ ), for materials factor 0.13 and 0.72 ( $p > .05$ ) and for training environment 1.92 and 0.17 ( $p > .05$ ). The results indicated that groups responded the Training Reaction Questionnaire in the same manner.

Cooperative learning has been established as a promising instructional method that may improve the cognitive, social, and affective outcomes of learning like learning outcomes and training reactions (Slavin, 1995). Cooperative learning was supported by a strong base of empirical research that demonstrates its superiority to other forms of competitive and individualistic instruction in improving the cognitive and non-cognitive outcomes (Slavin, 1995; Johnson, Johnson, & Maruyama, 1983). But, in the present study, the difference between two groups was not statistically significant. This may be due to the use of constructivist learning approach focusing on the adult learning principles in individualistic learning groups unlike the traditional learning methods, like information presentation.

When the reactions of subjects were examined in terms of each factor, the factor with highest mean and lowest standard deviation among factors was “Trainer”,  $M=4.64$ ,  $SD=0.48$ . The factor with the second highest mean and lowest standard deviation was “Training”,  $M=4.51$ ,  $SD= 0.67$ . The next factors were “Materials” with  $M=4.16$ ,  $SD= 0.69$ , and “Training Environment” with  $M= 4.02$ ,  $SD= 0.85$ . The factor with the lowest mean and highest standard deviation was “Administration”,  $M=3.48$ ,  $SD= 1.23$ .

The trainer factor had the highest mean, and was determined as the third most liked aspect of training program by the subjects. 24 subjects wrote that they liked the training program because trainer was sensitive to

participants' needs, friendly, communicates well, speaks fluently and clearly, and increased participation during training. As the results indicated trainer has an important role in conducting trainings, applying effective instructional methods, applying adult learning principles, respecting for adults' experiences and differences, being sensitive to their needs, listening to what they say and creating a positive learning climate.

Second factor identified as a result of factor analysis was training with the second highest mean. Subjects evaluated the training as high in utility, and meeting their expectations and their needs, and triggering their desire to learn new subjects. In their responses to open-ended questions, learning and subject of training with 14 and 4 frequency levels were stated as most liked aspects among others.

Materials and training environment were among the next highest most liked aspects of the training. The quality and efficiency of training materials were evaluated as satisfactory. The training environment and services during training were evaluated as good enough for effective training generally. But, in their open-ended responses 17 subjects determined the physical conditions of training, especially the classroom, as least liked aspect.

Administration of training was evaluated less positively when compared to other factors in Training Reactions Questionnaire. The information supplied, especially before the training started, was evaluated as inadequate. This implies the importance of trainee preparedness, which encompasses (1) readiness to learn, including the degree to which trainees possess the requisite KSAs prior to entering training, (2) motivation to learn or motivation to engage in a specific training program, or (3) awareness of (or mental preparation for) the forthcoming training material and its complexity, structure, and potential application (Cannon-Bowers, Rhodenizer, Salas, Bowers, 1998; Goldstein & Ford, 2002).

The rest of their responses to open-ended questions included the method, presentation of training, psychological climate, enjoyment, and being valued. 26 of the subjects in cooperative learning groups and four subjects in individualistic learning groups presented the most liked aspect of training as “learning as a group”. It is not surprising that subjects in individualistic learning groups stated this aspect, because the first day of both groups focused on developing small-group skills through cooperative learning in both groups. Responses of the subjects in cooperative learning groups indicated that cooperative learning had an impact on their satisfaction with the training program; they liked learning as a group. This study was not a direct testing of the validity of andragogy, but it suggests that cooperative learning procedures can be used effectively within adult education classes. Both learning outcomes and training reactions of subjects provide evidence for the effectiveness of cooperative learning in the present study. Cooperative learning environments allow adult learners not only to confirm their ideas and interpretations but also to develop their critical thinking and self-regulation abilities in relation to specific educational goals (Garrison & Archer, 2000). In order for trainers to be effective in their role as support to employee development through training, they need to know and understand how to support adult learners.

On the other hand, 10 subjects in cooperative learning group and 17 subjects in individualistic learning group indicated the most liked aspects of training as presentation. They stated that they understood the topics more easily, and subjects were explained very clearly and fluently in a simple and clear language. In both trainings, power point slides were used, and those slides were used to either start the lesson or summarize the topics; but individualistic learning groups had higher frequency in this theme. Both statistical analysis and narrative responses indicated that both groups liked their method, but the difference occurred in their learning performance,

cooperative learning group outperformed individualistic learning group in terms of learning outcomes. This result also supports the social constructivism, which emphasizes that knowledge is constructed by social interaction and collaborative learning (McDonald, & Gibson, 1998). That is experienced individuals can help inexperienced learners by collaborative learning. Creating a social negotiation environment can foster reflective response and support collaborative construction (Jonassen, 1994).

The next most liked aspects of training were psychological climate, and enjoyment. 11 subjects stated that there was a very positive environment, and 9 subjects stated the most liked aspect as enjoyment. Creating a safe environment for adult learners to express themselves freely in appropriate ways, to share ideas and to ask questions in both groups may lead positive reactions. Almost ten percent of the subjects presented the most liked aspect of training as “psychological climate” that they speak about their ideas very easily in the classroom, express their ideas very explicitly for the first time, and stated that the classroom environment encouraged everyone speak about their ideas. Many adult learners may be skeptical of group work at first because it is nontraditional and different from their previous schooling. However, after they have experienced success with group work in one course, they may become wholehearted supporters of it. Furthermore, face-to-face promotive interaction seems to be the most powerful influence on caring and committed work relationships.

The last theme was very interesting; 8 subjects stated the most liked aspect as feeling themselves very valuable; they felt themselves as being valued and important in the Bank at the end of training. Although such feelings were not stated by many participants, verbalizing them can be considered as one of the important results of the training. The self-concept of adults is heavily dependent upon a move toward self-direction. Adults prefer learning situations that promote their positive self-esteem. Even one

employee feel valued at the end of any intervention, both this employee and organization would gain a lot through increase in commitment, involvement, performance etc. In the present study, delegation of the supervisors might be accounted as one of the possible reasons of feeling valued. Because, at the beginning of trainings, participants were explained that supervisors delegated “on-the-job training” responsibilities to them, and they were empowered and expected to teach their job to newcomers. Empowering employees is defined as the key way to demonstrate their value (McFarland, Senn, & Childress, 1994). Effective delegation means clearly communicating the specific results expected, then empowering and motivating the employee to achieve the results, monitoring the person’s progress, and evaluating performance upon completion of the task. When employees are delegated and empowered, they feel themselves more valued.

Another reason for feeling valued might be social exchange between organization and participants, “*My organization was doing something for me by having me participating training, so it values me*”. In social exchange theory, Eisenberger, Fasolo, and Davis-LaMastro (1990) noted: A positive relationship has been established between employees’ perceptions of being valued by organizations and conscientiousness, involvement, and innovation, as caused by a social exchange occurring between the individual and the organization. In terms of organizational commitment, for example, social exchange suggests that committed employees perceive the relationship between themselves and the organization as favorable to the extent that the organization supports and values the individual. This, in turn, facilitates reciprocity from the employee in the form of increased commitment, involvement, and even performance or other benefits to the organization.

The variation of the instructional approach to cooperative learning may have enough justification in the fact that it encourages participation,



cooperation, and helpfulness in learners--skills that research has shown are highly valued in the workplace today. Based on the needs of the adult learner to participate, to share, and to cooperate, and based on the trends of employers to form work groups and teams, it would appear that cooperative learning is a logical method of instruction for adults. Cooperative learning may take different forms, but it always involves groups of learners working together to help one another learn academic material (Slavin, 1990).

While Kirkpatrick acknowledged that the training reaction level of training evaluation does not provide any measure of learning, a more favorable reaction may lead trainees to pay attention during the training, resulting in greater learning. In the present study, the interaction between two variables was tested in order to examine the role of training reactions on learning. No significant correlation was found at the .05 alpha level ( $r = .25$ ). This result supports the findings in earlier research founding no or weak relationships between reactions and learning (Noe & Schmitt, 1986; Alliger & Janak, 1989).

#### *Contribution to SOJT Literature*

Training reactions of subjects were very positive about training and they have scored high in learning the basic concepts of Structured On-the-Job Training (SOJT). Some of the trainees have written on the Training Reactions Questionnaire that they feel themselves responsible for teaching the job to newcomers and develop their skills. These results indicated that the present study also contributed to the SOJT research and practice area that is generally ignored by employers and training practitioners. On-the-job trainings constitute almost half of the trainings in organizational settings, and there is a considerable need for planned on-the-job training processes. Traditional OJT is generally perceived as inconsistent, inefficient, and ineffective (Sisson, 2001). What should be learned is often seldom learned in traditional OJT. Training outcomes may differ from job expectations.

Those charged with the training function may be unable to communicate effectively and experienced employees may fear sharing knowledge because of a perceived threat to job security. In addition to the differences in the preparation of the trainers and their training abilities, different training methods are used each time creating inconsistencies in the program. Finally, management all too often fails to follow up on the results and effectiveness of traditional on-the-job training process (Jacobs, 2002). In order to improve the effectiveness of on-the-job trainings, a structured training process, SOJT concept was developed, and it is defined as the planned process of developing competence on units of work by having an experienced employee train a novice employee at the work setting or a location that closely resembles the work setting (Jacobs, 2002). This type of training is appropriate when those being trained are to use the information learned to meet specific job expectations. Major benefits of SOJT are defined as shortening unproductive breaking-in periods for newcomers, relief of employee anxiety, employee turnover reduction, evaluation of employee's basic skills, and continuous improvement in production or services of organization (Jacobs, 2002). Research has also shown that, compared with unstructured training, structured OJT results in fewer quality errors, substantial positive financial impact on organizations, reductions in training time, and training objectives that are achieved faster and more completely (Walter, 2002). The training used for the present study focus on developing SOJT knowledge of employees, and results indicated that participants benefited from the training instructed by using cooperative learning methods. Adults prefer to learn the subjects if it is useful and meaningful to their lives, and in this respect, cooperative learning was successful to create a meaning for the subject, and ownership for the role of being a trainer of newcomers.

## **5.2. Implications**

In this section, implications were given under the headings of research and practice.

### **5.2.1. Implications for Research**

This study dealt with the impact of cooperative learning on learning outcomes and training reactions of adult learners in an in-service training program. The sample of the study does not represent the adult population in general. But, it was the only choice the researcher had. The researcher was careful to include information on demographic and other characteristics of the sample studied. But, the study should be replicated with a number of similar samples to decrease the likelihood that the results obtained were simply a one-time occurrence. Future research could include the study of men with different types of jobs in different organizational settings for different training content using similar approach as undertaken by this study to determine if significant differences occurred.

The future research should also compare the effectiveness of cooperative learning methods and traditional training methods, like information presentation methods which are very widely used instructional method in training settings as mentioned before. In this study, the researcher used constructivist approach in all groups, and compared the individualistic learning and cooperative learning. Although individualistic learning did not include group work and mediation, most of the adult learning principles were applied during the individualistic learning lessons. Trainees in individualistic learning groups were encouraged to participate actively learning process, and think, ask questions, test ideas, and explain concepts. Trainees were also encouraged to build connections between daily work life and the concepts they are learning. Classroom climate was created to encourage discussions and negotiation of ideas. They responded questions,

brainstormed possible alternatives, looked for information, reviewed and critiqued solutions, encouraged to integrate a solution with their existing knowledge and experiences, and ask new questions individually. With those characteristics, individualistic learning is different from traditional training methods and thus, comparison of cooperative learning with traditional training methods like information presentation methods may add greater value to cooperative learning in training literature.

It would also be interesting to see how the same study would be replicated in a course setting where the results of learning outcomes are used as criteria for promotion in the organization employees work. But, the comparison should be done between the lessons not the groups. Because, generally the results of such training courses include promotion, and using an instructional method proven to have resulted in more learning in many settings may favor the group whom instructed by cooperative learning, resulting in inequity across trainees.

The impact of cooperative learning would be evaluated on the retention of knowledge, the third and fourth level of Kirkpatrick's evaluation criteria whether trained knowledge, skills or behaviors have been transferred to the work environment, and organization-level outcomes or results. The results indicated that cooperative learning increased trainees' knowledge. However, increased knowledge does not predict how well people are able to perform actual tasks. Besides, attitudes and reaction measure are not linked to later performance. Training is a continuous process; participant reactions and knowledge acquisition provide two sources for continuous improvement of the training effort. Thus, the effect of cooperative learning on employee performance and organizational outcomes should be examined through research studies.

In accordance with the previous suggestions, the impact of cooperative learning on the development of work teams can be examined

through design of adequate learning environments. Cooperative learning is viewed as a tool for preparing employees to work in teams as required in various employment settings when there is a need to combine energies and work towards a common goal (Doymus, 2008). Five elements of cooperative learning are clearly important aspects of healthy teams in the organizations (Lewis, Tucker, Tsao, Canaan, Bryant, Talbot, King, & Flythe, 2001). Those teams would share common goals and would all have skills from specific trainings to bring to the team. The cooperative learning model, since it is a very good match to actual teamwork, can simulate and serve as a vehicle to train functional, real-life interpersonal teams. Indicating those benefits of cooperative learning on team's actual performance through research studies would contribute both to training work teams and organizational development.

#### **5.2.2. Implications for Practice**

The findings of this study may assist trainers, especially working in institutions for developing knowledge, skills and abilities of employees in accordance with the present days' work life requirements, or for life-long learning activities. The practical significance of the results of the present study should not be overlooked, because many training programs are packaged in brief time periods as well.

Cooperation, compared with competitive and individualistic efforts, tends to result in higher achievement, greater long-term retention of what is learned, more frequent use of higher level reasoning (critical thinking) and meta-cognitive thought, more accurate and creative problem-solving, more willingness to take on difficult tasks and persist (despite difficulties) in working toward goal accomplishment, more intrinsic motivation, transfer.

This study indicated that cooperative learning appears to be a method of instruction that is well suited to the needs of adult learners and

one that adults respond to positively. Subjects of the study learned more through the cooperative learning method than individualistic learning method that was used. Discussions among group members during the group learning provided an additional feature to the learning process. Adults prefer face-to-face promotive interaction referring that group members challenge the conclusions and opinions of others, along with clarifying, paraphrasing or elaborating on the ideas and suggestions of other members; adult learners prefer to exchange what they learn in a discussion format (Knowles, 1984). Johnson et al. (1999) reports that relevant ideas, conclusions and resources are exchanged and utilized in ways that promote collective and individual insights, and energy is increased to complete the task. Kaufman, Sutow, and Dunn (1997), assert that cooperative learning techniques give learners the opportunity to clarify their ideas and misgivings on a topic in a non-threatening environment.

The results of studies suggest that cooperative learning procedures can be used effectively within adult education and specifically training settings. Although training methods may depend on the goals and contextual effects, information presentation methods are very widely used in professional training programs in Turkey. These methods do not require interaction between trainees, so trainees learn material independently of each other. Training practitioners should take into consideration the effective instructional methods and adult learning principles. Because, presenting large amount of information within a limited time without any consideration of effective instructional methods and adult learning principles may lead only to waste of time and money in the short term, and negative attitudes toward trainings, and mistrust to human resource development professionalism in the long run where it began to grow several decades ago in Turkey.

Cooperative learning is the instructional procedure of choice to maximize employee learning (especially of highly complex or difficult material) and long-term retention in organizational settings. In addition, cooperative learning is a central procedure for creating positive interpersonal relationships and personal support promoting greater psychological health and well-being (including self-esteem and social competencies), and developing positive attitudes. Here are some of the reasons (Johnson, Johnson, & Smith, 2007).

First, cooperative learning is a very cost-effective instructional procedure. It affects many different instructional outcomes simultaneously.

Second, the research on cooperative learning has a validity and a generalizability rarely found in the educational literature. It has been conducted over eleven decades by numerous researchers with markedly different orientations working in different organizations and countries. Research participants have varied as to economic class, age, sex, nationality, and cultural background. The researchers have used a wide variety of tasks, subject areas, ways of structuring cooperative learning, and ways of measuring dependent variables.

Third, cooperative learning method creates a learning climate that fosters adult learning. Involving learners into the lessons, face-to-face interaction, increasing self-esteem and sharing life experiences are among the several common features of cooperative learning method and adult learning principles of Knowles.

But, trainers should be aware of that only getting together and studying does not mean cooperative learning, and does not lead to effective learning. Cooperation will only develop under a certain set of conditions. These conditions, which were identified by social interdependence theory and mentioned in previous chapters, are positive interdependence,

individual accountability, promotive interaction, social skills and groups processing (Johnson, & Johnson, 1989). Understanding how to implement the five essential elements enables trainers to (a) structure any lesson in any subject area with any set of curriculum materials cooperatively, (b) fine-tune and adapt cooperative learning to their specific circumstances, needs and learners, and (c) intervene to improve the effectiveness of any group that is malfunctioning. (Johnson, Johnson, & Smith, 2007). Thus, the findings of the present study and many others suggested that trainer development for using cooperative learning method is necessary and appropriate to engage the adult learner in the learning process. Although, cooperative learning has the advantage of using this method in different subjects and levels starting from elementary school to university and professional settings, the cooperative learning approach requires very experienced and well-trained trainers. Trainer expertise in using cooperative learning depends on the ability to structure these five basic elements in cooperative lessons. Trainers should know how and when to assign learning objectives to learners and how to monitor each learner within each small group. Previous studies have suggested the trainer management skills to be a key element of effective cooperative learning programs. Intensive trainer training may be more critical for teachers of adult learners, because these learners often bring to the group situation mixed histories of success within group activities and competitive attitudes from the workplace (Thompson, & Chapman, 2004). For example, using effective probing to draw out comprehensive and elaborated answers on theoretical assumptions and applications during the task may motivate learners to learn.

This study provided an opportunity to investigate how instructional strategies, such as cooperative learning, and the learning environment impact learning and instruction. Structuring positive social interdependence in the classroom, through cooperative learning, improved learners' team



skills that are valuable in their workplace. If adults can learn cooperatively, then they can work cooperatively. Kirkpatrick's third training evaluation criteria, transfer of what has been learned is of the utmost importance to training programs in organizational settings. The interconnectedness between learning situations and real-life situations increases the learners' ability to transfer their learning. The cooperative learning method since it is a very good match to actual teamwork can simulate and serve as a vehicle to train functional, real-life interpersonal teams.

Researchers agree, however, that learning will not automatically result following the implementation of a specific training design technique (Machin, 2002). Beyond the training method employed to present training content (whether by lecture, computer, readings, case studies, etc), it is also important to consider how best to organize training content (e.g., incorporating relevant principles of learning and considering the complexity of training content) and how best to prepare trainees for receiving it. Research suggests that when trainees are ill-prepared for training, they will be less motivated to learn and therefore less likely to master training content (Tannenbaum, & Yukl, 1992). Logically, this causal relationship between motivation and preparation may operate in the reverse. Nevertheless, proper preparation for training has been shown to yield more efficient learning training content (Baldwin & Ford, 1988; Cannon-Bowers et al., 1998).

Trainee preparedness encompasses (1) readiness to learn, including the degree to which trainees possess the requisite KSAs prior to entering training, (2) motivation to learn or motivation to engage in a specific training program, or (3) awareness of (or mental preparation for) the forthcoming training material and its complexity, structure, and potential application (Cannon-Bowers et al., 1998; Goldstein & Ford, 2002). Six types of pre-training interventions have been identified as having the potential to prepare trainees for learning training content and to improve the

potential that practice during training will be efficient and effective in promoting learning (Cannon-Bowers et al., 1998). These interventions include attentional advice, meta-cognitive strategies, advance organizers, goal orientation, preparatory information and pre-training briefs. Each of these interventions is thought to promote learning by orienting trainees to the nature, structure, and/or complexity of the forthcoming training material, or by providing strategies trainees might use to monitor their learning during training and their performance during practice. For example, attentional advice offers trainees a process or strategy will optimize learning from training. This intervention primes existing knowledge with the goal of creating a general schema or mental model that might be applied across a variety of situations (Phye, 1989). On the other hand, an advance organizer may promote learning by providing advanced knowledge of the content and structure of the training material, facilitating an understanding of the interrelationships among training concepts, and laying the groundwork for the development of appropriate mental models of training material (Cannon-Bowers et al., 1998; Mayer, 1989). With the exception of pre-training briefs, which are specifically designed for team-training situations, each intervention has the potential to positively impact individual learning outcomes and training performance. Pre-training briefs are meant to impact team-level learning outcomes.

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## APPENDICES

### APPENDIX A

#### SAMPLE LESSON PLANS

#### İŞ BAŞINDA EĞİTİM DERS PLANI

Gün 1

#### Grup : Ortak Ders Planı

<b>Konu</b>	<b>Okuma ve Anlama Çalışmaları</b>
<b>Ders İçeriği</b>	Tanışma, eğitimin amacının ve yürütülüşünün açıklanması Katılımcıların grup becerilerini geliştirme amaçlı etkinliklerin uygulanması
<b>Ders Hedefleri</b>	Grup çalışması sırasında diğer grup üyelerinin görüşlerini dikkate alır. Grup arkadaşlarının verilen metni anlama durumlarını kontrol eder. Grup arkadaşlarını çalışmaya teşvik eder. Grup arkadaşlarını çalışmaya yönlendirir. Öğrendiklerini özetler.
<b>Malzemeler</b>	Katılımcı Listesi , Çalışma sayfaları, ppt Slaytları-GÜN 1
<b>Toplam Süre</b>	3 saat

Konu: Tanışma	Süre: 20 dk.
Malzeme: Katılımcı Listesi, Yaka İsimlikleri	Saat: 13.30 – 13.50
Eğitmen kendini tanıtır. Listedeki katılımcı isimlerini okur ve katılımcıların kendini tanıtmaları istenir (çalıştığı servis, hiz. yılı vb.) İsimlikler dağıtılır. Sadece isimlerini, karşıdan okunabilecek büyüklükte yazmaları istenir.	

## İŞ BAŞINDA EĞİTİM DERS PLANI

### Grup : Ortak Ders Planı

Gün 1

Konu: Eğitime Giriş	Süre: 25 dk.
Malzeme: PPT Slayt # 2-4	Saat: 13.50 – 14.15
<p>Eğitimin adından ne anladıkları sorularak “İş Başında Eğitim”in tanımı verilir;</p> <p>Kendi yaptıkları işi nasıl ve kimden öğrendikleri sorulur, verilen cevaplar doğrultusunda örnekler de verilerek açıklanır,</p> <p>Eğitimin amacı ve hedefleri anlatılır,</p> <p>Öğrenilecek konu başlığının genel olarak neler olduğu açıklanır,</p> <p>Eğitimin yürütülüşüyle ilgili bilgi verilir:</p> <ul style="list-style-type: none"><li>• Her ders başlangıcında o gün işlenecek konuların verileceği,</li><li>• Ders bitiminde işlenen konuların tekrarının yapılacağı,</li><li>• Katılımcıların konuları ders notlarından okuyacağı, okumalar bittikten sonra ya katılımcılardan soru hazırlamalarının isteneceği ya da eğitmenin tesadüfi olarak bir katılımcı seçerek okudukları konuları özetlemeleri isteyeceği, en sonunda da eğitmenin konuları tekrar edeceği belirtilir.</li></ul> <p>Katılımcılardan beklenenler açıklanır:</p> <ul style="list-style-type: none"><li>• Derse zamanında gelme,</li><li>• Ders notlarını ve dosyalarını derse getirme,</li><li>• Derse aktif olarak katılma.</li></ul> <p>Eğitim sonunda değerlendirme yapılacağı, sonuçların sadece eğitim programının değerlendirilmesi amacıyla kullanılacağı ve eğitmenden başka hiç kimse tarafından görülmeyeceği söylenir. Verecekleri bilgilerin programın geliştirilmesi amacıyla kullanılacağından yansız davranmalarının çok önemli olduğu belirtilir.</p> <p>Birinci gün okuma-anlama ve zamanı etkin kullanma becerilerinin gelişiminin hedeflendiği, bunun için de iş başında eğitim değil genel kültür ağırlıklı konular üzerinde çalışılacağı belirtilir.</p> <p>Sormak istedikleri konular sorulur, varsa cevaplanır.</p>	
ARA	Saat: 14.15 – 14.30

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : Ortak Ders Planı**

**Gün 1**

Konu: Okuma-Anlama Çalışması – 1	Süre: 15 dk.
Malzeme: Çalışma-1, PPT Slayt # 5	Saat: 14.30 – 14.45
<p>Verilen süre içerisinde bireysel çalışarak “İnsanlar” şiirini okumaları, her soru için en az üç cevap bulmaları ve verdikleri cevapların arasından birini seçmeleri istenir.</p> <p>Her sorunun cevabının katılımcılar arasından bir kişinin rasgele seçilerek alınır ve sınıfla birlikte tartışılır.</p>	
Konu: Okuma-Anlama Çalışması – 2	Süre: 20 dk.
Malzeme: Çalışma-2, PPT Slayt # 6	Saat: 14.45 – 15.05
<p>Verilen süre içerisinde bireysel olarak “Fakirlikle Cahillik Atbaşı” yazısını okumaları ve her sorunun cevabını bulmaları istenir. Sorulduğunda bunu sınıfa açıklayabilmelerinin beklendiği söylenir.</p> <p>Her sorunun cevabın katılımcılar arasından bir kişi rasgele seçilerek alınır ve sınıfla birlikte tartışılır.</p>	
Konu: Okuma-Anlama Çalışması – 3	Süre: 25 dk.
Malzeme: Çalışma-3, PPT Slayt # 7	Saat: 15.05 – 15.30
<p>Verilen süre içerisinde bireysel olarak “Üç Büyük Kentimizde Okumaz-Yazmalar” yazısını okumaları ve her sorunun cevabını bulmaları istenir. Sorulduğunda bunu sınıfa açıklayabilmelerinin beklendiği söylenir.</p> <p>Her sorunun cevabın katılımcılar arasından bir kişi rasgele seçilerek alınır ve sınıfla birlikte tartışılır.</p>	
ARA	Saat: 15.30 – 15.45
Konu: Okuma-Anlama Çalışması – 4	Süre: 30 dk.
Malzeme: Çalışma-4, PPT Slayt # 8	Saat: 15.45 – 16.15
<p>Verilen süre içerisinde bireysel olarak “Dost Kazanma Sanatı” yazısını okumaları ve her sorunun cevabını bulmaları istenir. Sorulduğunda bunu sınıfa açıklayabilmelerinin beklendiği söylenir.</p>	

Her sorunun cevabın katılımcılar arasından bir kişi rasgele seçilerek alınır ve sınıfla birlikte tartışılır.	
KAPANIŞ	Süre: 16.15 – 16.30
O gün yapılan uygulamaların tekrar edilmesi, Ertesi gün işlenecek konu başlıklarının verilmesi.	

### ÖRNEK ÇALIŞMA

DERS ADI: Okuma – anlama çalışması 1 (İnsanlar Şiiri)

DERS İÇERİĞİ: Katılımcılar gruplar halinde bir şiiri analiz eder ve soruları cevaplarlar.

MALZEMELER:

Malzeme	Adet
Şiirin ve soruların yazılı olduğu çalışma sayfası	Her katılımcı için bir adet
Rol kartları	Her grup için bir adet

SÜRE: 15 dakika

GRUP BÜYÜKLÜĞÜ: 3 kişi

GRUP OLUŞTURMA: Sınıftaki katılımcı sayısı 3’e bölünüp çıkan sayı sırayla saydırılarak gruplar tesadüfi olarak oluşturulur. Bir ya da iki kişinin kalması durumunda son bir ya da iki grup dörder kişi çalışır. Bu grupların, katılımcıların destek grubu olduğu açıklanır. Her ders başlangıcında bu grupların birarada oturacağı, birbirlerine hem akademik hem de sosyal yönden destek olacakları belirtilir.

ROLLER: Katılımcılar, rol kartlarını karıştırıp arasından seçerek rolleri tesadüfi olarak dağıtırlar.

Okuyucu: Şiiri yüksek sesle gruba okur.

Soruları Soran ve Kontrol Eden: Şiirin sonunda verilen soruları yüksek sesle okur ve soruların cevaplandığını kontrol eder.

Yazıcı: Sorular için grup olarak belirledikleri üç cevabı not eder, en son karar verilen cevabı arkadaşlarının kendi defterlerine yazmalarını sağlar.

GÖREV: Katılımcılar, (a) verilen her soru için en az 3 cevap yazılmasını sağlamak, (b) her soru için tek bir cevap belirlemek ve (c) grup olarak belirlenen cevabı açıklamakla görevlidir.

OLUMLU BAĞIMLILIK: Grup hedefi, cevaplar üzerinde fikir birliğine varmış olmaları ve grup olarak verdikleri cevabı her bir grup üyesinin açıklayabiliyor olmasıdır.

*“Grup olarak çalışabilmeniz için her birinize ayrı bir görev verilmiştir. Okuyucu, şiiri diğer grup üyelerine yüksek sesle okur. Soru soran ve kontrol eden kişi, verilen soruları yüksek sesle okur ve soruların cevaplandığını kontrol eder. Yazıcı, sorular için grup olarak belirledikleri üç cevabı not eder ve en son karar verilen cevabı işaretler.”*

BİREYSEL KATILIM: *“Soruların cevaplarını tartışırken, her birinizin bunları not etmesi gerekmektedir. Çalışma sonunda, ben içinizden birini rasgele seçip sorular üzerinde nasıl çalıştığınızı ve hangi cevapları verdiğinizi soracağım.”*

BAŞARI ÖLÇÜTÜ: *“Bütün grup üyeleri soruları cevaplayabilmeli ve verdikleri cevapları sınıftaki bir arkadaşına açıklayabilmelidir.”*

BEKLENEN DAVRANIŞLAR: *“Grup üyeleri çalışırken şunları yapmaları beklenmektedir:*

- ✓ *Her bir grup üyesi kendi görüşünü söylemelidir.*
- ✓ *Grup üyeleri anlamadıkları konuları sormalıdır.*
- ✓ *Grup üyeleri birbirlerinin soruların cevaplarını anlayıp anlamadığını sorarak kontrol etmelidir.*

Kontrol etme davranışı, bir T-gösterimi çizilerek hangi davranışları içerdiği, nasıl görüldüğü ve ne söylenmesi gerektiği açıklanmalıdır. (Nasıl Görünür=Göz teması, grup üyelerine doğru eğilme, ilgili bir şekilde dinleme + Nasıl söylenir= Bana bir daha anlatır mısın? Nerede bulduğunu gösterir misin? Bu cevabı nasıl buldun? Bunu nasıl açıklarsın?)

GRUPLARARASI İŞBİRLİĞİ: “*Grup olarak çalışmanızı bitirince, yandaki grupta cevaplarınızı kontrol ediniz.*”

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GRUPLARIN İZLENMESİ: Eğitimci, gruplar çalışırken, soruların cevaplarını bulmak için gösterdikleri çabayı ve grup olarak nasıl işbirliği yaptıklarını gözler. Eğer bir soru gelirse katılımcının bu sorusu sınıfa yöneltilir, ya da yandaki grupta kontrol etmesi istenir.

ARAYA GİRME: Bir grubun çalışmadığı ya da çalışırken zorlandığı görülürse, doğru zaman beklenir ve araya girilir. Soruların nasıl bir yöntemle cevaplanabileceği gruba sorulur.

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DEĞERLENDİRME: Sınıftan her soru için birer kişi seçilerek grup olarak verdikleri cevabı açıklaması istenir. Ders sonunda da bir test verilerek bireysel olarak testi yanıtlarlar.

GRUP DEĞERLENDİRMESİ : Çalışma sonunda grup üyeleri birlikte

- ✓ grup olarak iyi yaptıkları, kendilerini başarılı olarak değerlendirdikleri bir alanı
- ✓ hangi alanda gelişmeye ihtiyaç duyduklarını, bir dahaki sefere neyi daha iyi yapacaklarını belirlerler.

SINIF DEĞERLENDİRMESİ: Eğitimci, sınıf olarak neyi iyi yaptıklarını, izleme sırasındaki davranışlarından örnekler vererek açıklar.

KUTLAMA: Grup üyeleri, birbirlerini yaptıkları çalışmadan dolayı kutlarlar.

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : Ortak Ders Planı**

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**Gün 1**

<b>Konu</b>	<b>Çalışan Uzmanlığının Gelişimi ve Yetkinliklerin Hizmet İçi Eğitimle Geliştirilmesi</b>
<b>Ders İçeriği</b>	Örgütlerde, çalışan uzmanlığının önemi, değişim ve gelişimde hizmet içi eğitimin rolü, hizmet içi eğitim yöntemleri ve iş başı eğitimlerin yapılandırılmasının önemi
<b>Ders Hedefleri</b>	Örgütler için çalışan uzmanlığının önemini açıklar, İnsan yetkinliğinin düzeylerini tanımlar, Değişime neden olan faktörleri sıralar, Hizmet içi eğitimi ve uzmanlığı tanımlar, Hizmet içi eğitimin hedefini tanımlar, Yapılandırılmış İş Başında Eğitimi (YİBE) tanımlar, Sınıf eğitimlerinin olumsuz sonuçlarından üç tanesini sıralar, Geleneksel iş başında eğitimlerin temel özelliklerinden üç tanesini sıralar, Geleneksel iş başında eğitimlerin olumsuz sonuçlarından iki tanesini sıralar.
<b>Malzemeler</b>	Ders Notları, ppt slaytları –GÜN 2
<b>Toplam Süre</b>	3 saat 15 dakika

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : Ortak Ders Planı**

**Gün 1**

Konu: Giriş	Süre: 15 dk.
Malzeme: ppt Slayt # 2	Saat: 13.30 – 13.45
Yoklama, ısınma-ideal yönetici özellikleri sorulur ve tartışılır-, önceki günkü konular tekrar edilir ve o gün öğrenilecek konuların başlıkları verilir.	
Konu: Çalışan Uzmanlığının Gelişimi – 1	Süre: 15 dk.
Malzeme: Ders Notları & ppt Slayt # 3-8	Saat: 13.45 – 14.00
Örgütler için çalışan gelişiminin önemi açıklanır. Hizmet içi eğitimin örgütün ve çalışanın gelişimindeki rolü ve hedefi tanımlanır, “Gelişen Dünyada Uzmanlık” çerçevesinde uzmanlığın ve uzmanın tanımı yapılır. Uzmanlığın örgütler için önemi açıklanır.	
Konu: Çalışan Uzmanlığının Gelişimi – 2	Süre: 15 dk.
Malzeme: Ders Notları & ppt Slayt # 9-15	Saat: 14.00 – 14.15
“İnsan yetkinliğinin düzeyleri” bölümünü okumaları ve sorulduğunda cevap verebiliyor olmalarının beklendiği söylenir. Ders notunu kapatıp defterlerine yetkinlik düzeylerinin isimlerini sırasıyla yazmaları istenir. Katılımcıların arasından seçilerek • Düzeylerin isimlerini ve sırası sorulur ve açıklaması istenir. Verilen cevaplar doğrultusunda insan yetkinliğinin düzeyleri açıklanır. Çalışmalarından dolayı sınıf kutlanır.	
ARA	Saat: 14.15 – 14.30



**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : Bireysel Öğrenme**

**Gün 2 – Ünite 1**

Konu: Örgütlerde değişim ve sonuçları	Süre: 20 dk.
Malzeme: Ders Notları PPT Slayt #16 - 25	Saat: 14.30 – 14.50
<p>“Örgütlerde değişimi yaratan faktörler” bölümünü okumaları ve sorulduğunda cevap verebiliyor olmalarının beklendiği söylenir.</p> <p>Ders notunu kapatıp defterlerine değişimi yaratan faktörlerden hatırladıklarını yazmaları istenir. Katılımcıların arasından seçilerek değişime neden olan faktörlerin isimleri sorulur.</p> <p>Verilen cevaplar doğrultusunda bu faktörler açıklanır. Çalışmalarından dolayı sınıf kutlanır.</p>	
Konu: Hizmet içi eğitim çeşitleri	Süre: 25 dk.
Malzeme: Ders Notları PPT Slayt #16 - 25	Saat: 14.50-15.15
<p>Hizmet içi eğitimin çeşitleri – “Sınıf eğitimleri” ve “İş başında eğitim” tanımı açıklanır.</p> <p>Şu anda yapmakta oldukları işi nasıl öğrendikleri ve aldıkları eğitimin ne tür olduğu sorulur. Sınıf eğitimleri ve iş başında eğitim için örnekler verilir. Yapılandırılmış iş başında eğitimin tanımı verilir.</p> <p>Yapılandırılmış iş başında eğitimin geleneksel iş başında eğitimden farklı olduğu temel noktalar aktarılır.</p>	
ARA	Saat: 15.15-15.30
Konu: Sınıf Eğitimleri	Süre: 15 dk.
Malzeme: Ders Notları, PPT Slayt #26 - 38	Saat: 15.30-15.45
<p>“Sınıf eğitimlerinin bazı olumsuz sonuçları” bölümünü okumaları ve sorulduğunda cevap verebiliyor olmalarının beklendiği söylenir.</p> <p>Katılımcıların arasından seçilerek olumsuz sonuçlar tek tek sorulur ve tahtaya yazılır.</p> <p>Verilen cevaplar doğrultusunda sınıf eğitiminin olumsuz sonuçları açıklanır. Çalışmalarından dolayı sınıf kutlanır.</p>	

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : Bireysel Öğrenme**

**Gün 2 – Ünite 1**

Konu: Geleneksel İş Başında Eğitim - 1	Süre: 15 dk.
Malzeme: Ders Notları, PPT Slayt #39 – 48	Saat: 15.45- 16.00
<p>Geleneksel iş başında eğitimin tanımı açıklanır.</p> <p>“Geleneksel iş başında eğitimin temel özellikleri” sıralanır.</p> <p>Bu özelliklerden hangilerinin kendilerinin aldığı iş başında eğitim için geçerli olduğu sorulur, verilen cevaplar doğrultusunda açıklanır.</p> <p>Konu bitiminde ders notlarını kapatıp hatırladıkları temel özellikleri yazmaları istenir.</p> <p>Katılımcıların arasından seçilerek bu özellikler sorulur ve sırayla tahtaya yazılır. Çalışmalarından dolayı sınıf kutlanır.</p>	
Konu: Geleneksel İş Başında Eğitim - 2	Süre: 15 dk.
Malzeme: Ders Notları, PPT Slayt #39 – 48	Saat: 16.00- 16.15
<p>Banka’da göreve ilk başladıklarında ve yaptıkları işi öğrenirken ne tür zorluklar yaşadıkları sorulur.</p> <p>Verilen açıklamalar doğrultusunda Geleneksel iş başında eğitimin bazı olumsuz sonuçları açıklanır.</p>	
Konu: Öğrenilenlerin Hatırlanması	Süre: 5 dk.
Malzeme: Slayt #2	Saat: 16.15 -16.20
Başlıklar kısa açıklamalar verilerek gösterilir.	
ARA	Saat: 16.20 -16.30
Konu: Değerlendirme	Süre: 5 dk.
Malzeme: Test 1	Saat: 16.30 – 16.45
Yönerge okunur. Sınav uygulanır.	

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : İşbirliğine Dayalı Öğrenme**

**Gün 2 – Ünite 1**

<b>Konu</b>	<b>Çalışan Uzmanlığının Gelişimi ve Yetkinliklerin Hizmet İçi Eğitimle Geliştirilmesi</b>
<b>Ders İçeriği</b>	Örgütlerde, çalışan uzmanlığının önemi, değişim ve gelişimde hizmet içi eğitimin rolü, hizmet içi eğitim yöntemleri ve iş başı eğitimlerin yapılandırılmasının önemi
<b>Ders Hedefleri</b>	Örgütler için çalışan uzmanlığının önemini açıklar, İnsan yetkinliğinin düzeylerini tanımlar, Değişime neden olan faktörleri sıralar, Hizmet içi eğitimi ve uzmanlığı tanımlar, Hizmet içi eğitimin hedefini tanımlar, YİBE'yi tanımlar, Sınıf eğitimlerinin olumsuz sonuçlarından üç tanesini sıralar, Geleneksel iş başında eğitimlerin temel özelliklerinden üç tanesini sıralar, Geleneksel iş başında eğitimlerin olumsuz sonuçlarından iki tanesini sıralar.
<b>Malzemeler</b>	Ders Notları, ppt slaytları – GÜN 2
<b>Toplam Süre</b>	3 saat 15 dakika

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : İşbirliğine Dayalı Öğrenme**

**Gün 2 – Ünite 1**

Konu: Giriş	Süre: 15 dk.
Malzeme: ppt Slayt # 2	Saat: 13.30 – 13.45
Yoklama, destek gruplarıyla biraraya gelme ve ısınma (ideal yönetici özelliklerini belirleme ve tartışma-önce grup sonra sınıfça). Önceki günün tekrarı ve o gün öğrenilecek konuların verilmesi	
Konu: Çalışan Uzmanlığının Gelişimi – 1 ve 2	Süre: 30 dk.
Malzeme: Ders Notları & ppt Slayt # 3-8	Saat: 13.45 – 14.15
<p><u>Grup Oluşturma:</u></p> <ul style="list-style-type: none"><li>İkişerli gruplar “sayılarak” oluşturulur. 1.kişi ve 2.kişinin kim olacağını gruplar kendi karar vererek belirler.</li></ul> <p><u>Görev:</u> Grupların görevi, sorumlu oldukları bölümü öğrenip eşine öğretmek.</p> <p><u>Uygulama:</u></p> <ul style="list-style-type: none"><li>“Çalışan Uzmanlığının Gelişimi” bölümündeki 5. ve 6. sayfadaki açıklamaları 1. kişi, Tablo 1.1’deki “İnsan Yetkinliğinin Düzeyleri”ni de 2.kişi öğrenip, diğerine verilen süre içerisinde öğretmekle sorumludur.</li><li>Eşlerinin öğrenme durumunun soru sorularak kontrol edileceği belirtilir.</li><li>Verilen süre bitiminde ders notlarını kapattırıp uzmanlığın tanımını ve yetkinlik düzeylerini yazmaları, hatırlayamadıklarını eşlerinden kontrol etmeleri istenir.</li></ul> <p><u>Değerlendirme ve Sonuçlandırma:</u></p> <ul style="list-style-type: none"><li>Örgütler için çalışan gelişiminin ve uzmanlığın önemi kısaca açıklanır.</li><li>Eğitimin, örgütün ve çalışanın gelişimindeki rolü ve hedefi tanımlanır.</li><li>Katılımcıların arasından seçilerek insan yetkinliğinin düzeylerini sıralamaları ve kısaca açıklamaları istenir.</li></ul> <p>Grup değerlendirmesi ve kutlaması yaptırılır.</p>	
ARA	Saat: 14.15 – 14.30

**İŞ BAŞINDA EĞİTİM DERS PLANI**  
**Grup : İşbirliğine Dayalı Öğrenme**

**Gün 2 – Ünite 1**

Konu: Örgütlerde değişim ve sonuçları	Süre: 20 dk.
Malzeme: Ders Notları PPT Slayt #16 - 25	Saat: 14.30 – 14.50
<p><u>Grup Oluşturma:</u></p> <ul style="list-style-type: none"><li>• Bir saat şekli çizdirilerek her saat için sınıf arkadaşlarından randevu almaları ve isimlerin saat üzerine not edilmesi istenir.</li><li>• Saat 5'e randevu aldıkları arkadaşlarını bulup birlikte çalışmaya hazır olmaları istenir.</li></ul> <p><u>Görev:</u> Grupların görevi, sorumlu oldukları bölümü eşiyile birlikte okuyup öğrenmek ve eşinin öğrenip öğrenmediğini kontrol etmek.</p> <p><u>Uygulama:</u></p> <ul style="list-style-type: none"><li>• “Örgütlerde değişimi yaratan faktörler” <i>Oku ve Eşine Anlat</i> yöntemiyle öğrenirler.</li><li>• Okuma bittikten sonra ders notlarını kapatıp önce bireysel sonra da grup olarak 7 faktörü yazmaları istenir.</li><li>• Hatırlayamadıkları faktörleri yan gruplardan tamamlamaları istenir.</li></ul> <p><u>Değerlendirme ve Sonuçlandırma:</u></p> <ul style="list-style-type: none"><li>• Katılımcıların arasından seçilerek değişime neden olan faktörlerin isimleri sorulur.</li><li>• Verilen cevaplar doğrultusunda bu faktörler kısaca açıklanır.</li><li>• Grup değerlendirmesi ve kutlaması yaptırılır.</li></ul>	
Konu: Hizmet içi eğitim çeşitleri	Süre: 25 dk.
Malzeme: Ders Notları PPT Slayt #16 - 25	Saat: 14.50-15.15
<p><u>Grup Oluşturma:</u> Bir önceki uygulamadaki arkadaşlarıyla çalışmaya devam ederler.</p> <p><u>Görev:</u> Grupların görevi, konular anlatılırken not tutmak ve anlatım bitince notlarını eşiyile karşılaştırıp eksiklerini tamamlamak.</p> <p><u>Uygulama:</u> Hizmet içi eğitimin çeşitleri – “Sınıf eğitimleri” ve “İş başında eğitim” tanımlanır.</p>	

## İŞ BAŞINDA EĞİTİM DERS PLANI

### Grup : İşbirliğine Dayalı Öğrenme

Gün 2 – Ünite 1

Konu: Hizmet içi eğitim çeşitleri ( <i>devam</i> )	Süre: 25 dk.
Malzeme: Ders Notları PPT Slayt #16 - 25	Saat: 14.50-15.15
<ul style="list-style-type: none"><li>• Şu anda yapmakta oldukları işi nasıl öğrendikleri ve aldıkları eğitimin ne tür olduğu bir eğitim olduğu sorulur.</li><li>• Sınıf eğitimleri ve iş başında eğitim için örnekler verilir.</li><li>• Yapılandırılmış iş başında eğitimin tanımı verilir.</li><li>• Yapılandırılmış iş başında eğitimin tanımından yola çıkarak geleneksel iş başında eğitimden farklı olduğu temel noktalar anlatılır.</li></ul> <p><u>Değerlendirme ve Sonuçlandırma:</u></p> <ul style="list-style-type: none"><li>• Katılımcılar arasından seçilerek aldıkları notlar sorulur, verilen cevaplar doğrultusunda kısa açıklamalar yapılır.</li><li>• Grup değerlendirmesi ve kutlaması yaptırılır.</li></ul>	
ARA	Saat: 15.15-15.30
Konu: Sınıf Eğitimleri	Süre: 15 dk.
Malzeme: Ders Notları, PPT Slayt #26 - 38	Saat: 15.30-15.45
<p><u>Grup Oluşturma:</u></p> <ul style="list-style-type: none"><li>• Saat 9’a randevu aldıkları arkadaşlarını bulup birlikte çalışmaya hazır olmaları istenir.</li></ul> <p><u>Görev:</u> “Sınıf eğitimlerinin bazı olumsuz sonuçları” bölümünü öğrenip soru sorulduğunda cevap verebiliyor olmalarının beklendiği söylenir.</p> <p><u>Uygulama:</u></p> <ul style="list-style-type: none"><li>• “Sınıf eğitimlerinin bazı olumsuz sonuçları” bölümünü <i>Oku ve Eşine Anlat</i> yöntemiyle öğrenirler.</li></ul> <p><u>Değerlendirme ve Sonuçlandırma:</u></p> <ul style="list-style-type: none"><li>• Katılımcıların arasından seçilerek olumsuz sonuçlar sorulur ve tahtaya yazılır.</li><li>• Verilen cevaplar doğrultusunda sınıf eğitiminin olumsuz sonuçları açıklanır. Grup değerlendirmesi ve kutlaması yaptırılır.</li></ul>	

## İŞ BAŞINDA EĞİTİM DERS PLANI

### Grup : İşbirliğine Dayalı Öğrenme

Gün 2 – Ünite 1

Konu: Geleneksel İş Başında Eğitim – 1 ve 2	Süre: 15 dk.
Malzeme: Ders Notları, PPT Slayt #39 – 48	Saat: 15.45- 16.00
<p><u>Grup Oluşturma:</u></p> <ul style="list-style-type: none"><li>• Aynı eşleriyle çalışmaya devam ederler. 1. ve 2. kişi belirlenir.</li></ul> <p><u>Görev:</u></p> <p>Grupların görevi, sorumlu oldukları bölümü öğrenip eşine öğretmek.</p> <p><u>Uygulama:</u></p> <ul style="list-style-type: none"><li>• Geleneksel iş başında eğitimin tanımı verilir.</li><li>• 1. kişi “Geleneksel iş başında eğitimin temel özellikleri”, 2.kişi “Geleneksel iş başında eğitimin bazı olumsuz sonuçları” öğrenme ve eşine öğretmekten sorumlu olduğu belirtilir-<i>Jigsaw</i> yaptırılır.</li><li>• Banka’da göreve ilk başladıklarında ve yaptıkları işi öğrenirken ne tür zorluklar yaşadıklarını grup arkadaşlarıyla paylaşmaları istenir.</li></ul> <p><u>Değerlendirme ve Sonuçlandırma:</u></p> <ul style="list-style-type: none"><li>• Katılımcıların arasından seçilerek Geleneksel iş başında eğitimin temel özellikleri ve bazı olumsuz sonuçları sorulur, eksik kalan bölümler açıklanır.</li></ul> <p>Grup değerlendirmesi ve kutlaması yaptırılır.</p>	
Konu: Öğrenilenlerin Hatırlanması	Süre: 5 dk.
Malzeme: Slayt #2	Saat: 16.15 -16.20
Başlıklar sıralanır ve kısaca açıklanır.	
ARA	Saat: 16.20 -16.30
Konu: Değerlendirme	Süre: 5 dk.
Malzeme: Test 1	Saat: 16.30 – 16.45
Yönerge okunur. Sınav uygulanır.	

**BİRLİKTE ÖĞRENME İLKELERİ VE BUNLARIN**  
**UYGULAMASI**

**1. OLUMLU BAĞIMLILIK:**

Ders başlarında ve grup çalışmaları öncesinde şunlar söylenir:

*“Üç sorumluluğunuz var. Birincisi, konuları öğrenmekle sorumlusunuz. İkincisi, grubunuzdaki herkesin öğrenmesinden sorumlusunuz. Üçüncüsü, bütün sınıfın öğrenmesinden sorumlusunuz.”*

Grup çalışmalarında aşağıdaki bağımlılık oluşturma yöntemleri uygulanır.

✓ **Hedef Bağımlılığı:** Grupların hedefi, her bir üyenin grup çalışması kapsamında verilen bütün bölümleri öğrenmesini sağlamaktır.

Başarı Ölçütü: *“Bütün grup üyeleri soruları cevaplayabilmeli ve verdikleri cevapları sınıftaki bir arkadaşına açıklayabilmelidir.”*

✓ **Görev Bağımlılığı:** Gruplarda görev dağılımı yapılarak bir üyenin görevini tamamlayabilmesi için diğerinin de kendine verilen görevi mutlaka tamamlaması gerekir. Öğrenme-öğretme görevleri paylaştırıldığında grubun öğrenme hedefini gerçekleştirebilmesi için her grup üyesinin öğrenmiş ve öğretmiş olması gerekir.

✓ **Kutlama Bağımlılığı:** Her grup çalışmasının bitiminde grup üyeleri öğrenme hedefini gerçekleştirdikleri için birbirini kutlar.

**2. BİREYSEL KATILIM:** Her bir grup üyesinin öğrenmiş olması ve sorulacak sorulara cevap verebilir olması.

**3. SOSYAL BECERİ:** İlk gün öğrendikleri grup çalışma becerileri – anlayıp anlamadığını kontrol etme, teşvik etme, grup çalışmasını yönlendirme ve özetleme- her uygulamada sırasıyla hatırlatılır.



## İŞ BAŞINDA EĞİTİM DERS PLANI

### Grup : İşbirliğine Dayalı Öğrenme

Gün 2 – Ünite 1

4. YÜZ YÜZE ÇALIŞMA: Grup üyelerinin birbirine dönük ve yakın ama diğer gruplardan uzak oturması sağlanır.

5. GRUP DEĞERLENDİRMESİ : Grup çalışması sonunda grup üyeleri;

- ✓ *grup olarak iyi yaptıkları, kendilerini başarılı olarak değerlendirdikleri bir alanı*
- ✓ *hangi alanda gelişmeye ihtiyaç duyduklarını, bir dahaki sefere neyi daha iyi yapacaklarını belirlerler.*

SINIF DEĞERLENDİRMESİ: Eğitimci, sınıf olarak neyi iyi yaptıklarını, izleme sırasındaki davranışlarından örnekler vererek açıklar.

BEKLENEN DAVRANIŞLAR: “Grup üyeleri çalışırken şunları yapmaları beklenmektedir:

- ✓ *Grup üyeleri anlamadıkları konuları sormalıdır.*
- ✓ *Grup üyeleri her grup üyesinin konuları anlayıp anlamadığını sorarak kontrol etmelidir.*

GRUPLARARASI İŞBİRLİĞİ: “Grup olarak çalışmanızı bitirince, yandaki grupla cevaplarınızı kontrol ediniz.”

DEĞERLENDİRME: Sınıftan her soru için bir veya iki kişi seçilerek grup olarak verdikleri cevabı açıklaması istenir. Ders sonunda da bir test verilerek bireysel olarak testi yanıtlarlar.

### GRUPLARIN İZLENMESİ

Eğitimci, gruplar çalışırken, soruların cevaplarını bulmak için gösterdikleri çabayı ve grup olarak nasıl işbirliği yaptıklarını gözler. Eğer bir soru gelirse katılımcının bu sorusu sınıfa yöneltilir, ya da yandaki grupla kontrol etmesi istenir.

ARAYA GİRME: Bir grubun çalışmadığı ya da çalışırken zorlandığı görülürse, doğru zaman beklenir ve araya girilir. Soruların nasıl bir yöntemle cevaplanabileceği gruba sorulur.

## APPENDIX B

### TRAINING PROGRAM SCHEDULE

#### 3.İŞ BAŞINDA EĞİTİM SEMİNERİ

14 – 18 Mayıs 2007

**AMAÇ:** Göreve yeni başlayan personele işi öğretmekle görevlendirilmiş personelin, yapılandırılmış iş başında eğitim planı hazırlama, uygulama ve performansı izleyip geri bildirim verme konularında bilgi ve becerilerini geliştirmektir.

**KATILIMCILAR:**

Seminere inceleme ve sayım memurları katılacaktır.

**SEMİNER YERİ:**

Banknot Matbaası Genel Müdürlüğü

**AÇIKLAMALAR:**

Seminerin açılışı **08:45-09:00** saatleri arasında yapılacaktır.

**ÖĞRETİM ELEMANI ve PROGRAM SORUMLUSU:**

Süheyla Gökmen

Oda no:204

310 53 00/124

suheyla.gokmen@tcmb.gov.tr

## **PROGRAM İÇERİĞİ:**

### **14 Mayıs 2007 Pazartesi**

08:45-09:00 Açılış  
09:00-12:15 Grup Çalışması Becerilerinin Geliştirilmesi

### **15 Mayıs 2007 Salı**

09:00-12:15 Çalışan Uzmanlığının Gelişimi ve  
Yetkinliklerin Hizmet İçi Eğitimle Geliştirilmesi  
Örgütlerde çalışan uzmanlığının önemi  
Değişim ve gelişimde hizmet içi eğitimin rolü  
Hizmet içi eğitim yöntemleri  
İş başı eğitimlerin yapılandırılmasının önemi

### **16 Mayıs 2007 Çarşamba**

09:00-12:15 YİBE Basamakları:  
Eğitim İçin Hazırlık  
Eğitimin Başlatılması  
İşin Gösterilmesi

### **17 Mayıs 2007 Perşembe**

09:00-12:15 YİBE Basamakları:  
Öğrenilenlerin Uygulanması  
Performansın Değerlendirilmesi  
Gözden Geçirme

### **18 Mayıs 2007 Cuma**

09:00-12:30 YİBE Geliştirme Araçları  
Göstermek ve Anlatmak  
Sorular ve Cevaplar  
Koçluk  
Öz eleştiri  
YİBE Çeşitlerini  
Oryantasyon  
İş Tanıtımı  
Malzemelerle Tanıştırma  
Görevlerle ilgili eğitim  
Kapanış

## APPENDIX C

### APPROVAL OF ETHICAL COMMITTEE



1956

Orta Doğu Teknik Üniversitesi  
Middle East Technical University  
Sosyal Bilimler Enstitüsü  
Grad. Sch. of Social Sciences

06531 Ankara, Türkiye  
Phone: +90 (312) 2102254  
Fax: +90 (312) 2103703  
www.sbe.metu.edu.tr

Sayı : B.30.2.ODTÜ.E1.00.00/2008/676  
Konu : Sâheyla Gökmen hk.

10/07/2008

EĞİTİM BİLİMLERİ BÖLÜM BAŞKANLIĞI'NA,

Eğitim Bilimleri Anabilim Dalı Doktora Programı öğrencisi Sâheyla Gökmen'in, Mayıs 2007-Haziran 2007 tarihleri arasında doktora tezi kapsamında "İşbirliğine Dayalı Öğrenmenin Yetişkinlerin Bilgi Kazanımı Üzerine Etkileri" başlıklı çalışmasına ilişkin olarak Türkiye Cumhuriyet Merkez Bankası'nda çalışan yaklaşık 150 yetişkine uygulama yapması için görevlendirme başvurusu incelenmiş; ilgili Anabilim Dalı Başkanlığı'nın görüşüne dayanarak adı geçen öğrencinin isteği doğrultusunda görevlendirilmesi, Etik Komite onayı koşulu ile uygun görülmüştür.

Gereği için bilgilerinize saygılarımla sunarım.

  
Prof. Dr. Sencer AYATA  
Sosyal Bilimler Enstitüsü Müdürü

Etik Komite Onayı

Uygundur

14.07.2008

Prof. Dr. Canan ÖZGEN  
Uygulama ve  
İURAN Başkan  
ODTÜ 06531 ANKARA

*Sâheyla Gökmen'e ve  
başvurusu Prof. Dr. Meral Akkaya'ya  
iletildi*  
*AY 22/07/08*

**APPENDIX D**  
**TRAINING REACTIONS QUESTIONNAIRE**

TCMB  
İŞ BAŞINDA EĞİTİM SEMİNERİ  
PROGRAM DEĞERLENDİRME FORMU

**AÇIKLAMA**

1. Bu formda toplam 20 adet ifade bulunmaktadır. Her ifadeyi katılmış olduğunuz seminerle ilişkilendirerek düşüncünüz ve ifadelerin size göre ne kadar doğruyu yansıttığını aşağıdaki ölçeği kullanarak değerlendiriniz. Cevaplarınızı, olması gerekeni ya da diğerlerinin sizden duymak istediklerini değil, size şu an en iyi uyan duruma göre veriniz.
2. Her ifadeyi sadece kendi içinde değerlendiriniz ve bu ifadenin ne kadar doğru olduğunu belirtiniz. Diğer ifadelere verdiğiniz cevaplardan etkilenmeyiniz.
3. Tepkinizi en iyi yansıtan numaranın üzerini çarpı işareti ile kapatınız. İfadeleri aşağıdaki tepki seçeneklerinin sayısal karşılıklarını kullanarak veriniz:

- 1: Hiç Katılmıyorum  
2: Büyük Oranda Katılmıyorum  
3: Orta Düzeyde Katılıyorum  
4: Büyük Oranda Katılıyorum  
5: Tamamen Katılıyorum

## İŞ BAŞINDA EĞİTİM SEMİNERİ - DEĞERLENDİRME FORMU

**Programın amacı,** yapılandırılmış iş başında eğitim, eğitimin hazırlanması, başlatılması, yürütülmesi ve değerlendirilmesi hakkında bilgi ve beceri kazandırmaktır.

DEĞERLENDİRME KRİTERLERİ	1	2	3	4	5
Program sorumlusu;					
1. Programın etkin bir şekilde yürütülmesini sağladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Konuları açık ve anlaşılır bir şekilde sundu.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Dersi öğrenme isteğini artıracak şekilde sundu.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Etkin bir şekilde derse katılımı sağladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Öğretim hızını katılımcıların ihtiyaçlarına göre ayarladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. İçerikle doğrudan ilgili sorulara tatmin edici yanıtlar verdi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Derslerin süresini verimli kullandı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Eğitim programı, “Programın amacı”na uygundur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. İçerik teorik düzeyde eğitim ihtiyacımı karşıladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. İçerik uygulama düzeyinde eğitim ihtiyacımı karşıladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Yeni konularda öğrenme ihtiyacımı tetikledi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Öğrendiklerimi işimde kullanma olanağı bulacağımı düşünüyorum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Eğitim programını diğer Birim çalışanlarına da öneririm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Eğitim programı beklentilerimi karşıladı.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Program öncesi verilen ön bilgi (duyuru yazısı, program boşürü vb.) yeterliydi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Program sırasında verilen bilgi (pano duyuruları veya sözlü yönlendirmeler vb.) yeterliydi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Kullandığı eğitim materyalleri (veri, doküman vb.) öğrenmeyi kolaylaştırıcı nitelikteydi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Eğitim materyalleri program sonrasında kaynak olarak kullanılabilir niteliktedir.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Eğitim ortamı (sınıf düzeni, görsel işitsel araçlar, blok not, kalemler vb.) programın uygulanması için yeterliydi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Program sırasında sunulan hizmetler (ikramlar, temizlik vb.) yeterliydi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**AŞAĞIDAKİ KONULARLA İLGİLİ GÖRÜŞLERİNİZİ LÜTFEN BELİRTİNİZ.**

1. Eğitim programının en çok beğendiğiniz yönlerini belirtiniz.

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2. Eğitim programının yetersiz gördüğünüz yönlerini belirtiniz.

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## APPENDIX E

### Training Reactions Questionnaire Items, Associated Factors, and Item Description Statistics

	Item	M	SD	Factor	Factor Loading
1.	The program coordinator-trainer has enabled the training to run smoothly and effectively.	4,68	0,53	1	0,74
2.	The instructor presented the topics in a clear and comprehensible manner.	4,76	0,48	1	0,83
3.	The instructor presented the topics in a way which increased motivation to learn.	4,54	0,68	1	0,88
4.	The instructor encouraged participants to actively participate to the lessons.	4,73	0,58	1	0,72
5.	The instructor adjusted the speed of her presentation to the needs of participants.	4,54	0,70	1	0,75
6.	The instructor gave satisfactory answers to the questions which were directly related to the content.	4,58	0,63	1	0,75
7.	The instructor used the allocated time effectively.	4,66	0,58	1	0,74
8.	The training has accorded with the aims of the program stated above.	4,59	0,63	2	0,55
9.	The content served the needs of the training in terms of theoretical background .	4,10	0,96	2	0,73
10.	The content served the needs of the training in terms of application .	3,82	1,02	2	0,75
11.	The training has triggered my desire towards new learning areas.	3,99	1,00	2	0,65



	Item	M	SD	Factor	Factor Loading
12.	I think I can find the opportunity to use what I learned in the training when I'm doing my job.	4,03	1,13	2	0,79
13.	I can recommend this training program to my colleagues in my department.	4,32	1,00	2	0,83
14.	The training program has met my expectations.	4,24	0,67	2	0,60
15.	The information supplied before the training (announcement of the program, written directions etc.) was adequate.	3,20	1,53	3	0,79
16.	The information supplied during the training (announcements, written and oral directions) was adequate.	3,86	1,19	3	0,82
17.	The training materials (data, documents etc.) were of a quality which facilitated easy learning.	4,56	0,65	4	0,76
18.	The training materials can be used as a source (reference material) after the training.	4,46	0,83	4	0,61
19.	The training environment was good enough for effective training in terms of seating arrangements, audio-visual equipments etc..	3,95	1,09	5	0,79
20.	Services provided during the training such as refreshments, cleaning services etc. were sufficient.	4,09	0,92	5	0,84

## APPENDIX F

### LEARNING OUTCOMES TEST

#### TCMB İŞ BAŞINDA EĞİTİM SEMİNERİ BİLGİ TESTİ

Size söylenmeden soru kitapçığını kesinlikle açmayınız.  
Açıklamanın okunmasını bekleyiniz.

#### AÇIKLAMA

1. Bu kitapçıktaki sorular sizin iş başında eğitim ile ilgili bilginizi ölçmek üzere hazırlanmıştır. Soru kitapçığında toplam ... soru vardır ve cevaplamanız için toplam ... dakika süre verilmiştir.
2. Soruları cevaplamadan önce verilen açıklamaları dikkatli bir şekilde okuyunuz. Çoktan seçmeli sorularda cevabınızı, soru kitapçığındaki ilgili bölümlere çarpı işareti (X) koyarak işaretleyiniz. Diğer soruların cevaplarını verilen boşluklara yazınız. Soruları cevaplarken kurşun kalem kullanınız.
3. Soru kitapçığının açıklama sayfası hariç ... sayfa olması gerekmektedir. Eksik sayfalı soru kitapçığı olan varsa elini kaldırarak bildirsın lütfen.

BAŞARILAR

### **TEST 1**

**Soru 1 :** Çalışanlarının bilgisi, becerisi ve tutumları bir örgütte aşağıdakilerden hangisini doğrudan etkiler? Bir tanesini çarpı işaretiyle belirtiniz.

- a) ..... Çalışanların sosyal güvence düzeylerini
- b) ..... Çalışanların kullandığı yıllık izin sürelerini
- c) ..... Örgütün gelişmişliğini ve rekabet gücünü
- d) ..... Örgüt yöneticilerinin yönetim becerilerini

**Soru 2 :** Aşağıdaki sütunlarda yetkinlik düzeyi tanımları ve isimleri karışık olarak verilmiştir. Tanımların ait olduğu yetkinlik düzeyini bulunuz ve başındaki harfi yetkinlik düzeyinin yanındaki kutuya yazınız.

	<b>Tanım</b>
A	Bir işin yapılabilmesi için gerekli olan bilgi ve deneyimden daha fazlasına sahiptir. Rutin ve rutin olmayan işlerle aynı düzeyde çaba sarfederek başatabilir.
B	Daha önce, işle ilgili ya çok az ya da hiç bir deneyimi olmamıştır. Kişi, işi yapabilmesi için gerekli olan bilgi ve beceriden yoksundur.
C	İşin belirli parçalarını tek başına ve tekrar tekrar yapabilen kişidir. Kişi doğru bir şekilde ve kolaylıkla bu rutin işleri yapabilir.
D	Sahip olduğu değerler, bilgi ve deneyimin, diğer çalışanlar ve kurumu için standart oluşturabileceği düşünülür.
E	Gözetim olmaksızın işin sadece belirli parçalarını doğru bir şekilde yapabilen kişidir. Genellikle, bu düzeyde en iyi performansı gösterebilmesi için yönlendirmeye ihtiyacı vardır.

	<b>Yetkinlik Düzeyi</b>
	Yeni Başlayan
	Gelişmekte Olan
	Deneyimli Çalışan
	Uzman
	Usta

**Soru 3 :** Örgütlerde değişime neden olan 3 faktörü işaretleyiniz.

- a) ..... Teknoloji
- b) ..... Uzmanlaşma-Uzmanlık
- c) ..... Rotasyon-Transferler
- d) ..... Yeni işe alım
- e) ..... Örgütlerin küçülmesi
- f) ..... Verimliliğin artması

**Soru 4 :** YİBE'nin açık yazılışı nedir?

**Soru 5 :** YİBE eğitimlerinden farklı olarak sınıf eğitimlerinde ortaya çıkabilecek olumsuz sonuçlardan 2 tanesini bulunuz ve işaretleyiniz.

- a) ..... Katılımcıların eğitmenle tartışması
- b) ..... Edinilen bilgi ve becerilerin kaybedilmesi
- c) ..... Eğitim hedefinin yapılan işten farklı olması
- d) ..... Eğitime katılanların, eğitimden sonra işten ayrılması

**Soru 6 :** Geleneksel iş başında eğitimlerin temel özellikleri nelerdir? 2 seçenek işaretleyiniz.

- a) ..... Geleneksel iş başında eğitim işe odaklıdır.
- b) ..... Geleneksel iş başında eğitim yapılandırılmıştır, iş akışı eğitim akışını etkilemez.
- c) ..... Geleneksel iş başında eğitimde eğitmenler işin yapılışıyla ilgili standart yöntemleri öğretir.
- d) ..... İş başında eğitim yöntemi eğitmen tarafından belirlenir.

**Soru 7 :** Geleneksel iş başında eğitimin sonuçları tutarsızdır.

Doğru (.....)

Yanlış (.....)

**Soru 8 :** Geleneksel iş başında eğitim uzun sürer.

Doğru (.....)

Yanlış (.....)

**Soru 9 :** Geleneksel iş başında eğitimin sonuçlarıyla ilgili bir değerlendirme yapılır.

Doğru (.....)

Yanlış (.....)

## **TEST 2**

**Soru 1 :** Aşağıda verilen Yapılandırılmış İş Başında Eğitim (YİBE) basamaklarının uygulama sırasını, ilk yapılacak işe 1 vermek üzere başlarındaki boşluklara yazınız.

- ..... Eğitimin Başlatılması
- ..... İşin Gösterilmesi
- ..... Eğitim İçin Hazırlık

**Soru 2 :** Aşağıdakilerden hangisi iş başında eğitimin başarısındaki en önemli basamaktır?

- a) ..... Eğitim İçin Hazırlık
- b) ..... Eğitimin Başlatılması
- c) ..... İşin Gösterilmesi
- d) ..... İşin Uygulanması

**Soru 3 :** İş başında eğitimin başarıya ulaşmasında sorumluluk iş öğrenen kişiye aittir!

Doğru (     )              Yanlış (     )

**Soru 4 :** Araştırmalarda, aşağıdakilerden hangisinin çoğu kişinin yaşamında strese neden olduğu bulunmuştur?

- a) ..... Evlenmek
- b) ..... Yeni bir eve taşınmak
- c) ..... Eğitim olmak
- d) ..... Yukarıdakilerin hepsi

**Soru 5 :** Aşağıda verilen seçenekler arasından “YİBE-Eğitim İçin Hazırlık” basamağında yapılması gereken 2 tür hazırlığı bulunuz ve işaretleyiniz.

- |                            |                                   |
|----------------------------|-----------------------------------|
| a) ..... İş analizleri     | e) ..... Çay, kahve gibi ikramlar |
| b) ..... İş öğrenecek kişi | f) ..... Materyaller              |
| c) ..... Yöneticiler       | g) ..... Çalışma arkadaşları      |
| d) ..... Eğitim Ortamı     |                                   |

**Soru 6 :** YİBE eğitimcinden eğitime başlamadan önce gerçekleştirmesi gereken en temel iki davranış aşağıdaki seçenekler arasında bulunuz ve işaretleyiniz?

- a)..... Gülümsemek
- b)..... Eğitim sorumluluğunu üstlenmek
- c) ..... Dostça davranmak
- d)..... Kendini hazırlamak
- e) ..... Soru sormak

**Soru 7 :** Eğitimcinin, eğitim vermenin yarattığı stresi ortadan kaldırıp iyi bir eğitimci olabilmek yapması gereken en temel uygulamanın ismini yazınız.

.....

**Soru 8 :** Eğitimcinin, eğitim sırasında notlarına sık sık bakması ve yazılı materyallerden okuyarak anlatmasının sonucunda aşağıdakilerden hangisi meydana gelir?

- a) ..... Eğitim alan kişinin dikkati dağılır
- b) ..... Zaman kaybı olur
- c) ..... Eğitim aksar
- d) ..... Yukarıdakilerin hepsi

**Soru 9 :** Eğitim materyalleri eğitime başlamadan önce hazırlanmalı, çoğaltım işi ise eğitim sırasında yapılmalıdır.

Doğru ( ) Yanlış ( )

**Soru 10 :** İş başında eğitimin yürütüleceği alanda aranacak en temel özelliklerden iki tanesini yazınız?

- a)
- b)

**Soru 11 :** Eğitim için hazırlık aşamasına en fazla önemi, yeni eğitimci olan kişiler verir.

Doğru ( ) Yanlış ( )

**Soru 12 :** Eğitimin başlatılması aşamasında yapılması gereken uygulamalar nelerdir? 3 seçenek işaretleyiniz.

- a)..... İşi yaparken kullanılacak materyallerin hazırlanması
- b) ..... Eğitim alacak kişinin rahatlatılması
- c) ..... İş analizleri ve görev tanımlarının okunması
- d) ..... Hedeflerin açıklanması
- e) ..... Öğrenmek için sebepler oluşturulması
- f) ..... İşin aşama aşama anlatılması
- g)..... Kişinin, işi en iyi şekilde görülebileceği yerde konumlandırılması

**Soru 13 :** Eğitmen önce işin yapılışını göstermeli sonra da kişiyi öğrenmeye hazırlamalıdır.

Doğru ( ) Yanlış ( )

**Soru 14 :** İşin gösterilmesi aşamasında yapılması gereken uygulamalar nelerdir? 3 seçenek işaretleyiniz.

- a) ..... İşin yapılışı gösterilirken kestirme yöntemler de mutlaka gösterilmelidir.
- b) ..... İş öğrenecek kişinin işi izleme pozisyonu iyi ayarlanmalıdır.
- c) ..... Eğitmen işi gösterirken bir yandan da işi anlatmalıdır.
- d) ..... Eğitmen, işi önce hızlı bir şekilde göstermeli sonra da kişiden uygulamasını istemelidir.
- e) ..... Her aşama tamamen öğrenildikten sonra bir sonraki aşamaya geçilmelidir.
- f) ..... İş gösterme aşamasında eğitmen, işin yürütülüşüne odaklanmalıdır.

**Soru 15 :** Uygulamaya hazırlık aşamasında yapılması gerekenlerden en önemlisi nedir?

- a) ..... Uygulamanın nasıl yapılacağının açık bir şekilde anlatılması
- b) ..... Eğitmenin rahat olması
- c) ..... Kişiye soru sorularak bilgi seviyesinin belirlenmesi
- d) ..... İşin yapılışıyla ilgili bilgilerin tamamının verilmesi

### **TEST 3**

**Soru 1:** Eğitim alan kişinin uygulamayı kaç kere tekrar etmesi gerekir?

- a) ..... Her uygulama en fazla 2 kere tekrarlanır.
- b) ..... Eğitim alan kişi yoruluncaya ya da sıkılıncaya kadar tekrar edilir.
- c) ..... Eğitimci, kişinin performansından tatmin oluncaya kadar tekrar edilir.
- d) ..... Eğitim alan kişi istediği kadar uygulama yapabilir.

**Soru 2 :** Uygulama basamağıyla ilgili olarak aşağıdakilerden hangisi yanlıştır?

- a) ..... Eğitim alan kişinin ilk denemesinde yaptığı işi açıklaması beklenmez.
- b) ..... Yeni başlayan er geç tek başına işi yapacağından denemeler ne kadar gerçekçi olursa o kadar iyidir.
- c) ..... Bütün işlerde işin tamamı parçalara bölünmeden bir defada uygulattırılmalıdır.
- d) ..... Uygulama basamağıyla değerlendirme basamağı eş zamanlı yani aynı anda yürütülür.

**Soru 3 :** Hangi iş olursa olsun mutlaka gerçek ortamlarda uygulama yaptırılmalıdır.

(.....) Doğru (.....) Yanlış

**Soru 4 :** İş öğrenen kişinin uygulama performansının değerlendirilmesinde eğitimcinin ilk yapması gereken nedir?

- a) ..... Soru sormak
- b) ..... Teşvik etmek
- c) ..... Gözlemek
- d) ..... Geri bildirim vermek

**Soru 5 :** Eğitim alan kişiye uygulama sırasında yaptığı hatalarla ilgili yönlendirmenin ne zaman verilmesi gerekir?

- a) ..... Hatayı yapar yapmaz
- b) ..... Bir sonraki uygulamaya başlamadan hemen önce
- c) ..... Uygulamayı tekrar yaparken
- d) ..... Gözden geçirme basamağına geçmeden önce



**Soru 6 :** Aşağıdaki sütunlarda performansı değerlendirme basamağında yapılması gerekenlerle ilgili açıklamalar ve bu açıklamalara ilişkin yöntemlerin isimleri karışık olarak verilmiştir. Her bir açıklamanın ait olduğu yöntemi bulunuz ve başındaki harfi yöntemin yanındaki kutuya yazınız.

	<b>Performansın değerlendirme basamağında yapılması gerekenler</b>		<b>Yöntem</b>
A	Eğitim alan kişinin, söz konusu işi, belirlenen süre içerisinde ve kalite standartlarına uygun bir şekilde zamanında yapabilecek beceriye ulaştığını kanıtladığı bölümdür.		Koçluk
B	Eğitmenler eleştirel yaklaşımdan tamamen uzaklaşmalı ve bu yöntemle kişinin gelişimine katkıda bulunmalıdırlar.		Deneyim Artışı
C	İşin zor kısımlarının diğer kolay bölümlerden ayrılması ve tekrar tekrar uygulanmasıyla elde edilir.		Soru Sormak
D	Eğitim alan kişi uygulama yaparken, doğru yönde gerçekleştirdiği performans için söylenir.		Teşvik Etmek
E	Eğitim alan kişinin bilgi birikimini belirlemeye yarar.		“Solo” Uygulama

**Soru 7:** İlerideki performansının yüksek olabilmesi için eğitim alan kişi uygulamaya başlar başlamaz hızlı yapması için yönlendirilmelidir.

(.....) Doğru

(.....) Yanlış

**Soru 8 :** Aşağıdaki sütunlarda gözden geçirme basamağında yapılması gerekenlerle ilgili açıklamalar ve bu açıklamalara ilişkin yöntemlerin isimleri karışık olarak verilmiştir. Her bir açıklamanın ait olduğu yöntemi bulunuz ve başındaki harfi yöntemin yanındaki kutuya yazınız.

	Gözden Geçirme basamağında yapılması gerekenler		Yöntem
A	Eğitim alan kişiye bir sorun çıkarsa nerede olunacağı belirtilir.		Performansı Gözden Geçirmek
B	Eğitim alan kişinin işi ne kadar iyi yaptığını ve her şeyin yolunda olup olmadığını bir süreliğine sık sık kontrol etmek.		İzlemek
C	Kişinin gelişmesi gereken alanlardaki hem güçlü hem de zayıf yönlerinden bahsedilir.		Yardım Önermek
D	Kontrollerin ne kadar süreceğinin, ne sıklıkla olacağının ve ne zaman biteceğinin, eğitmenin yargısına kaldığı bölüm.		Eğitimi Sonlandırmak

**Soru 9 :** Aşağıda YİBE için belirlenen hedeflerle ilgili örnekler ve hedef türleri karışık olarak verilmiştir. Örneklerin, hangi hedef türüne ait olduğunu bulunuz ve başındaki harfi hedef türünün yanındaki kutuya yazınız.

	YİBE Hedefleri için Örnekler		Hedef Türü
A	Baskı makinelerini kullanabilecek çalışan sayısını %75 artırmak.		Performans Hedefi
B	İşe devamsızlığı %40 azaltmak.		Eğitim Hedefi
C	Üretimi %25 artırmak.		İnsan Unsuruna İlişkin Hedefler

#### **4. GÜN**

**Soru 1 :** YİBE Geliştirme Araçlarıyla ilgili aşağıdakilerden hangisi doğrudur?

- a) ..... İşin yapılışı için gerekli materyallerle birlikte önceden hazırlanmalıdırlar.
- b) ..... Eğitim alan kişiler de bu araçları kullanabilirler.
- c) ..... Deneyimli eğitmenler kullanacakları araçları kendileri geliştirirler.
- d) ..... Karmaşık bir yapıda olmadıkları için kolayca öğrenilebilirler.

**Soru 2 :** YİBE Geliştirme Araçlarının ..... kullanılacağı değil ne zaman kullanılacağı önemlidir.

**Soru 3 :** Eğitmen, fiziksel beceri gerektiren hareketleri ya da takip etmesi zor olabilecek diğer hareketleri gösterirken nasıl hareket etmesi gerektiğini tek bir kelimeyle tanımlayınız. ....

**Soru 4 :** Eğitmenin, işin yapılışını gösterirken günlük işleriyle de uğraşması eğitim alan kişinin işin yürütülüşünü daha iyi anlamasına neden olur.

(.....) Doğru (.....) Yanlış

**Soru 5 :** YİBE sırasında sorulan sorularla ilgili aşağıdaki ifadelerden hangisi yanlıştır?

- a) ..... Soru sormak en iyi geri bildirim verme ve alma yöntemidir.
- b) ..... En iyi sorular eğitim alan kişileri düşünmeye sevk eden sorulardır.
- c) ..... “Evet” ya da “Hayır” ile yanıtlanabilen sorular sık sık sorulmalıdır.
- d) ..... Takip soruları, bir önceki cevabın daha derinlerine iner ve onu genişletir.

**Soru 6 :** Eğitim alan kişileri utandıran ve konudan uzaklaşmalarına neden olan sorulara “..... Sorular” denir.

**Soru 7 :** Eğitim veren kişi suçlayıcı ses tonuyla soru sorarsa eğitim alan kişi genellikle nasıl bir tepki verir?

- a) ..... Konu hakkında henüz bilgisinin olmadığını söyler.
- b) ..... Performansının değerlendirilmesini ister.
- c) ..... Kendini savunmaya geçer.
- d) .....Eğitmeni şikayet eder.

**Soru 8 :** YİBE kapsamındaki koçluk çoğunlukla ne zaman uygulanır?

- a) ..... Eğitim tamamlandıktan sonra
- b) ..... Uygulama ve izleme sırasında
- c) ..... İşin gösterilmesi ve soru sorulması aşamalarında
- d) ..... Performans değerlendirme için gözlem yapılırken

**Soru 9 :** Koçluk uygulaması doğru kullanıldığında eğitim alan kişiler daha az ..... yapıp daha ..... bir şekilde öğrenirler.

**Soru 10 :** Bir kişinin kendi performansını değerlendirmesini sağlayan teknik ..... olarak adlandırılır.

**Soru 11 :** Eğitimci, eğitim alan kişinin kendi performansıyla ilgili değerlendirmesinde olumlu kısmı geçirip olumsuz odaklanmasında izin vermez.

(.....) Doğru (.....) Yanlış

**Soru 12 :** Aşağıda tanımları verilen YİBE çeşitlerinin isimlerini boş bırakılan yerlere yazınız.

Tanımlar	YİBE Çeşitleri
Yeni çalışmaya başlayan kişiye işi, kurumu, servisi ve çalışma arkadaşlarını planlı bir şekilde tanıştırma sürecidir.	.....
İşle ilgili temel bilgilerin verildiği eğitimidir.	.....
İş yerinde kullanılan malzeme ve “dil” ile tanıştırma eğitimidir.	.....
Kişinin yapacağı işin öğretildiği eğitimidir.	.....

**Soru 13 :** Oryantasyon eđitminin amaları nelerdir? 2 seenek iřaretleyiniz.

- a) ..... Grevinde hata yapma olasılıđını azaltmak
- b) ..... Olumsuz davranıřı geiřtirip olumluya odaklanmak
- c) ..... Yeni bařlayanda olumlu izlenim yaratmak
- d) ..... Olumlu tutum geliřtirmek
- e) ..... İři ğretmek

## APPENDIX G

### TABLE OF SPECIFICATION

Content	Number of Questions (Comprehension)	Items
Organizational change and employee competence	4	1, 7, 8, 9
Levels of employee competence	5	2, 3, 4, 5, 6
Developing employee competence through training	8	10, 11, 12, 13,14, 15, 16, 17
SOJT steps	4	18, 19, 20, 21
Characteristics of SOJT trainer	3	22, 23, 33
Training preparation	8	24, 25, 26, 27, 28, 30, 31, 32
Opening the training session	4	34, 35, 36, 37
Presenting the subject	5	29, 38, 39, 40, 41
Practicing the skills	3	42, 43, 44
Evaluating performance	8	45, 46, 47, 48, 49, 50, 51 , 52
Reviewing the subject	4	53, 54, 55, 56
Specifying training objectives	3	57, 58, 59
Tools to enhance SOJT	2	60, 61
Show and tell	2	62, 63
Questions and answers	3	64, 65, 66
Coaching	3	67, 68, 69,
Self-critique	2	70, 71
Types of SOJT	6	72, 73, 74, 75, 76
<b>Total</b>	<b>76</b>	

## APPENDIX H

### ITEM ANALYSIS RESULTS - LEARNING OUTCOMES TEST

Item Number	r (item-total correlation)	r (Discrimination)	p (Difficulty)
1.	0,37	0,42	0,81
2.	0,53	0,42	0,81
3.	0,31	0,49	0,74
4.	0,37	0,61	0,60
5.	0,36	0,57	0,57
6.	0,47	0,75	0,62
7.	0,34	0,32	0,86
8.	0,43	0,32	0,86
9.	0,37	0,45	0,67
10.	0,28	0,41	0,33
11.	0,48	0,47	0,79
12.	0,38	0,32	0,86
13.	0,39	0,37	0,83
14.	0,31	0,44	0,71
15.	0,52	0,68	0,69
16.	0,37	0,32	0,86
17.	0,5	0,64	0,67
18.	0,46	0,53	0,76
19.	0,53	0,53	0,76
20.	0,48	0,47	0,79
21.	0,32	0,32	0,86
22.	0,36	0,42	0,81
23.	0,3	0,29	0,74

Item Number	r (item-total correlation)	r (Discrimination)	p (Difficulty)
24.	0,46	0,53	0,76
25.	0,3	0,26	0,88
26.	0,29	0,38	0,74
27.	0,36	0,42	0,55
28.	0,37	0,39	0,48
29.	0,24	0,28	0,83
30.	0,42	0,55	0,62
31.	0,53	0,58	0,74
32.	0,49	0,59	0,69
33.	0,37	0,45	0,67
34.	0,2	0,19	0,79
35.	0,3	0,5	0,64
36.	0,35	0,54	0,40
37.	0,28	0,44	0,45
38.	0,24	0,32	0,86
39.	0,22	0,16	0,93
40.	0,3	0,46	0,62
41.	0,43	0,63	0,45
42.	0,39	0,42	0,81
43.	0,32	0,41	0,33
44.	0,27	0,48	0,52
45.	0,42	0,6	0,64
46.	0,36	0,57	0,52
47.	0,4	0,45	0,67
48.	0,48	0,59	0,69
49.	0,5	0,76	0,52
50.	0,41	0,49	0,69



<b>Item Number</b>	<b>r (item-total correlation)</b>	<b>r (Discrimination)</b>	<b>p (Difficulty)</b>
51.	0,45	0,47	0,79
52.	0,3	0,35	0,45
53.	0,24	0,32	0,60
54.	0,27	0,28	0,52
55.	0,23	0,25	0,71
56.	0,36	0,4	0,43
57.	0,41	0,49	0,43
58.	0,51	0,61	0,60
59.	0,25	0,3	0,21
60.	0,24	0,33	0,50
61.	0,34	0,39	0,48
62.	0,4	0,38	0,79
63.	0,26	0,21	0,90
64.	0,35	0,46	0,36
65.	0,38	0,45	0,67
66.	0,33	0,62	0,50
67.	0,46	0,53	0,76
68.	0,36	0,65	0,36
69.	0,54	0,75	0,62
70.	0,31	0,26	0,88
71.	0,52	0,63	0,71
72.	0,52	0,78	0,48
73.	0,57	0,85	0,57
74.	0,38	0,48	0,26
75.	0,3	0,33	0,81
76.	0,31	0,53	0,50
		0,46	0,65

## APPENDIX J

### Samples of Responses (Turkish)

#### Eğitim Programının En Beğenilen Yönlerine İlişkin Verilen Cevaplardan Örnekler

<b>Tema 1 (Yöntem)</b>
<p><i>Grup halinde olan çalışmalar daha eğlenceli oluyor. İnsanlar birbiriyle daha iyi kaynaşıyor, akılda kalıcı bir yöntem. Bir kişiye anlatmak ve onun anlattıklarını dinlemek çok iyi oluyor. Ona karşı kendini sorumlu hissediyorsun. Ben çok zevk aldım.</i></p> <p><i>Grup olarak çalışmak ve karşılıklı fikirler doğrultusunda çalışmak ve öğrenmek çok hoştu.</i></p> <p><i>Birbirimize öğrenme konusunda yardımcı olmamız.</i></p> <p><i>Grup olarak eğitim almak çok güzel bir uygulamaydı. Anlamada ve kavramada çok faydası olduğuna inanıyorum.</i></p> <p><i>Karşılıklı konu anlatmak yani grup çalışması öğrenmemize ve öğretmemize daha etkili oldu.</i></p> <p><i>Herkesin katılımının sağlanması.</i></p> <p><i>Açık bir şekilde tartışılarak sonuçlandırmak.</i></p>
<b>Tema 2 (Sunum)</b>
<p><i>Konular açık ve anlaşılır bir şekilde anlatıldığı için daha kolay kavradım.</i></p> <p><i>Basit ve anlaşılır bir düzeyde anlatıldı.</i></p> <p><i>Eğitimin akışı, anlatış ve sunuş şekli çok iyiydi.</i></p> <p><i>Yalın bir dille bu programdaki anlatılan şeyleri öğrendik.</i></p> <p><i>Sade, kolay ve anlaşılır bir dille aktarıldı.</i></p> <p><i>Anlatım tarzından çok memnun kaldım, anlaşılır nitelikte dersi sundu.</i></p>
<b>Tema 3 (Eğitici)</b>
<p><i>Güleryüzlü, akıcı ve anlaşılır konuşması, samimi, sempatik, aktif, iletişim, katılımcıların ihtiyaçlarına dıyarlı.</i></p> <p><i>Tabii eğitimcinizin güler yüzlü ve sempatik davranışları beni daha çok derse gelmeye sevk etti.</i></p> <p><i>Eğitmenimizin davranışları, yöntemleri ve bizi dinlemesi.</i></p> <p><i>Derslerin eğitmen tarafından zevkli hale getirilmesi.</i></p>

<p><i>Hocamızın sempatik oluşu derse katılımımızı artırdı.</i></p> <p><i>Eğitmenin anlaşılır, akıcı, motivasyonu yükseltici güleryüzlü olması, programı aksatmadan emin bir şekilde yürütmesi, sınıf kontrolü ve güvenilir olması bizim için önemli.</i></p>
<p><b>Tema 4 (Öğrenme)</b></p> <p><i>Yaptığımız işin boyutlarıyla öğrenmek ve yapmamız gerekeni en iyi şekilde uygulamaya geçirmeyi öğrendik.</i></p> <p><i>İşimizle ilgili bize bilgi verilmesi güzeldi.</i></p> <p><i>İleride yapacağım şeyin farkına vardım. Oryantasyon eğitimi, koçluk ne demek nasıl olur gibi şeyleri daha iyi öğrendim.</i></p> <p><i>Başkalarına anlatma yeteneği kazandım.</i></p> <p><i>Konusu, bizden sonrakilere yeterli bir biçimde işi öğretmemize yardımcı olacak.</i></p> <p><i>İşimin bilinçli bir şekilde öğretilmesini sağlayacağım ve iyi bir eleman yetiştirmek beni olumlu yönde etkileyecek.</i></p>
<p><b>Tema 5 (Ortam)</b></p> <p><i>Herkesin kendini rahat bir şekilde kendini ifade edebilmesi, samimi bir ortam olması.</i></p> <p><i>Sınıf içerisinde fikirlerimizi rahat bir şekilde dile getirebilmemiz.</i></p> <p><i>Fikirlerimizi ilk kez açık şekilde birilerine aktarmamız.</i></p> <p><i>Herkesin özgürce fikirlerini, şikayetlerini, eleştirilerini söyleyebileceği bir ortamdı.</i></p>
<p><b>Tema 6 (Eğlenceli)</b></p> <p><i>Aldığım en zevkli eğitimdi.</i></p> <p><i>Eğlenceli bir şekilde ve grup olarak çalışmak çok hoşuma gitti.</i></p> <p><i>Örneklemeler çok eğlendirdi.</i></p>
<p><b>Tema 7 (Değerli hissetme)</b></p> <p><i>Bu program, banka'da sıradan bir insan olmadığımı hatırlattı. Kendimi değerli bir insan gibi hissettim.</i></p> <p><i>Yaptığımız işin ve bizim aslında çok önemli olduğumuzu hissettirdi.</i></p> <p><i>Bu faaliyetin bize birşeyler vermek ve bizi önemsemek için yapılmış olması.</i></p>

**Eğitim Programının Yetersiz Görülen Yönlerine İlişkin Verilen  
Cevaplardan Örnekler**

<b>Tema 1 (Fiziksel Koşullar)</b>
<i>Eğitim verilen alanın darlığı ve kalabalıklığı.</i> <i>Grup çalışmaları içerisinde devam eden eğitimlerin daha geniş alanlarda olabilirdi.</i> <i>Eğitim yeri küçük ve sıkıcıydı.</i> <i>Ortam çok kötüydü.</i>
<b>Tema 2 (Eğitim Zamanı)</b>
<i>Geç kalınmış bir eğitim programı. Biz göremedik ama bizden sonrakilere uygulayacağız.</i> <i>Eski arkadaşlarımız için geç kalındığını düşünüyorum. Belki daha önce böyle bir eğitim alınsaydı bizler işi öğrenim sırasında daha rahat ederdik.</i> <i>Eğitim programları yetersiz değildi, zamansızdı. Yani eğer biz işe yeni başladığımızda bu uygulama, program olsaydı daha yarar sağlardı diye düşünüyorum.</i> <i>Eğitim programını 3 yıl önce yeni arkadaşlar başladığında almış olsaydık çok yararlı olurdu.</i>
<b>Tema 3 (Diğer)</b>
<i>Eğitim süresi çok uzun, 3 gün yeterlidir diye düşünüyorum. Çünkü çok zor bir eğitim değil.</i> <i>Katılımın az olması, grup olarak aktif(f) bir biçimde katılım olmadı.</i> <i>Sadece çalışanlara yönelik olması. Aynı eğitim yöneticilere de verilmeli.</i> <i>Daha fazla görsel şeyler kullanılıp katılımcıların her gün rutin bir şekilde aynı şeyleri kullanıyo(r) olması engellenebilirdi.</i> <i>Eğitmenin işimizi çok iyi bilmemesi</i> <i>Katılmak istemiyorum çünkü çok geç kalınmış durumda</i> <i>Bu eğitim programlarına katılmak istemiyorum. Çünkü emekli olma zamanım geldi. Bu program yeni işe alınmış ve alınacak genç insanlar için gerekli.</i>

## TURKISH SUMMARY

### GİRİŞ

Çalışan uzmanlığı ve gelişiminin, örgütün verimliliğindeki ve değişen dünyaya ayak uydurmasındaki katkısı, örgütler tarafından gittikçe daha iyi anlaşılmaktadır ( Holton & Collins, 2004 ). Çalışanların bilgi ve becerisinin, uzmanlığının gelişiminde ise hizmetiçi eğitim en sık kullanılan araçlardan biridir. Hizmetiçi eğitim, çalışanın bilgi ve beceri gelişiminin yanısıra motivasyon ve benlik gelişimi üzerinde de olumlu etkilere sahiptir ( Wexley & Latham, 2002 ). Örgüt, bilgi ağırlıklı bir yapıya gereksinim duydukça hizmetiçi eğitimin rolü de artmaktadır ( Marchington & Wilkinson, 2002 ).

Türkiye’deki çalışanların uzmanlığının gelişimi konusunda da önemli bir eğitim ihtiyacı söz konusudur; bu doğrultuda hem örgütler hem de ulusal düzeyde çalışmalar yapılmaktadır ( ETF, 2006 ). Türkiye’deki insan kaynağının gelişimine yönelik bazı politikalar ve programlar geliştirilmektedir. Ülkenin çok genç nüfusa sahip olması ve çalışma yaşındaki kişi sayısının gittikçe artması insan kaynağının gelişimi konusunda yapılması gerekenlerin önemini daha da artırmaktadır. Ancak, özellikle Avrupa ülkeleriyle karşılaştırıldığında temel eğitime sahip nüfus oranının oldukça düşük olduğu görülmektedir. Temel eğitime katılım oranının düşük olmasının yanısıra verilen eğitimlerde kişilere iş gücü piyasası için gerekli ve değişen koşullara uygun bilgi ve beceriler kazandırılmaması da önemli bir sorundur. Sekizinci ve Dokuzuncu Beş Yıllık Kalkınma Planlarında insan kaynağının gelişimi ve değişen koşullara uyum sağlayacak nitelik kazandırılması üzerinde durulmuş ve temel hedefler arasında yer almıştır.

İş gücü piyasasına uygun nitelikte eleman yetiştirilebilmesi için mesleki eğitim kuruluşlarının yanısıra örgütler kendi eğitim merkezlerinde

alıřanlarına gerekli bilgi ve becerileri kazandırmak amacıyla eğitim programları düzenlemektedirler. alıřanlar, bu eğitim programlarında gerekli bilgi ve becerileri kazanmakta ve kendi verimliliklerinin artmasıyla alıřtıkları örgütün verimliliğinin artmasına katkıda bulunmaktadır. Ancak, hem alıřan hem de örgüt gelişimi için öneme sahip hizmetii eğitim programları, bilgi ve beceri gelişimini sağladığı ve edinilen bu bilgi ve becerilerin işe transferi gerekleştiğı zaman hizmetii eğitimin etkililiğinden bahsedilebilmektedir ( Goldstein & Ford, 2002 ). Hizmetii eğitimin etkililiğinin göstergesi olan öğrenme, tutundurma ve edinilen bilgi ve becerilerin işe transferini etkileyen bazı unsurlar bulunmaktadır. Bunlar sırasıyla eğitim programının tasarımı, eğitime katılanların özellikleri ve iş ortamının özellikleri olarak gruplanmaktadır ( Baldwin & Ford, 1988 ). Bunlar arasından eğitim programı tasarımı, eğitimcilerin diğerklerine kıyasla daha fazla kontrol edebildikleri unsurdur. Özellikle katılımcıların yetkinliğinin geliştirilmesinde uygun eğitim yöntemlerinin kullanılması eğitimciler için büyük önem taşımaktadır.

Hizmetii eğitim için uygun öğretim yöntemlerinin belirlenmesinde temel kuramlar ve modeller, eğitimciler için yol gösterici olmaktadır. Temel öğrenme kuramlarının yanısıra yetişkin eğitimi ilkelerinin de yetişkin eğitimi programlarının tasarımı ve uygulanmasında dikkate alınması, eğitim etkililiğinin artmasına katkıda bulunmaktadır ( Knowles, Holotn, & Swanson, 1998 ). Galbraith ( 1990 ) yetişkin eğitimcisinin bazı sorumlulukları olduğunu belirtmiştir. Bu sorumluluklar, program geliştirme ve hedef belirleme aşamalarında, öğrenenlerin sürece dahil edilmesi ve görüşlerinin dikkate alınması, öğrenenlerin kendi gelişim ihtiyaçlarını belirlemelerine yardımcı olunması, öğrenmeyi kolaylaştırıcı bir iklimin oluşturulması ve eğitim sonuçlarını değerlendirme sürecine katılımlarının sağlanması olarak belirtilmektedir.

Öğrenme kuram ve modelleri ile yetişkin eğitimi ilkelerinin program tasarımı sırasında uygulamaya aktarılmasında daha önce yapılmış araştırmaların sonuçları eğiticilerin karar vermesini kolaylaştırmaktadır. Ancak, özellikle Türkiye’de yetişkinler üzerinde yapılan deneysel araştırma sayısının çok az olması ( Yıldız, 2004 ), eğiticilerin uygun öğretim yöntemini belirleme sürecini zorlaştırmaktadır. Bu yüzden, örgütlerde insan kaynağının gelişmesi ve değişen koşullara uyum sağlamasında etkili bir araç olarak kullanılan hizmetiçi eğitimin etkililiğinin sağlanabilmesi için etkili öğretim yöntemleriyle ilgili deneysel araştırmalara ihtiyaç duyulmaktadır. Hizmetiçi eğitim ve yetişkin eğitimi alanlarında öğretim yöntemleri araştırılmakta, grup olarak öğrenmenin etkililiği bu araştırma konuları arasında yerini almaktadır ( Gilliam, 2002 ).

Bu çalışmanın amacı, işbirliğine dayalı öğrenme ve bireysel öğrenme yöntemlerinin hizmetiçi eğitim programına katılan yetişkinlerin öğrenme ürünleri ve eğitime ilişkin tepkileri üzerindeki etkilerini karşılaştırmaktır. Yetişkin eğitimi alanında ön plana çıkarılan demokrasi, etkileşimli öğrenme ve öğrenen merkezli eğitim kavramları, işbirliğine dayalı öğrenme yaklaşımının da temelinde yer alan temel unsurlardır. İşbirliğine dayalı öğrenme daha çok ilk ve orta öğrenim düzeyini içeren okul ortamlarında yaygın olarak araştırılması ve kullanılmasına rağmen yetişkin eğitimiyle benzer felsefî temelleri paylaşması nedeniyle yetişkin eğitimi ve hizmetiçi eğitim alanlarına kolayca uyarlanabilmesini sağlamaktadır.

#### *Hizmetiçi Eğitimin Etkililiği ve Değerlendirilmesi*

Örgütler, hizmetiçi eğitim için belli bir kaynak ayırmakta, ayrılan bu kaynaktan daha fazlasının da geri dönmesini beklemektedir. Bu geri dönüş, verimlilik olabileceği gibi çalışanların iş yaşamı kalitesinin artması da örgüt için bir geri dönüş olarak değerlendirilmektedir. Hizmetiçi eğitimin etkililiğinin değerlendirilmesinde en önemli aşama ise kullanılacak ölçütlerin belirlenmesidir. Hizmetçi eğitimin değerlendirilmesi, hedeflenen

sonuçların ulaşılma durumunun belirlenmesidir ( Kraiger, Ford, & Salas, 1993 ). Eğitimle hedeflenen öğrenme davranışlarına ulaşılma ve öğrenilenlerin işe transfer durumu değerlendirilmektedir. Hizmetiçi eğitimin değerlendirilmesinde farklı yaklaşım ve modeller bulunmasına rağmen hem araştırmacılar hem de alandaki uygulamacılar arasında en yaygın kabul gören model Kirkpatrick tarafından geliştirilen dört aşama modelidir. Bu model, her ne kadar “dört aşama” olarak adlandırılrsa da birbirini takip etmeyen, birbirinden bağımsız ve biri diğerinden daha az ya da daha çok bilgi içermeyen dört farklı alandan oluşur ( Alliger & Janak, 1989 ). Bu dört alan, değerlendirme sırasına göre tepki, öğrenme, davranış ( işe transfer ) ve örgütsel sonuçları içermektedir ( Kirkpatrick, 1994 ). Bu araştırmada sadece tepki ve öğrenme alanlarıyla ilgili değerlendirmeler yapıldığından aşağıda bu alanlarla ilgili araştırma bulgularına yer verilmiştir.

Hizmetiçi eğitime ilişkin tepkiler, genellikle eğitim programının hemen sonunda dağıtılan değerlendirme formları ile ölçülmekte ve katılımcıların, eğitim programına ve organizasyona ilişkin beğeni düzeyleri ile eğitimde edindikleri bilgi ve becerilerin kullanılabilme durumuna ilişkin algılarının belirlenmesi amaçlanmaktadır ( Kirkpatrick, 1987 ). Öğrenme alanındaki değerlendirmeler ise, eğitime katılanların bilgi, beceri ve tutum düzeylerindeki değişimlerin belirlenmesine yöneliktir.

Eğitime ilişkin tepkiler, çok sık kullanılmasına rağmen tek başına eğitim etkililiğinin belirlenmesi için yeterli değildir. Eğitime ilişkin tepkilerin, öğrenme ve işe transfer üzerinde dolaylı bir etkisinin olduğu belirlenmiştir ( Mathieu, Tannenbaum, & Salas, 1992 ). Uygunabilirlik ve yararlanmaya ilişkin sorulan soruların beğeni düzeyini belirlemeye yönelik sorulan sorulardan daha fazla öğrenme ve işe transfer düzeyini tahmin ettiği belirtilmektedir ( Tannenbaum, & Yukl, 1992 ).

Eğitime ilişkin tepkiler ve öğrenme arasında yüksek bir ilişki olmamasına rağmen, üçüncü aşamadaki işe transferin oluşabilmesi için



öğrenmenin gerçekleşmesi gerekmektedir ( Kraiger, Ford, & Salas, 1993 ). Öğrenme ürünleri ise üç temel alanda tanımlanmaktadır: bilişsel, beceri ve duyuşsal. Bilişsel öğrenme ürünleri sözel bilgi, bilginin organizasyonu ve bilişsel stratejileri içermektedir.

### *İşbirliğine Dayalı Öğrenme*

İşbirliği en genel tanımı ile ortak hedeflere ulaşmak için birlikte çalışmak anlamına gelmektedir. Bu çalışma biçiminde bireyler, hem kendileri hem de tüm grup üyeleri için yararlı sonuçlara ulaşmak isterler. İşbirliğine dayalı öğrenme ise, iki - dört kişiden oluşan grupların birlikte kazandığı ya da birlikte kaybettiği, ortak amaçlar çerçevesinde yardımlaşarak öğrendikleri öğretim yöntemini ifade etmektedir ( Johnson, Johnson, & Holubec, 1993 ). İşbirliğine dayalı öğrenme, verimliliği artırdığı için küçük gruplarda etkili olmaktadır. İşbirliğine dayalı öğrenme, eğitimin kuram, araştırma ve uygulama alanlarında en yoğun çalışılan konularından biridir. Rekabetçi ya da bireysel öğrenme yöntemlerinin sınırlılıklarını taşımamakta ve her duruma uyarlanabilmektedir. Şimdiye kadar yapılan 550'den fazla araştırmanın sonucu, işbirliğine dayalı öğrenmenin, rekabetçi ve bireysel öğrenme yöntemleriyle karşılaştırıldığında pek çok alanda daha üstün olduğunu göstermiştir (Johnson, Johnson, & Stanne, 2000; Johnson, & Johnson, 1989). İşbirliğine dayalı öğrenmeyle ilgili yapılan araştırmaların sonuçlarının gruplandığı üç temel alan şunlardır: ( a ) başarı ve verimlilik, ( b ) sosyal ilişkiler, ve ( c ) psikolojik sağlık. İşbirliğine dayalı öğrenme yönteminde başarı için daha çok çaba sarf edilmekte, motivasyon daha yoğun yaşanmaktadır. Bu da her düzeydeki ve yaştaki öğrenenin verimini artırmakta, başarıya ulaşmasını sağlamaktadır. İkinci olarak, öğrenenler arasında daha olumlu ilişkilerin gelişmesine katkıda bulunmakta; öğrenenlerin grup arkadaşlarından hem akademik hem de sosyal destek almasını kolaylaştırmaktadır. Diğer bir alan ise, öğrenenlerin psikolojik sağlığına olumlu etkileri olarak belirlenmiştir.

İşbirliğine dayalı öğrenme yöntemiyle öğrenenlere, psikolojik etkenler açısından daha iyi bir öğrenme ortamı sunulmaktadır. Benlik kabülü, sosyal gelişim, kendine güven ve zorluklarla başedebilme konularında kişi güçlenmektedir.

İşbirliğine dayalı öğrenmenin etkililiğinin yüksek olmasında kurama dayalı olması, araştırmalarla etkililiğinin kanıtlanması ve uygulama süreçlerinin operasyonel olarak tanımlanması büyük rol oynamaktadır ( Johnson, Johnson, & Stanne, 2000 ). İşbirliğine dayalı öğrenmenin en temelinde yatan kuram Koffka, Lewin ve Deutsch'un çalışmalarına dayanan "sosyal bağlılık" kuramıdır ( Johnson, Johnson, & Smith, 1998 ). Sosyal bağlılık kuramına göre, grup üyelerinin hedeflerinin yapılandırılma biçimi üyelerin birbirleriyle iletişimini, iletişim örüntüleri ise grubun elde edeceği sonuçları belirlemektedir ( Johnson & Johnson, 2003 ). Sosyal bağlılık kuramı, sosyal bilimlerde az rastlanan bir geçerliğe ve genellemeye sahiptir. Sosyal bağlılığın iki türü olan olumlu ve olumsuz sosyal bağlılığın olmadığı öğrenme durumları ise bireysel öğrenme durumları olarak adlandırılmaktadır.

İşbirliğine dayalı öğrenmenin açıklanmasında kullanılan ikinci kuram ise içsel motivasyonun önemini ön plana çıkaran ve bilginin öğrenen tarafından yapılandırıldığını öne süren bilişsel öğrenme kuramıdır; işbirliğine dayalı öğrenme sınıflarında öğrenenler bilgiyi birlikte yapılandırırlar. Üçüncü kuram ise, davranışçı öğrenme kuramıdır. Grup çalışmasının ödül ve görev odaklı olarak yapılandırılmasında öneme sahiptir; öğrenme için dışsal motivasyonu oluşturur ( Johnson & Johnson, 2003 ).

İşbirliğine dayalı öğrenme, öğrenenlerin fiziksel olarak yakın olma, materyalleri paylaşma, yardım etme ya da grup olarak tartışmadan öte anlam taşımaktadır (Johnson, Johnson, & Holubec, 1993 ). İşbirliğine dayalı öğrenmenin başarılı olabilmesi için operasyonel olarak tanımlanan beş

temel ögenin uygulamaya aktarılması gerekmektedir. Bu temel ögeler, olumlu bağlılık, bireysel sorumluluk, yüzyüze etkileşim, sosyal beceri ve değerlendirme olarak adlandırılmıştır.

*Olumlu bağlılık:* “Olumlu” bağlılık kavramı, dayanışmanın bireysel çıkarlar için değil, sadece ve sadece gruptaki her üyenin en iyi şekilde grup çalışmasından yararlanması sorumluluğunun herkes tarafından taşınmasını ifade etmektedir. Her grup üyesi kendi başarısının grubun diğer üyelerinin başarısına bağlı olduğunun farkındadır; grup üyeleri, gruptaki diğerlerinin de öğrenmesinden sorumlu olduklarının bilincinden hareketle çalışırlar.

*Bireysel sorumluluk:* Grup amaçlarının gerçekleştirilmesi için, her bir grup üyesinin kendine düşen görevi en iyi şekilde yerine getirmesi ve grup amaçlarını gerçekleştirmek için katkıda bulunması gerekmektedir. Bireysel sorumluluk ögesi, grup başarısı kadar, bireylerin sorumluluklarının önemine işaret ederek eğiticinin grup bireylerini ayrı ayrı değerlendirmesi gerektiğini vurgulamaktadır.

*Yüzyüze etkileşim:* Bu öge, öğrenmenin etkili olabilmesi için grup üyelerinin birbirini cesaretlendirmesi, desteklemesi ve yardım etmesini ifade etmektedir. Grup üyeleri karşılaştıkları sorunları nasıl çözdüklerini birbirlerine açıklamalı, edindikleri fikirleri grup arkadaşlarıyla tartışmalı ve bunun için birbirlerini cesaretlendirmeli, desteklemeli ve yardım etmelidirler.

*Sosyal beceri:* İşbirliğine dayalı öğrenme çabalarının etkili olabilmesi için grup üyelerinin sosyal becerilerinin de gelişmiş olması ve bu becerilerin grup olarak öğrenme aşamalarında kullanılması gerekmektedir. Grup üyelerinin birbirlerini tanıması, güvenmesi, etkin iletişim kurabilmesi birlikte öğrenmelerini olumlu etkileyeceğinden, işbirliğine dayalı öğrenmenin bu ögesi de büyük önem taşımaktadır. Gruplar arası ve grup içi etkili iletişim eğitici tarafından desteklenmeli ve özendirilmelidir.

*Değerlendirme:* Grup üyelerinin birlikte gerçekleştirdikleri etkinlikleri değerlendirmesi, olumlu ve olumsuz yanları paylaşması ve verimliliği artırma yönünde yapılacak değişiklikleri belirlemesi gerekmektedir. Bu öge, grup bilinci ve grup çalışmasının daha etkili olması için vurgulanmaktadır.

### *Bireysel Öğrenme*

Bireysel öğrenme, diğer öğrenenlerin çabalarından bağımsız bir şekilde kişinin daha önceden belirlenmiş hedefler ve ölçütler doğrultusunda tek başına çalışarak öğrenmesidir (Johnson & Johnson, 1999). Her bir kişi kendi öğrenme materyallerine sahiptir, verilen süre içerisinde kendi hızında öğrenir ve yardıma ihtiyacı olduğunda sınıftaki arkadaşlarından değil, eğiticiden yardım talep eder. Öğrenenler, kendi hedeflerine odaklanmıştır, başarılarının sadece kendi yeteneklerine bağlı olduğunu düşünürler, başarılarını tek başlarına kutlarlar ve diğerlerin ne başarısı ne de başarısızlığı onları ilgilendirir. Meta-analiz sonuçları, işbirliğine dayalı öğrenme yöntemiyle öğrenenlerle karşılaştırıldığında bireysel öğrenme yöntemiyle öğrenenlerin öğrenme başarılarının daha düşük olduğunu göstermektedir (Johnson, Johnson, & Stanne, 2000). Bireysel öğrenme, bireyselleştirilmiş öğretim yöntemlerinden farklıdır. Bireyselleştirilmiş öğretim yöntemleri, her bir bireyin ihtiyaçlarının, özelliklerinin ve hazır oluşluk durumunun belirlendiği, bireye özel ders planlarının hazırlandığı, öğrenmeye yardımcı ve bireyden bireye farklılık gösterebilen öğrenme materyallerinin hazırlandığı, bireylerin gelişim düzeylerinin düzenli aralıklarla ölçüldüğü ve verilen etkinliklerde, ödevlerde ve sürede esnekliğin esas alındığı öğretim yöntemleridir (Bolvin, 1991).

### YÖNTEM

Bu çalışma kapsamında işbirliğine dayalı öğrenme ve bireysel öğrenme yöntemlerinin eğitime ilişkin tepkiler ve öğrenme ürünleri

üzerindeki etkilerini karşılaştırılabilmesi amacıyla deneysel araştırma deseni kullanılmıştır. Tesadüfi yöntemle gruplara atanan deneklere son test uygulanmıştır ( Fraenkel & Wallen, 2000 ). Eğitim süresinin kısa olması (beş yarım gün ) nedeniyle ön test uygulanmamıştır. Hazır oluşluk durumlarındaki olası farklılıkların etkisinin, deneklerin gruplara tesadüfi yöntemle atanmasıyla ortadan kaldırılması amaçlanmıştır. Deney grubundaki denekler, işbirliğine dayalı öğrenme yöntemiyle, karşılaştırma grubundaki denekler ise bireysel öğrenme yöntemiyle konuları öğrenmişlerdir.

Araştırmadaki bağımlı değişkenler Öğrenme Ürünleri Testi ve Eğitime İlişkin Tepkiler Ölçeğidir. Araştırmanın bağımsız değişkeni ise işbirliğine dayalı öğrenme ve bireysel öğrenmeden oluşan öğretim yöntemidir. Yaş, hizmet süresi ve eğitim düzeyi de diğer değişkenleri oluşturmaktadır. Ancak, lise mezunlarının sayısının diğer eğitim düzeylerindeki kişi sayısına göre daha fazla olması nedeniyle, eğitim düzeyine göre gruplar arasındaki farklılıkların test edilmesi analizlere dahil edilmemiştir. Bunun yanı sıra, hizmet süresi ile yaş değişkenleri arasındaki ilişkinin yüksek olması nedeniyle sadece yaş değişkeni analizlere dahil edilmiştir.

Bir kamu bankasında görevli inceleme ve sayım memurlarıyla yürütülen araştırma, pilot çalışma ve esas çalışma olarak iki bölümden oluşmuştur. Pilot uygulamaya 42, esas uygulamaya ise 92 kişi katılmıştır. İnceleme ve sayım memuru olarak çalışanların tamamı bayanlardan oluşmakta ve toplam 148 kişi bu görevi yürütmektedir. Denekler, iki pilot uygulama ile dört esas uygulama gruplarına kurum sicil numaralarının son rakamına göre tesadüfi yöntemle atanmışlardır. Fakat, denek grubundaki 14 kişi, rahatsızlık, iş yoğunluğu ya da özel nedenlerle eğitime katılamamıştır. Bu yüzden, araştırmaya (pilot ve esas uygulama) katılanların sayısı 134 olarak gerçekleşmiştir.

İşbirliğine dayalı öğrenme ve bireysel öğrenme yöntemlerinin karşılaştırılabilmesi için “Yapılandırılmış İş Başında Eğitim” programı adı altında bir eğitim programı geliştirilmiştir. Yapılandırılmış iş başında eğitim, iş ortamında ya da iş ortamına çok benzer ortamlarda, bu işle görevlendirilen deneyimli bir çalışanın, aynı zamanda eğiticinin, bazı kuralları izleyerek ve ölçülebilir - gözlenebilir performans hedefleri saptayarak planlı ve sistemli bir şekilde bire bir verdiği eğitim olarak tanımlanmaktadır. Bu araştırma kapsamında gerçekleştirilen eğitim programının amacı ise, göreve yeni başlayan personele işi öğretmekle görevlendirilmiş personelin, yapılandırılmış iş başında eğitim planı hazırlama, uygulama ve performansı izleyip geri bildirim verme konularında bilgi ve becerilerini geliştirmek olarak belirlenmiştir. Üçer saatten beş yarım gün olmak üzere toplam 15 saatlik eğitim programı için içeriğin, hedeflerin ve okuma materyallerinin aynı, öğretim yönteminin farklı olduğu iki ayrı ders planı oluşturulmuştur.

Ders planları, materyaller, derslerde kullanılan etkinlikler, ölçme araçları ve Öğrenme Ürünleri Testi belirtke tablosu, kurumda çalışmakta olan bir diğer eğitim uzmanı tarafından incelenmiş, önerileri doğrultusunda değişiklikler yapılmıştır. İşbirliğine dayalı öğrenme ve bireysel öğrenme ders planlarının uygulanabilirliğini değerlendirebilmek ve ölçme araçlarının psikometrik özelliklerini belirleyebilmek amacıyla bir pilot uygulama yapılmıştır. Pilot uygulamanın işbirliğine dayalı öğrenme grubunda 18 kişi, bireysel öğrenme grubunda ise 24 kişi eğitim almıştır. Pilot uygulama sonucunda, bazı derslerin sürelerinde değişiklikler yapılmıştır. Ölçme araçlarının değerlendirilmesi sonucunda ise bazı maddeler çıkarılmıştır.

Esas uygulamaya katılan 92 kişiden 45’i işbirliğine dayalı öğrenme yöntemiyle, 47’si ise bireysel öğrenme yöntemiyle konuları öğrenmişlerdir. İki işbirliğine dayalı öğrenme grubu, iki bireysel öğrenme grubu oluşturulmuştur. Gruplardaki kişi sayıları 22 ile 24 arasında değişmektedir.

İlk hafta sabahları işbirliğine dayalı öğrenme birinci grubu eğitime katılmış, öğleden sonra ise bireysel öğrenme birinci grubu eğitime katılmıştır. Daha sonraki hafta sabah-öğleden sonra etkisini ortadan kaldırabilmek amacıyla sabahları bireysel öğrenme ikinci grubu, öğleden sonra ise işbirliğine dayalı öğrenme ikinci grubu eğitime katılmıştır.

Esas uygulamadaki 92 deneğin yaşları 21 ile 54 arasında değişmektedir. Deneklerin yaş ortalaması 29.15 ve standart sapması 9.08'dir. Deneklerin kurumdaki hizmet yılı 3 ile 31 arasında değişmektedir. Hizmet yılı ortalaması 8.77 ve standart sapması 8.62'dir. 75'i lise mezunu olan deneklerden, 16'sı ön lisans mezunu, bir kişi ise üniversite mezunudur.

Yapılandırılmış İş Başında Eğitim Programları, daha önce de bahsedildiği gibi 15 saatlik bir sürede, kurumda eğitim uzmanı olarak görev yapmakta olan araştırmacı tarafından yürütülmüştür. İşbirliğine dayalı öğrenme gruplarının etkili bir şekilde birlikte çalışarak öğrenebilmeleri için beş temel öğeden biri olan sosyal becerilerinin gelişmiş olması ya da eğitimler sırasında geliştirilmesi gerekmektedir. Bu yüzden, eğitim programının ilk gününde grupta çalışma becerisini geliştirmeye yönelik dersler yer almıştır. Bu derslerde, fikirleri ve görüşleri paylaşma, açıklama isteme, grup çalışmalarını yönlendirme, diğerlerinin katılımını sağlama, diğerlerinin söylediklerini kendi cümleleriyle tekrarlama ve grubu çalışmaya teşvik etme becerilerini geliştirmeye yönelik etkinlikler yapılmıştır. Deney grubu (işbirliğine dayalı öğrenme grubu) ve karşılaştırma grubu (bireysel öğrenme) eğitimlerinin sürelerinin eşit olabilmesi için, bireysel öğrenme grubuna da ilk gün aynı dersler uygulanmış, daha sonraki dersleri ise tamamen bireysel öğrenmeye yönelik etkinlikleri içermiştir.

İşbirliğine dayalı öğrenme grubunun dersleri, işbirliğine dayalı öğrenmenin beş temel ögesine göre yapılandırılmıştır. Bütün etkinlikler dakika bazında planlanmış, en az iki en fazla dört kişiden oluşan gruplar oluşturulmuştur. Grup üyelerinin birbirine yakın ancak diğer gruplardan

uzak oturması sađlanmıř, olumlu bađlılık ögesi her etkinlikte özellikle vurgulanmıřtır. Birbirlerinin öđrenmesinden sorumlu oldukları, eđitici, grup üyelerinden birine birlikte öđrendikleri konuyla ilgili soru sorduđunda bu grup üyesinin soruları cevaplayabilme ya da cevaplayamama durumunun diđer grup üyelerinin sorumluluđu olduđu belirtilmiřtir. Olumlu bađlılıđın geliřtirilebilmesi için rol, görev ve materyal bađlılıđı yöntemleri sıklıkla kullanılmıřtır. Grup çalıřmalarının sonunda grup olarak iyi yaptıkları ve geliřtirilmesi gereken yönleri üzerinde grup olarak tartıřmaları ve bir sonuca vararak eđitici ve sınıfla paylařmaları istenmiřtir. Grup çalıřmaları sırasında birbirlerinin öđrenmesine yaptıkları katkılarla ilgili geri bildirim vermeleri sađlanmıř, etkinliklerin sonunda birlikte öđrenme bařarılarını kutlamaları istenmiřtir.

Bireysel öđrenme yönteminde ise dersler yine dakika bazında planlanmıř ve aynı okuma materyali kullanılmıřtır. Eđiticinin verdiđi yönergeler ve etkinlikler dođrultusunda katılımcılar tek bařlarına çalıřarak konuları öđrenmiřler, soru sormak istediklerinde soruları eđiticiye yöneltmiřler, aynı řekilde, tartıřmaları sadece eđiticiyle yürütmüşlerdir. Katılımcılar arasında dersler sırasındaki yardımlařma, bilgi ve görüř alıř veriři eđiticinin araya girmesi ya da süreyi kısa tutması gibi yöntemler kullanılarak engellenmiř, dersler sırasında sadece eđiticiyle iletiřim kurmaları sađlanmaya çalıřılmıřtır. Verilen süre sonunda katılımcılar arasından seçilerek etkinlik sonucu alınmıř ve öđrenme düzeylerini belirlemeye yönelik sorular sorulmuřtur.

Arařtırmada, katılımcıların eđitime iliřkin tepkilerini belirlemeye yönelik olarak Eđitime İliřkin Tepkiler Ölçeđi, öđrenme ürünlerini belirlemeye yönelik olarak da Öđrenme Ürünleri Testi kullanılmıřtır.

Eđitime İliřkin Tepkiler Ölçeđinde 24 madde yer almıřtır. Pilot uygulamaya katılan katılımcılar, beřli Likert tipi ölçekte verilen ifadelere iliřkin tepkilerini 1 puandan “Hiç katılmıyorum” 5 puana “Tamamen



Katılıyorum” arasında belirtmeleri istenmiştir. Ölçeğin sonunda eğitim programının en beğenilen ve geliştirilmesi gereken yönlerinin sorulduğu iki soru yer almıştır.

Eğitime İlişkin Tepkiler Ölçeğindeki maddelerin madde - toplam puan korelasyonları ve ölçeğin iç tutarlılık endeksleri hesaplanmıştır. Madde toplam puan korelasyonları 0.20 ve altında olan dört madde ölçekten çıkarılmıştır. Ölçeğe uygulanan faktör analizi sonucunda ölçeğin beş faktörden oluştuğu belirlenmiştir. Bunlar eğitici, eğitim programı, organizasyon, materyaller ve eğitim ortamı olarak adlandırılmışlardır. Her bir faktörün iç tutarlılık endeksi hesaplanmış ve eğitici alt ölçeği için 0.92, eğitim programı alt ölçeği için 0.86, eğitim materyalleri alt ölçeği için 0.77, organizasyon alt ölçeği için 0.75 ve eğitim ortamı alt ölçeği için 0.64 olarak bulunmuştur. Ölçeğin tamamı için iç tutarlılık katsayısı ise 0.89 olarak hesaplanmıştır.

Öğrenme ürünlerini belirlemeye yönelik hazırlanan Öğrenme Ürünleri Testinde 90 soru yer almıştır. Öğrenme Ürünleri Testi her bir ünite için ayrı hazırlanmış, ünite bitiminde yani günün sonunda katılımcılara uygulanmıştır. Sözel bilginin hatırlanmasına yönelik soruların sorulduğu Öğrenme Ürünleri Testinde sorular değişik tiplerde hazırlanmıştır. Testte, çoktan seçmeli, doğru-yanlış, eşleştirme, boşluk doldurma ve tek sözcüklü cevaplar içeren soru tiplerinden oluşmuştur. Her bir doğru cevap 1 puanla değerlendirilmiş, yanlış cevaplara ise puan verilmemiştir. Belirtke tablosunda kavrama düzeyine ilişkin sorular yer almış, kapsam geçerliğini belirlemek üzere üç yargıcı tarafından soruların belirtke tablosundaki uygunlukları ve içeriği temsil etme durumları değerlendirilmiştir. Bu değerlendirmelerin yanısıra ifadelerin açıklık, anlaşılabilirlik, yazım şekli gibi konulardaki değerlendirmeleri de alınmıştır. Önerileri doğrultusunda gerekli değişiklikler yapılmıştır.

Öğrenme Ürünleri Testindeki maddelerin madde - toplam puan korelasyonları ve ölçeğin iç tutarlılık endeksleri hesaplanmıştır. Madde toplam puan korelasyonları 0.20 ve altında olan on dört madde ölçekten çıkarılmıştır. Bu maddeler çıkarıldıktan sonra geriye kalan maddelerin eğitim içeriğini temsil etme durumu yargıcılar tarafından tekrar değerlendirilmiştir. Öğrenme Ürünleri Testi için hesaplanan iç tutarlılık endeksi 0.93 olarak bulunmuştur. Ayrıca her bir maddenin ayırıcılık ve zorluk endeksleri hesaplanmıştır. Testteki maddelerin ayırıcılık endekslerinin ortalaması  $r=0.46$  , zorluk derecelerinin ortalaması ise  $r=0.65$  olarak hesaplanmıştır.

## SONUÇLAR

Çalışmanın amacı işbirliğine dayalı öğrenme yöntemi ile bireysel öğrenme yönteminin öğrenme ürünleri ve eğitime ilişkin tepkiler üzerindeki etkilerini karşılaştırmaktır. Bu amaç için belirlenen 4 gruptan ikisi işbirliğine dayalı öğrenme yöntemi diğer ikisi ise bireysel öğrenme yöntemi ile yapılandırılmış iş başında eğitim konusunu içeren bir eğitim almıştır. Çalışmada kullanılan bağımlı değişkenler öğrenme ürünleri ile eğitime ilişkin katılımcı tepkileridir. Bağımsız değişken ise oluşan öğretim yöntemidir (bireysel ve işbirliğine dayalı öğrenme yöntemi olarak iki düzey). Sonuçlarda etkili olabileceği düşünülen yaş değişkeni de eşdeğişken olarak analizlere dahil edilmiştir.

Çalışmada öncelikle bağımsız değişkenler merkezi yönelim (ortalama) ve değişkenlik (standart sapma) ölçümleri kullanılarak incelenmiştir. Popülasyonun normal dağılım gösterdiği yokluk hipotezini test etmek için Kolmogorov-Smirnov istatistiği hesaplanmıştır. Kullanılan maddelerin çoğu bağımlı değişken ve eşdeğişken açısından olağan ranjda standart çarpıklık ve basıklık ölçümleri vermiş ve böylece verinin normal dağılım gösterdiği sonucuna ulaşılmıştır. İşbirliğine dayalı öğrenme ve

bireysel öğrenme grupları karşılaştırıldığında Öğrenme Ürünleri Testinden elde edilen puanlar açısından işbirliğine dayalı öğrenme grubunun ortalamasının ( $M=53.02$ ,  $SD=11.26$ ), bireysel öğrenme grubunun ortalamasından ( $M=46.66$ ,  $SD= 14.57$ ) daha yüksek olduğu gözlenmiştir.

Eğitime İlişkin Tepkilerin ortalaması 25 puan üzerinden 20.85 olarak belirlenmiştir. Alt ölçek bazında deneklerin puanları incelendiğinde ortalaması en yüksek, standart sapması en düşük ( $M=4.64$ ,  $SD=0.48$ ) alt ölçeğin “Eğitici” alt ölçeği olduğu gözlenmiştir. En düşük ortalama ve en yüksek standart sapma ise ( $M=3.48$ ,  $SD= 1.23$ ) “organizasyon” alt ölçeğinden elde edilmiştir.

Araştırmadaki bağımlı ve bağımsız değişkenler arasındaki korelatif ilişkiler incelenmiş ve varyans analizine hazırlık oluşturmuştur. Ölçümlerde bağımsız değişken dışında etkili olabileceği düşünülen “Yaş” ve “Hizmet Süresi” değişkenlerinin bağımlı değişkenlerle (Öğrenme Ürünleri Testi ve Eğitime İlişkin Tepkiler Ölçeği) korelasyonları incelenmiştir. Bağımlı ve bağımsız değişkenler arasında .05 düzeyinde istatistiksel olarak anlamlı ilişki bulunmuştur. Yaş ile hizmet yılı arasında .01 düzeyinde .98’lik kolinear bir ilişki gözlenmiştir. Bu yüzden sadece yaş değişkeni esas alınarak analizler yapılmıştır.

### *Öğrenme Ürünleri*

Öğrenme ürünleri açısından işbirliğine dayalı öğrenme gruplarıyla bireysel öğrenme grupları arasındaki farkı incelemek amacıyla yaş değişkeninin eşdeğişken olarak alındığı ANCOVA uygulanmıştır. Ancak öncelikle ANCOVA’nın kullanılabilmesi için gerekli testler tek tek yapılmıştır (homoscedasticity, varyansların homojenliği vb.). Yapılan testlerle ANCOVA’nın uygun bir test olarak kullanılabileceği belirlenmiş ve analizlere devam edilmiştir. Yapılan analizler sonucunda işbirliğine dayalı öğrenme grubunun Öğrenme Ürünleri Testinden aldıkları puanların

ortalamasının bireysel öğrenme grubunun aldığı puanların ortalamasından anlamlı düzeyde daha yüksek olduğu belirlenmiştir,  $F(1, 89) = 4.01$ ,  $p < .05$ . İki grup arasındaki etki büyüklüğü ise 0.48 olarak hesaplanmıştır. Öğrenme ürünleri değişkeni üzerinde sabah - öğleden sonra eğitime katılmanın etkili olup olmadığı ise  $2 \times 2$  ANCOVA kullanılarak test edilmiştir. Yapılan analiz sonunda, sabah ve öğleden sonra eğitime katılan gruplar arasında anlamlı düzeyde fark olmadığı belirlenmiştir,  $F(1, 87) = 2.46$ ,  $p > .05$ .

Bu sonuçlar, 1924 ve 1997 yılları arasında, 18 yaş ve yukarısı yetişkinlerle yürütülen ve işbirliğine dayalı öğrenme, rekabetçi öğrenme ve bireysel öğrenme gruplarının akademik başarı – öğrenme düzeylerinin karşılaştırıldığı 168 araştırmanın bulgularıyla tutarlılık göstermektedir (Johnson, Johnson, & Smith, 2007). Bu araştırmada, işbirliğine dayalı öğrenme yöntemiyle öğrenen grupların akademik başarı düzeyinin rekabetçi öğrenme yöntemiyle öğrenen grupların (etki büyüklüğü = 0.49) ve bireysel öğrenme yöntemiyle öğrenen grupların (etki büyüklüğü = 0.53) akademik başarı düzeylerinden daha yüksek olduğu bulunmuştur. Bu sonuçların, her yaş düzeyi, bütün eğitim içerikleri ve her çeşit öğrenme hedefi içi geçerli olduğu belirtilmektedir (Johnson, Johnson, & Holubec, 1993). İşbirliğine dayalı öğrenme yönteminin, diğer öğrenme yöntemlerine olan üstünlüğünün araştırmalarla daha fazla desteklenmesi sosyal bağlılık kuramının da güçlenmesine neden olmaktadır.

Bazı araştırmacılar, işbirliğine dayalı öğrenmenin etkili olabilmesi için en az dört hafta sürenin geçmesi gerektiğini öne sürmektedirler (Slavin, 1990). Fakat, diğer bazı araştırmacılar ise sürenin önemli olmadığını, daha kısa süren çalışmalarda da işbirliğine dayalı öğrenmenin etkili olduğunu belirtmektedirler. Örneğin, Ellison ve Boykin (1994) tarafından yapılan bir araştırmada kontrollü laboratuvar ortamında üniversite öğrencileriyle gerçekleştirilen bir araştırmada öğrenciler 30 dakikalık kelime testine tabi

tutulmuşlardır. Deney sonunda, işbirliğine dayalı öğrenme grubunun bireysel öğrenme grubundan daha yüksek bir performans gösterdiği bulunmuştur. Bununla ilgili olarak yapılan yorumlarda, süreden çok grup üyelerinin birlikte çalışma ve birlikte öğrenme becerilerinin ne kadar gelişmiş olduğunun önemli olduğu belirtilmektedir (Davidson & Versluys, 1999). Çünkü, grup çalışması becerilerini içeren sosyal beceriler, grubun olgunluğunun dolayısıyla da öğrenmeye odaklanarak performansının artmasına neden olmaktadır. Pek çok sosyal bilimcinin üzerinde anlaştığı gibi ancak ve ancak grup çalışma becerileri gelişmiş grupların elde edeceği başarı, bireylerin tek başlarına elde edebileceği başarıdan daha yüksek olacaktır (Johnson & Johnson, 2003). Bu bağlamda, alanda yapılan diğer çalışmalara göre daha kısa süren bu çalışma değerlendirildiğinde işbirliğine dayalı öğrenmenin daha etkili olmasında, katılımcıların grup çalışma becerilerine sahip olmalarının ve birbirlerini tanımalarının etkili olduğu düşünülmektedir. Katılımcılar, eğitime katıldıkları kişilerle aynı bölümde çalışmakta, aynı işin bölümlerini gerçekleştirmekte ve gün boyunca etkileşimde bulunmaktadır.

Öğrenme ürünleri ve yaş arasındaki ilişki incelendiğinde ise yaşça daha büyük katılımcıların daha düşük puan almasının yaş, bilişsel süreçler ve hafıza arasındaki ilişkiyi inceleyen araştırma sonuçlarıyla tutarlı bir bulgu olduğu ortaya çıkmaktadır. Yaşlandıkça hafıza gerektiren bazı işlemlerdeki performans düşerken bazılarında daha durağan kalındığı bulunmuştur (Chelminski, 1999). Bilgiyi işleme süreçlerinde de yaş ilerledikçe sürenin uzadığı alanda yapılan araştırmaların diğer bulguları arasındandır (Hess, 2005).

Yaşla birlikte bilgiyi işleme sürecinde meydana gelen değişimlerin yaşamın diğer alanlardaki değişimlerden de etkilenebildiğini öne sürmektedirler (Baltes, 1987). Deneyim, sağlık, kişilik, iş deneyimi, motivasyon, deperesyona yatkınlık, genetik ve kültür gibi değişkenlerin

kişilerin bilişsel yetileri üzerinde etkileri olduğu belirtilmektedir (Shinamura, Berry, Mangels, Rusting, & Jurica, 1995). Bu araştırmada yaş arttıkça öğrenme ürünlerindeki düşüşün, fizyolojik nedenlerden çok özellikle iş yaşamlarındaki etkenlerden kaynaklanabileceği düşünülmektedir. Emeklilik hakkını kazanmış katılımcıların, emeklilik planları yaparken kariyer gelişimlerini daha ikinci planda tutabilmektedirler. Nitekim bu durumu, sözlü ve değerlendirme formlarının açık uçlu sorularında yazılı olarak verdikleri yanıtlarda da belirtmişlerdir. Kendileri için hizmetiçi eğitimin oldukça geç olduğunu, özellikle bu tür içerikteki bir programın, kendilerinden daha genç ve kurumda daha uzun yıllar çalışmayı hedefleyen personel için daha yararlı olacağını söylemişlerdir. Bu tür bir yaklaşım, katılımcıların, eğitimden beklentilerini dolayısıyla da gösterdikleri çabayı etkilemekte ve öğrenme performanslarının düşmesine, daha az yararlanmalarına neden olmaktadır.

#### *Eğitime İlişkin Tepkiler*

Eğitime İlişkin Tepkiler açısından işbirliğine dayalı öğrenme gruplarıyla bireysel öğrenme grupları arasındaki farkı incelemek amacıyla yaş değişkeninin eşdeğişken olarak alındığı ANCOVA uygulanmıştır. Ancak öncelikle ANCOVA'nın kullanılabilmesi için gerekli testler tek tek yapılmıştır (homoscedasticity, varyansların homojenliği vb.). Yapılan testlerle, ANCOVA'nın uygun bir test olarak kullanılabileceği belirlenmiş ve analizlere devam edilmiştir. Yapılan analizler sonucunda işbirliğine dayalı öğrenme grubunun Eğitime İlişkin Tepkiler Ölçeğinden aldıkları puanların ortalamasının bireysel öğrenme grubunun aldığı puanlardan anlamlı düzeyde farklı olmadığı belirlenmiştir,  $F(1, 89) = .46, p > .05$ . İki grup arasındaki etki büyüklüğü ise 0.20 olarak hesaplanmıştır..

Eğitime İlişkin Tepkiler Ölçeğinin alt ölçekleri açısından gruplar arasında fark olup olmadığı ise MANCOVA analizi kullanılarak test edilmiştir. MANCOVA'nın uygunluk düzeyi test edilmiş, uygunluğu

belirlendikten sonra yapılan analizde alt ölçekler açısından işbirliğine dayalı öğrenme grubu ile bireysel öğrenme grubu arasında anlamlı düzeyde fark olmadığı bulunmuştur,  $F(5, 85) = .39, p > .05$ .

Eğitime ilişkin tepkilerle ilgili bu sonuçlar, her ne kadar var olan bulgularla ters düşüyor gibi görünse de, işbirliğine dayalı öğrenme yönteminin bireysel öğrenme yöntemiyle karşılaştırıldığı araştırmalarda bireysel öğrenme yöntemi geleneksel öğretim yöntemlerini içermekte, daha çok ders anlatma yöntemiyle eğitimler sürdürülmektedir. Bu araştırmada ise, geleneksel öğretim yöntemi yerine öğrenen merkezli, eğiticinin daha çok kolaylaştırıcı olarak görev yaptığı, katılımcıların eğiticiyle tartışarak öğrendiği, yetişkin öğrenmesi için uygun bir ortamın yaratıldığı ancak tamamen bireysel hedeflere odaklandıkları bir öğretim yöntemi uygulanmıştır. Yetişkin eğitime uygunluğu nedeniyle katılımcıların eğitime ilişkin tepkilerinin işbirliğine dayalı öğrenme yöntemindeki kadar olumlu olduğu varsayılmaktadır. Fiziksel ortam ve organizasyona ilişkin değerlendirmeler dışındaki bütün alanlardaki değerlendirmelerin ortalamalarının çok yüksek olması bu iki yöntem arasındaki farkın azalmasına neden olmaktadır. Her iki grubun katılımcıları da açık uçlu sorulara verdikleri yanıtlarda da eğitim aldıkları yöntemi beğendiklerini belirtmişlerdir.

Suç olarak, bu çalışmayla işbirliğine dayalı öğrenmenin yetişkin öğrenenler için etkili bir öğretim yöntemi olarak kullanılabileceği belirlenmiştir. İşbirliğine dayalı öğrenme yöntemiyle öğrenen katılımcıların, bireysel öğrenme grubundakilere kıyasla öğrenme ürünleri açısından daha başarılı oldukları ve eğitim programını bireysel öğrenme grubundakiler kadar olumlu değerlendirdikleri bulunmuştur. Araştırma sonuçları, işbirliğine dayalı öğrenmenin beş ögesine göre katılımcılar arasında sosyal bağımlılığın yapılandırılmasının yetişkin eğitimi ve özellikle de hizmetiçi eğitimde etkili bir şekilde kullanılabileceğini göstermektedir. Ancak, bu

alıřma, tek bir kurumda, birbirine benzer zellikler taşıyan bayanlarla yapılmıř olduėu iin ğretim yntemlerinin yetiřkinlerin ğrenmesi zerindeki etkilerinin farklı gruplarla ve farklı ortamlarda tekrarlanması faydalı olacaktır. Bunun yanı sıra, iřbirliėine dayalı ğrenme ynteminin hizmetii eėitimde ve yetiřkin eėitiminde en sık kullanılan geleneksel ğretim yntemleriyle karřılařtırmalarını amalayan arařtırmaların yapılması da nerilmektedir. İřbirliėine dayalı ğrenme yntemi ve geleneksel ğretim yntemlerinin karřılařtırılması durumunda ğrenme rnleri zerinde daha byk farklar oluřacaėından iřbirliėine dayalı ğrenme ynteminin zellikle alandaki uygulayıcılar tarafından tercih edilmesini kolaylařtıracaaėı dřnlmektedir.

İřbirliėine dayalı ğrenmenin ğrenme rnleri zerindeki olumlu etkisinin kalıcılıėının inceleneceėi arařtırmalar da yararlı olacaktır. Hizmetii eėitimin etkililiėinin lldė bir diėer alan olan iře transfer ařaması iin, edinilen bilgi ve becerilerin kalıcı olması gerekmektedir. Yapılacak arařtırmalarla edinilen bilgi ve becerilerin kalıcılıėını saėlayan uygun ğretim yntemlerinin belirlenmesi hem arařtırmacılar hem de alandaki uygulayıcılar iin yararlı olacaktır.

İřbirliėine dayalı ğrenme ynteminin etkililiėini belirlemeye ynelik deneysel arařtırmalarda ve alandaki uygulamalarda unutulmaması, gz ardı edilmemesi gereken en nemli husus, iřbirliėine dayalı ğrenmenin beř temel gesinin uygulanması zorunluluėudur. Bu beř temel genin olumlu baėlılık, bireysel sorumluluk, yzyze etkileřim, sosyal beceri ve deėerlendirme, uyvanması grup olarak ğrenmenin bařarılı olabilmesi iin bir řarttır. Beř temel geden birinin eksik kalması durumunda, birlikte ğrenme iin gerekli řartlar ya da ortam oluřmayacaėından, yntemin etkililiėi de tehlikeye dřecektir.



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Developing E-Learning Materials for Performance Evaluation, December 2003 - January 2004.

## **BOOKS**

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