TEACHING EFFECTIVENESS INDICES OF IN-SERVICE AND PROSPECTIVE PHYSICAL EDUCATION TEACHERS

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ABSTRACT

TEACHING EFFECTIVENESS INDICES OF IN-SERVICE AND PROSPECTIVE PHYSICAL EDUCATION TEACHERS

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Effective teaching in physical education has growing interest due to its direct relation with the student learning. The purposes of this study were a) to examine classroom management behaviours, time management strategies, and teaching style preferences of in-service and prospective physical education teachers and b) to compare in-service and prospective teachers' competencies on these teaching effectiveness categories. Thirty in-service and twenty-four prospective physical education teachers participated in this study. Video recordings of physical education teachers were obtained during the lessons. Classroom management behaviours were analysed by using Physical Education Classroom Management Analysis Form, time management strategies were analysed by the Time Management Analysis Form, and teaching style preferences were analysed by

Mosston Spectrum of Teaching Style Checklist. Results indicated significant difference in selection criteria for grouping students, arrangement and picking up equipment, preferred group size category, and preferred classroom formation patterns in terms of classroom management behaviour subcategories between in-service and prospective teachers ($p<.05$). Significant difference was not found in use of instructional area and application of summary part between groups ($p>.05$). Use of time for instruction, management, and warm-up in terms of time management subcategories differed significantly between the in-service and prospective teachers ($p<.05$). Use of time for beginning the class, ending the class, activity, and game did not differ significantly between the two groups ($p>.05$). No significant differences were found in preferred teaching styles between in-service and prospective teachers ($p>.05$). These results indicated that, there is a need for the development of classroom management and time management skills as well as usage of various teaching styles of both in-service and prospective physical education teachers in order to make their instruction more effective.

Keywords: Teaching Effectiveness, Classroom Management, Time Management, and Teaching Styles.

ÖZ

HİZMET-İÇİ VE HİZMET-ÖNCESİ BEDEN EĞİTİMİ ÖĞRETMENLERİNİN DERSLERİNİN ETKİNLİĞİNİN BELİRLENMESİ

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Beden eğitimi alanında eğitimin etkinliği konusuna olan ilgi öğrenme ile yakın ilişkisinden dolayı giderek artmaktadır. Bu çalışmanın amacı (1) hizmet-içi ve hizmet-öncesi beden eğitimi öğretmenlerinin sınıf yönetimi davranışları, zaman yönetimi stratejileri ve tercih ettikleri öğretim yöntemlerinin incelenmesi ve (2) öğretmenlerin belirtilen eğitim etkinliği kategorilerindeki yeterliliklerinin karşılaştırılmasıdır. Bu araştırmaya 30 hizmet-içi ve 24 hizmet-öncesi beden eğitimi öğretmeni katılmıştır. Beden eğitimi öğretmenlerinin dersleri videoya kayıt edilmiştir. Sınıf yönetimi davranışları Beden Eğitimi Sınıf Yönetimi Analiz Formu kullanılarak, zaman yönetimi stratejileri Zaman Yönetimi Analiz Formu kullanılarak, öğretim yöntemleri tercihleri Mosston Spektrumu Öğretim Yöntemleri Formu ile video kayıtlarından analiz edilmiştir. İstatistiksel analiz için, tanımlayıcı istatistikler, ki-kare testi ve iki ortalama arasındaki farkın önemlilik testi

kullanılmıştır. Ortaya çıkan bulgulara göre, hizmet-içi ve hizmet öncesi beden eğitimi öğretmenleri arasında sınıf yönetimi davranışlarından öğrencilerin gruplandırılması sırasında kullanılan kriterler, malzemelerin hazırlanıp toplanması, tercih edilen grup büyüklükleri ve tercih edilen sınıf formasyonu çeşitleri açısından anlamlı farklılık olduğu saptanmıştır ($p<.05$). Dersin özetlenmesi ve ders alanının kullanımı açısından ise anlamlı bir farklılık saptanmamıştır ($p>.05$). Zaman yönetimi hizmet-içi ve hizmet-öncesi beden eğitimi öğretmenleri arasında, zaman yönetimi stratejilerinden ders süresinin kullanımı, teorik bilgi verilmesi, sınıf yönetimi ve ısınma kategorilerinde anlamlı farklılık olduğu saptanmıştır ($p<.05$). Dersin başlatılması ve bitirilmesi, aktiviteler ve oyun için harcanan süre bakımından iki grup arasında anlamlı farklılık bulunmamıştır ($p>.05$). Tercih edilen öğretim yöntemleri açısından hizmet-içi ve hizmet-öncesi beden eğitimi öğretmenleri arasında anlamlı bir fark bulunmamıştır ($p>.05$).

Anahtar Kelimeler: Etkili Öğretim, Sınıf Yönetimi, Zaman Yönetimi, Öğretim Yöntemleri.

To Dr. M. Levent İnce

"I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work".

Date: June 2003 Signature: 

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TABLE OF CONTENTS

ABSTRACT iii
ÖZ v
DEDICATION vii
ACKNOWLEDGEMENTS ix
TABLE OF CONTENTS xi
LIST OF TABLES xiv
LIST OF FIGURES xvi
CHAPTER
1. INTRODUCTION 1
    1.1. Research Questions 7
    1.2. Hypotheses 8
    1.3. Significance of the Study 10
    1.4. Assumptions 12
    1.5. Limitations 12
    1.6. Definition of Terms 12
2. LITERATURE REVIEW 14
    2.1. Teaching Effectiveness 14
    2.2. Classroom Management 17
    2.3. Time Management 21
    2.4. Teaching Styles 28
    2.5. Practice Teaching of Physical Education Teachers 33
    2.6. Review of Teaching Effectiveness Research Literature in Turkey 35
    2.7. Systematic Observation Technique in Physical Education 36
3. METHOD 40
    3.1. Overall Design 40

3.2. Participants 41
3.3. Data Collection Procedures 44
3.4. Instruments for Data Analysis 44
3.4.1. Classroom Management Analysis Form 45
3.4.2. Time Management Analysis Form 46
3.4.3. Teaching Style Preferences Analysis Form 47
3.5. Inter-observer and Intra-observer Agreement Analysis of Forms 47
3.6. Data Analysis 49
4. RESULTS 50
4.1. Description of Classroom Management Behaviours of In-service and Prospective Teachers 50
4.2. Description of Time Management Strategies of In-service and Prospective Teachers 53
4.3. Description of Teaching Style Preferences of In-service and Prospective Teachers 55
4.4. Comparison of Classroom Management Behaviours of In-service and Prospective Teachers 56
4.5. Comparison of Time Management Strategies of In-service and Prospective Physical Education Teachers 65
4.6. Comparison of Teaching Style Preferences of In-service and Prospective Teachers 66
5. DISCUSSION 68
5.1. Analysis of Classroom Management Behaviours of In-service and Prospective Teachers 68
5.2. Analysis of Time Management Strategies of In-service and Prospective Teachers 74
5.3. Analysis of Teaching Style Preferences of In-service and Prospective Teachers 79
6. CONCLUSIONS AND RECOMMENDATIONS 84
6.1. Conclusions 84
6.2. Recommendations 86

REFERENCES.....88
APPENDICES 97
A. Physical Education Classroom Management Analysis Form 97
B. Time Management Data Form 105
C. Teaching Style Preferences Checklist 108

LIST OF TABLES

TABLE

2.3.1. The Amount of Time Students Spent in Different Lesson Context Categories 24

2.3.2. Analysis of the Teachers' Use of Class Time 25

2.3.3. Student and Teacher Activities with Pre-service Teacher Goals 25

3.2.1. Demographic Information on Participants 43

3.2.2. List and Frequency of Courses Conducted by In-service & Prospective Teachers 44

3.5.1. Inter-observer and Intra-observer Agreement Scores in Different Segments of the Lesson for Time Management. 48

4.1.1. Frequency and Percentage Scores of Group Size, Active Students in Each Group, Number of Groups and Number of 52

4.1.2. Frequency and Percentage Scores of Total Classroom Arrangement Patterns in Different Lesson Context Categories 53

4.2.1. Mean and Percentage Scores of Total Class Time Spent in Different Lesson Contexts by In-service and Prospective Teachers 54

4.3.1. Frequency and Percentage Scores of Preferred Teaching Styles by In-service and Prospective Teachers 55

4.4.1. Chi-Square Analysis Results on Criteria for Grouping Students 57

4.4.2. Chi-Square Analysis Results on Arranging Equipment 58

4.4.3. Chi-Square Analysis Results on Picking up Equipment 59

4.4.4. Chi-Square Analysis Results on Group Size Preferences 60

4.4.5. Chi-Square Analysis Results on Closure Part of the Lesson 61

4.4.6. Chi-Square Analysis Results on Usage of the Instructional Area 62

4.4.7. Contingency Table Analysis of Classroom Formation Patterns in Different Lesson Context Categories 64

4.5.1. Independent-samples T-test Scores for In-service and Prospective Teachers in Terms of Time Management Strategies.....66
4.6.1. Chi-Square Analysis Results Teaching Style Preferences.....67

LIST OF FIGURES

FIGURE

2.4.1. Characteristics of the Clusters of Teaching Style 30
3.1. Overall Design of the Study.....42
4.2.1. Time Management Strategies of In-service and Prospective Teachers ..55
4.3.1. Teaching Style Preferences of In-service and Prospective Teachers.....56

CHAPTER I

INTRODUCTION

Physical education, as one of the subjects of school curriculum, performs crucial function in the development of lifetime skills, behaviours, and knowledge of students (Silverman, 1991). However, teaching-learning setting is an active and dynamic process in which students are involved in numerous activities with different equipment in different learning environments such as gymnasium, swimming pool, school garden, and field (Silverman, 1985; Shuell, 2002). Differences in the physical education setting (i.e. context, learner, and learning outcomes) demand preparation of different aims and objectives, mainly focusing on psychomotor as well as affective and cognitive domains of physical education. In order to attain the aims and the objectives, teachers should provide effective teaching-learning environment in which maximum student learning is occurs (Garn & Byra, 2002).

Effective teaching in physical education has been studied since 1970s to identify variables that maximise student learning (Metzler, 1990). In these studies, particular characteristics of successful teachers (i.e. tolerant, tender, have sense of humour, have content knowledge) rather than their actual ability, were accepted as factors that determine effectiveness of teachers (Silverman, 1991; Arslan &

Pehlivan, 1996). In order to identify common characteristics of effective teachers, researchers generally used questionnaires or they directly asked principals, administrators, and sometimes students about common terms that define effective teachers (Graham & Heimerer, 1981). Following years, researchers studied the methods of teaching to find-out the most effective teaching style. Students were taught by different methods, and then the average knowledge gain was compared in these studies (Graham & Heimerer, 1981).

In the early 1980s, a great deal of investigation on effective teaching centred on observing the teacher or student behaviour by direct observation or videotaping the classes (systematic observation). Observation of actual teaching environment enabled researchers to classify teacher or student behaviour, as well as to collect data about classroom setting (Silverman, 1991). As a result of these investigations, researchers determined that effective teachers had a large repertoire of competencies (methods of teaching, managing the classroom, etc.), rather than a single best representative of effective teaching for all subjects and all situations (Harrison & Blakemore, 1992).

Classroom management skills, as one of the indicators of effective teaching, are accepted as central to the task of teaching (Gensemer, 1991). Randall (1992) defined the classroom management as, any arrangement that the teacher makes to create an appropriate environment for teaching and learning. Harrison and Blakemore (1992) described some of the classroom management strategies in physical education as a) preparing the environment, b) distributing and collecting equipment, c) calling roll, d) leading warm-up and fitness activities, e) teaching and

utilising class formations, f) organising groups or teams. Because of the limited amount of time, lack of equipment, and facilities in physical education, teachers need to plan carefully, use a variety of resources, and operate a structured teaching-learning environment for maximum student participation and benefit (Graham, 1992). As Metzler (1990) indicated, "all efforts for managing the class and effective usage of available space and equipment are to provide increasing student engagement (by decreasing waiting time) (p. 62)".

Besides classroom management, teacher and student's use of class time was an important concept in teaching effectiveness research during 1980s. Differences in effectiveness of teachers are thought to be dependent upon how well class time is managed for instruction (Metzler, 1990). Siedentop, Mand, and Taggart (1986) described some of the effective teaching strategies as: a) devote a large percentage of time to content, minimise management / wait / transition time in class routines, b) devote a high percentage of content time to practice, c) keep students on-task. Philips and Charlisle (1983) stated that effective teachers provided more learning time to students. One of the reasons for a growing interest in the use of class time during physical education lessons was the minimal amount of time allotted for physical education in many schools (Godbout, Brunelle, & Tousignant, 1983). Due to characteristics of the physical education lessons, teachers spend a considerable large amount of time on wide variety of activities (organisation of the class, arrangement of the equipment, organising activities, etc) than teachers in other subject areas (Rink, 1985, cited by Gensemer, 1991). Although, Metzler (1990) indicated that, effective teachers were mostly conscious about using class time,

physical educators were generally forced to teach more content, to crowded classes with the limited class time, instructional area, and inadequate facilities leading to less time for actual practice. However, students learn more as a result of experience, and to accomplish student learning, teachers should provide adequate amount of time for active engagement of students with the subject (Rink, 1996).

Teaching styles that teachers use during transmitting information to students is also a very important factor for effective teaching-learning environment (Ballinger, 1993). Teachers are usually seek for and apply different methods to instruct their students, and selection of these methods relies on a careful consideration of teaching-learning environment (student, subject matter content, teacher, and time) (Harrison & Blakemore, 1992). Mosston and Ashworth (1994) introduced 11 teaching styles and these teaching styles became a framework all over the world for delivering the instruction in physical education setting.

"How teachers learn teaching" has becomes a major focus in teaching/learning process (O'Sullivan & Tsangaridou, 1992), and effective teaching strategies described previously should be learned and practiced in order to be successful in transferring knowledge. McCallister and Napper-Owen (1999) stated that the critical time for the development of these strategies was the field experiences during teacher education program. Practice teaching courses are taken prior to student teaching and designed to provide prospective teachers the opportunity to practice pedagogical skills, and facilitate an easy transition into student teaching (Curtner-Smith, 1996; Schempp, 1988). One of the main purposes of teacher education program is to improve prospective teachers' skills on effective

decision making tendencies and instructional behaviours in the actual teaching environment (Brawdy & Byra, 1995). According to the literature on in-service and prospective teachers' concerns and practices on classroom and time management, there were differences between the prospective and in-service teachers' time and classroom management strategies (Boyce & Kelly, 1992). It was indicated that during practice teaching, prospective teachers were mostly concerned with the classroom management and organisation, as well as instructional skills (Curtner-Smith, 1996). Additionally, prospective teachers described the effective teaching indicators as quality of instruction, management and organisation skills (O'Sullivan & Tsangaridou, 1992).

Research findings have revealed that most physical educators had lack of ability to manage students and classroom effectively to provide maximum learning environment (Ballinger, 1993; Livingston, 1996; Kovar, Ermler, Mehrhof, Napper-Owen, 2001). However, it is a fact that students learn more when they practice more, and classroom organisation and management especially in physical education setting influence student achievement. Also, Kovar et al. (2001) suggested that in order to attain PE program goals students should fully participate in classes. Harrison and Blakemore (1992) indicated that "management was important because time spent for the management actions was taken away from substantive content". That's why, teachers should organise classroom environment and instruction time for increased practice and they also should develop a learning environment that maintains high level of student engagement in that practice (Rink, 1996).

While research efforts in the teaching effectiveness area have been carried out in the physical education area, there was a lack of systematic attempts to investigate the current state and the status of physical education lessons in Turkey. Most of the studies focused on the effectiveness of physical education instruction by using quantitative methods (Beydoğan & Şirinkan, 1998; Boztepe, 1993; Demirhan, Açıkada, & Altay, 1996; Sönmez & Sunay, 2001). Findings from these studies might serve as a guide or provide general information at theoretical background about the effectiveness of teachers or teaching in physical education classes, but still there is need for additional data about what is going on in actual physical education classes. These data were collected through questionnaire and were mainly about the teachers' thoughts about effectiveness of the physical education lessons. Furthermore, there is a lack of investigation in teaching effectiveness on prospective teachers as well. Although, most of the studies on effectiveness of in-experienced teachers were carried out by using questionnaires (Çamlıyer, 1992; Çiçek & Bizati, 2000) and studies on prospective teachers by systematic observation technique are very few (Çiçek, 1998; İnce, 2002). Further systematic observation analyses of effective teaching are needed to find out information about classroom and time management strategies, and teaching style preferences of in-service and prospective teachers.

Thus, the purpose of this study was to describe classroom management behaviours, time management strategies, and teaching style preferences of in-service and prospective physical education teachers by using systematic observation analyses. The second purpose of the study was to examine the differences between

in-service and prospective teachers' competencies on variables of classroom management behaviours, time management strategies, and teaching style preferences.

1.1. Research Questions

1. What are the classroom management behaviours that in-service and prospective physical education teachers possess?

2. Is there a difference between in-service and prospective physical education teachers' classroom management behaviours in relation to:

    a. criteria for grouping students

    b. arranging equipment

    c. picking up equipment

    d. group size preferences

    e. closure

    f. usage of the area

    g. classroom formation patterns

3. What are the time management strategies that in-service and prospective physical education teachers possess?

4. Is there a difference between in-service and prospective physical education teachers' time management strategies in relation to:

a. instruction

b. management

c. beginning class

d. ending class

e. warm-up

f. motor activity

g. game

5. What are the in-service and prospective physical education teachers' preferred teaching styles?

6. Is there a difference between in-service and prospective physical education teachers' preferred teaching styles?

1.2. Hypotheses

For the research question 1, 3, and 5 no hypothesis were written because of the nature of the question, so hypothesis 1 refers to the question 2, hypothesis 2 refers to the question 4, and hypothesis 3 refers to the question 6.

1. There is no statistically significant difference between in-service and prospective physical education teachers' classroom management behaviours in relation to:

    a. criteria for grouping students

b. arranging equipment

c. picking up equipment

d. group size preferences

e. closure

f. usage of the area

g. classroom formation patterns

2. There is no statistically significant difference between in-service and prospective physical education teachers' time management strategies in relation to:

h. instruction

i. management

j. beginning class

k. ending class

l. warm-up

m. motor activity

n. game

3. There is no statistically significant difference between in-service and prospective physical education teachers' teaching style preferences.

1.3. Significance of the Study

In order to provide more efficient instruction and to attain goals and objectives of education for enhancement of student learning, it is crucial to study the parts that constitute effective instruction. Although maximum active participation of students to the lessons is key for the achievement of physical education program goals and objectives, researchers mainly claim that students in physical education classes do not participate fully in lessons, and that they spend most of the class time listening, waiting for their turn, and organising students (Kovar et al., 2001). Moreover, a major problem for physical educators has been the lack of ability to organise the classroom and the time effectively and the use of traditional teaching style that mainly focus on the psychomotor domain. As classroom and time management strategies and teaching styles are important factors affecting maximum student learning, there is a need for the development and application of effective management skills and diversity of teaching styles in order to create an efficient and orderly classroom that allows maximum student learning (Sariscsany & Pettigrew, 1997).

Since the current physical education research area focused on general purpose of this study was to identify in-service and prospective teachers' teaching skills on classroom management, time management, and the usage of the diverse teaching styles. It is important to be aware of competencies that in-service and prospective teachers possess. This information will provide feedback and will enable in-service teachers to broaden their knowledge and improve their teaching competencies. Furthermore, physical education teacher educators will be conscious

about the strengths and weaknesses of prospective teachers on classroom management, time management and usage of various teaching methods during practice teaching.

Moreover, there is a lack of completed teaching effectiveness in physical education research in Turkey, that is why this study may provide data on classroom management behaviours, time management strategies as well as preferred teaching styles of prospective and in-service physical education teachers comparatively.

Furthermore, there is lack of systematic attempts in order to obtain a full description of teaching physical education in the actual setting; rather most of the researches have been based on data gathered through questionnaires. In other words, there is a need for examining and describing physical education teachers' teaching behaviours in actual classrooms with students in order to find out information about the current status of physical education classes in Turkey.

Because it is crucial to prepare future teachers to have essential skills for effective instruction, the knowledge and understanding that are gained from the research can be used by teacher educators in teacher education programs to help the prospective teachers to be a more effective teacher. Teacher educators should help prospective teachers to enhance their skills on classroom, time management and teaching styles.

It is suggested that in order to determine the effectiveness of a lesson, the data should be gathered by an observer during the interactive phase of the lesson (Randall, 1992). Since the present study was conducted by observation, physical

education research area will be aware of the practical and useful side of systematic observation for studying teaching effectiveness. The study will also give the information to compare the current status of physical education setting in Turkey with other countries.

1.4. Assumptions

It was assumed that presence of observers and video recording did not affect the teaching skills of in-service and prospective physical education teachers.

1.5. Limitations

The sample size of this study was limited to 30 in-service and 24 prospective physical education teachers. Also observations were limited to one lesson (40 Min.) for each teacher. Since participant schools are from one region (Ankara) there is limited generalizability.

Content of the lessons that are practiced by both in-service and prospective teachers, number of male and female prospective physical education teachers and also number of the public and private schools was different.

1.6. Definition of Terms

Prospective: Refers to the senior (4th year) physical education student teachers taking "Practice Teaching" course.

In-service: Refers to the physical education teachers who are currently teaching physical education in schools.

Classroom Management: Classroom management refers to any provisions that the teacher makes to create an appropriate environment for teaching and learning (Randall, 1992). Physical education classroom management includes activities such as roll call, grouping students for an activity, organising people, equipment and activities (Gensemer, 1991).

Time management: Time management refers to the teachers' use of class time for instructional activities, management activities, and motor skill activities.

Teaching Style: Refers to the physical education styles in the Mosston Spectrum (Mosston and Ashworth, 1994): Command, Practice, Reciprocal, Self-check, Inclusion, Guided Discovery, Convergent Discovery, Divergent Production, Individual Program Learner's Design, Learner-initiated, and Self-teaching Styles.

CHAPTER II

LITERATURE REVIEW

The following sections will review the literature of classroom and time management strategies as well as teaching style preferences of physical education teachers. Literature review will focus on the following titles: (1) Teaching effectiveness, (2) Classroom management strategies, (3) Time management strategies, (4) Teaching style preferences, (5) Practice teaching, 6) Review of Teaching Effectiveness literature in Turkey, and 7) Systematic observation technique.

2.1. Teaching Effectiveness

Teaching effectiveness, which started during 1970s, stated as one of the most important research area and major progression in physical education (Silverman, 1991). First attempts in the effective teaching research focused on a list of particular teacher personality characteristics to decide whether the teacher is effective or not (Harrison, 1987). However, these studies did not succeed on validating the standardisation of these personal characteristics for effective teachers (Graham & Heimerer, 1981). Following research on teaching effectiveness was concentrated on teaching methods, but it was also not sufficient to describe

effective teacher, because different situations demand different methods of teaching (Harrison & Blakemore, 1992).

It was declared that effectiveness can not be described with single competency, rather effectiveness requires different types of qualities such as teaching methods, classroom management, and time management. Effective use of class time by both teachers and students was studied for many years, since; effective teaching accepted as increased students' engagement with the lesson content and reduced waiting or non-content time (Harrison & Blakemore, 1992; Metzler, 1990).

An effective teaching process described in different ways by various researchers. Silverman (1991) stated that teaching effectiveness as student opportunity to practice skills in order to improve by presentation of a clear explanation and demonstration, allocation of time for motor skill practice and facilitation of practice trials that will provide student learning. Similarly, Ballinger (1993) described effective instructors planning each lesson thoroughly, and keep students motivated for learning and greater part of the effective teaching practices that affect student learning are stated under the teachers control (Metzler, 1990).

Beighle and Pangrazi (2002) stated that teaching effectiveness was determined by teacher's competence of managing a class. They also stressed the impossibility of the teaching in an unorganised class, and teachers were suggested to improve their classroom management skills to provide an effective learning environment. In order to increase teaching effectiveness in physical education classes, teachers should manage classroom and time effectively (Kirchner & Fishburne, 1995; Randall, 1992; Sariscsany & Pettigrew, 1997). It is also suggested

that, in order to provide successful classroom management, class size, equipment available, and duration of the lesson should be considered carefully and also management time and off-tasks should be decreased while optimal on-task behaviour increased (Randall, 1992; Lacy & La Master, 1996). Similarly, Metzler (1990) stated the time and resource management as two important effective teaching indicators for physical education. Similarly, Philips and Charlisle (1983) carried out a study to compare most and least effective teachers. They obtained data from video recordings on; teacher instruction time, teacher management time, student allocated skill learning time, and student management time. They also measured students to find skill and knowledge gain to decide effectiveness of the lesson. Some of the findings showed that, most effective teacher group spent approximately 5% more of their classroom time in the teacher instruction time. Similar results were found for the teacher management time variable. Additionally, the most effective teachers utilised less time than the least effective teachers did in beginning class, equipment management, organisation, and ending class sessions of the lesson. Moreover, teachers in the most effective group provided their students with 8% more allocated skill-learning time than the least effective teachers.

Philips and Charlisle (1983) comprehensively related teaching effectiveness with student achievement, time-on-task, presentation of content, performance feedback, use of objectives and teacher management. Lumpkin (1990) stated that the teachers is an important factor affecting program quality and she mentioned that effective teachers should be skilful in organisational procedures during instruction, since planning, organisation, and evaluation were vital parts of high-quality

teaching. As well as the time and classroom management, teaching styles directly related with the teaching effectiveness since it provides more effective environment, teachers search for the ways including methods or techniques to transfer the information or skills to learners (Weng, 2001).

2.2. Classroom Management

Gilberts and Lignuaris-Kraft (1997) described the classroom management skills as the teacher's competence on the administering the educational settings, and precisely manage and evaluate student's classroom performance. Since one of the most important characteristics of the physical education is having a dynamic setting, it is impossible to talk about a single best classroom management behaviour, instead it is better for teachers to create different classroom management systems for immediate, different, and situations during the lesson (Harrison & Blakemore, 1992; Johnston, 1995).

Rink (1996) reported that management function was very important, since the time spent to organise classroom and to manage the student behaviour was taken from the total class time. Harrison and Blakemore (1992) stated that classroom management was indispensable for effective and productive teaching-learning in physical education. They also indicated that the reduction of off-task and deviant behaviours by organisation of the efficient learning activities, providing sufficient time for student learning, and supervision of the student responses as a key for effective classroom management. Moreover, effective classroom management in physical education setting was reported as necessary because of the different types of activities (football, volleyball, swimming, etc), teaching areas (sports hall, school

garden, courts, swimming pool), equipment (rackets, balls), crowded classes, limited lesson duration (for dressing, roll call, warm up, instruction, exercises) to allow students get optimum gain from the instruction. In order to manage the classroom and class time effectively, they suggested to teachers that, before beginning the class, resources, equipment, and course materials should be checked, necessary adjustments should be done with the equipment including arrangements of apparatus, preparation of balls, rackets etc. Also distribution of the equipment, calling roll, warm up activities, organisation of class formations, groups, and teams are suggested to be performed in a short time and saving more time for instructional activities and student learning. They concluded that, classroom organisation and management competencies such as well-ordered physical and cognitive activities, organised transitions from one activity to another, time saving arrangement procedures provide increased student engaged time and success.

Similarly, Beighle and Pangrazi (2002) summarised the class routines, developed by teachers, as beginning and ending the class, organising equipment, arranging students into groups, etc. which were for the effective classroom management and instruction as well as enjoyable environment. They also mentioned that, as well as classroom management, consideration of equipment available for use, activities provided, and the teaching style for the lesson was also very important to be an effective teacher. Similarly, Lumpkin (1990) mentioned that in order to provide maximum learning environment, each daily class should be planned including the review of the previously acquired skills, facilitation warm-up activities, explanation of objectives, presentation of the subject matter, arrangement

of practice trials, and closure of the lesson, more importantly, it was suggested to keep the theoretical explanations short, brief, and clear, setting the large amounts of time aside for the maximum participation of students.

Harrison and Blakemore (1992) described the organised and well-planned teaching-learning environment including the minimised off-task activities, appropriate learning activities, arrangement of instructional activities and practices as more effective. They stated that much of the class time was spent in roll calling, giving directions, theoretical explanations, etc. in physical education lessons. They suggested the quick and useful roll call procedures, which take one or two minutes providing students with more efficient learning time. Additionally, it was mentioned that students taught to move with the signals and orders during group formations and organisation patterns, and transitions between formations should be useful. They also presented the time and accuracy as two main criteria for the selection of the classroom organisation patterns and add some other factors as class size, characteristics of the students, learning situation.

Silverman, Tyson and Morford (1988) suggested that organisation patterns in physical education setting should be organised in a way that whole class could be included in practices and exercises to achieve maximum participation and student learning. Similarly, Kirchner and Fishburne (1995) described the effective teaching-learning environment as the structured classroom environment (establishing equipment and facilities), keeping students engaging in activities by maintaining the motivated and encouraging class atmosphere.

Parker (1995) carried out a study on 14 experienced high school physical education teachers to examine teachers' views of effective teaching and to examine the underlying rationales behind these definitions. At the end of the study, organisation and management part was ranked highest overall. Teachers stated management and organisation as a key for effective teaching. Additionally, they described them as a backbone of teaching. Moreover, some of the teachers stated that pupils did not learn anything if the class disorganised.

Bucher (1987) reported that effective management strategies that were being planned carefully before class began to provide the students perform the activities systematically and attain the goals successfully. He summarised the necessity of classroom organisation and management as following:

- It helps to eliminate discipline problems.
- It gives meaning and purpose to instruction and to the activities.
- It results in efficiency, the right emphasis, and the best use of the time available.
- It more fully ensures that the needs and interests of the participants will be satisfied.
- It more fully ensures progression and continuity in the program.
- It provides for measurement and progress toward objectives.
- It ensures participants' health and safety.
- It encourages program adaptations to each individual's needs and interests.
- It reduces errors and omissions.

- It helps to conserve the instructor's time and strength and aids in giving the instructor a sense of accomplishment.

Although current status of the PE with crowded classes, more content, limited class time, minimal and restricted space and insufficient equipment, resources and facilities make it hard to provide effective teaching for students, it was reported that teachers could improve their effectiveness by acquiring and practicing classroom and time management strategies documented in literature, since increased student engagement with physical skills was provided by effective use of resource and class management (Ballinger, 1993; Metzler, 1990).

2.3. Time Management

Management of class time effectively is accepted as one of the most difficult tasks for teachers (Virgilio & Krebs, 1984). It was also stated that management of the time contributed to enhance organisational designs, which would provide more worthwhile teaching and learning experience for both teachers and students.

During 1980s effective teaching research focused on the teacher and student use of time and how effective the class time was spend for instruction. According to these researches, Metzler (1990) described the categories of time management:

- Functional curriculum time (time in which students are meaningfully engaged with the lesson content)
- Allocated time (class time apportioned for learning activities)
- Management time (time taken up with clerical and preparatory tasks like calling roll and setting up equipment)
- Waiting time (time between opportunities to participate)

- Transition time (time spent moving to and between class activities)
- Demonstration time (time spent showing students how to perform skills)
- Instructional time (time spent providing students with cues and feedback)
- Engaged time (actual time for participation)
- Academic learning time (time spent in relevant participation with regular student success) (p. 62)

Silvestri (2001) reported that due to limited class time, the physical education program should be well organised and efficient to control, organise, and use the limited time effectively in physical education classes. She described the class time as spent in management or organisational activities, listening to directions, waiting between activities, and engaged or active learning time. According to her study which was carried out to evaluate the self-reported classroom management and time-on-task knowledge of prospective teachers, in order to enhance, and increase the time-on-task behaviour in classroom settings, pre-service teachers should be taught stressing the classroom management techniques in each teaching methods course having more opportunity to practice and develop the classroom management skills. Additionally, Siedentop (1990) remarked the time as the most crucial problem in physical education, since high quality instruction to accomplish maximum student learning requires time.

Ballinger (1993) stated that although, physical education pre-service teachers are taught a wide variety of teaching, time management and classroom management techniques, they exhausted because of the difficulties in organising the classroom setting, effective usage of the class time, and managing the students'

disruptive behaviour. Gilberts and Lignuaris-Kraft (1997) presented teacher effectiveness in time management as the availability of the equipment and resources for use, beginning the class on time, moving students quickly and in an orderly manner from one station to another, etc.

According to the studies on classroom and time management, Luke (1989) (as cited in Harrison & Blakemore, 1992) mentioned that in physical education classes students engaged 15 to 22 percent of class time in management activities including off-task behaviours and inappropriate dressing of students, and teacher's attempted to prevent inappropriate behaviour of students continuously.

Although, it has been generally accepted as the content of the physical education lessons composed of exercises, skill, and movement activities, cognitive aspects of the physical education was reported as critical for the synthesis of the psychomotor activity for students. Also, it has been expressed that, knowledge acquired through practice stay longer than acquired through reading or listening (Harrison & Blakemore, 1992). Similarly, Silverman (1991) declared that explanation and demonstration, as well as previewing and reviewing of the subject at the beginning and end of the lesson was contributed to student learning.

Siedentop et al. (1986) suggested to spend most of the class time for content and exercise by presenting the subject matter and demonstration quickly and efficiently, allowing students progress and enjoy the physical education activities, and provide more opportunity to practice. They gathered some research findings on student's use of class time in different places shown in the Table 2.3.1. According to the findings, they stated that the results appeared as consistent from one place to

another, and students spent much time on waiting than engaging in subject matter. Additionally, they mentioned that the classroom management as a serious problem.

Table 2.3.1. The Amount of Time Students Spent in Different Lesson Context Categories

Where research was carried out	Management (including transitions)	Waiting	Receiving information	Engaged in motor activity
Victoria, Canada	20%	22%	22%	26%
Belgium	6%	32%	23%	30%
New York	13%	25%	25%	27%
Ohio	22%	24%	15%	21%
Quebec, Canada	18%	29%	17%	22%

Note. From "Physical education: Teaching & Curriculum Strategies for Grades 5-12," by D. Siedentop, C. Mand, & A. Taggart, 1986. Copyright 1986 by Mayfield Publishing Company.

Similarly, Woods and Earls (1995) carried out a study on six subjects to examine physical education teachers' effectiveness during instruction as well as to find out current teaching practices of the physical education teachers. According to the results they stated that all teachers in the study were believed that the main purpose of the physical education was to help students learn motor skills. Table 2.3.2. summarised the findings related to time analysis.

Table 2.3.2. Analysis of the Teachers' Use of Time

%	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6
Activity	61	20	22	46	37	59
Instruction	30	63	59	43	41	27
Management	9	17	19	11	22	14
Total	100	100	100	100	100	100

Note. From "An Examination of PE Teachers From a Research-Based Preparation Program," by A. M. Woods & N. F. Earls, 1995, *Physical Educator, 52(2),* 78-92.

Different from the in-service researches, Boyce and Kelly (1992) gleaned study results comparing pre-service and in-service teachers' time management strategies. Summaries of the results are given in Table 2.3.3.

Table 2.3.3. Student and Teacher Activities with Pre-service Teacher Goals

Activities	% Time Gleaned from the Research	% Time Goals Set by Pre-service Teachers*
Teacher		
Instruction	10-50	20
Management	15-35	< 20
Monitor	20-45	> 40
Feedback	3-16	10
Student		
Receive information	20	20
Manage	15-20	< 15
Practice	25	> 40
Waiting	27	< 20
Student Success	80	70

*These goals were examples of those generated by pre-service teachers.
Note. From "Developing Pedagogical Skills of Preservice Teachers through Goal Setting and Computer Generated Feedback" by B. A. Boyce and L. Kelly, 1992, *Physical Educator*, 49(4), 213-218.

Further, Ballinger (1993) summarised some research findings on effective use of class time. According to the results, about one third of the class time was spent on management and transition, one third was spent for theoretical explanations, and the one third was watching, observing, and controlling the students. Similarly, it was stated that, students waited for the transitions, management activities (equipment preparation, distribution, and collection), and instructional activities in most of the class time. Additionally, it was stated that students generally engaged in functional activity no more than 10-20% of the class time. She concluded that the teachers were found ineffective at the management competencies to provide the maximum teaching and learning environment.

Rink (1996) indicated that although to provide student learning especially in physical education classes was very crucial to acquire motor skills, according to the research findings in literature, it was indicated that students were not spend sufficient amount of time on the practice of physical skills. Moreover, he suggested physical educators increase the students' engagement time with exercises during class time. Metzler (1989) summarised findings of the studies on time in physical education (as cited in Harrison & Blakemore, 1992, p. 188). He mentioned that teachers spent 25 to 50 percent of class time for non-instructional activities, conceptualise time for whole class rather than individual students, do not consider the maximum participation of students, use of class time unsteadily providing ineffective learning environment for optimum student learning. Similarly, it was mentioned according to the literature by Siedentop, Doutis, Tsangaridou, Ward and Rauschenbach (1994) that in high school physical education classes teachers spent

20-22 % of the class time in management activities, 30 % in talking, 20-40 % in monitoring student activity.

According to the research results presented in the literature, Harrison (1987) reported that 6-22 % of class time was spent on management and transition activities, 15-25 % in receiving information, 22-32 % waiting to participate or take a turn, and 21-30 % to motor activity. Shute, Dodds, Placek, Rife, and Silverman (1982) (as cited in Harrison 1987) stated that in movement education classes elementary school children spent 21 % of the class time in management and transition activities, 30 % in skill practice, 23 % in knowledge instruction and 25 % in partial or total game-play. Silvestri (2001) stated that although time was strongly related to achievement, according to the research findings from the literature student engagement time was founded only 25-30 % of the total PE education class time. Similarly, Harrison and Blakemore (1992) mentioned that students spent 15 to 22 % of class time in management activities, managerial and organisational skills, and very small amounts of time in learning activities.

To promote student learning, teachers should present clear explanations and demonstration, allocate time for motor skill practice for appropriate and successful learner engagement (Silverman, 1991). Cooledge and Arbogast (1995) suggested that the time spent in management episodes should be under 15 %, time in instruction episodes should be between 25 % and 35 %, and time in activity should be at least 50 %. Since, effective teachers provided more learning time, and increased allocated time increased the student's achievement level (Philips & Charlisle, 1983; Metzler, 1990).

2.4. Teaching Styles

The Mosston's spectrum of teaching styles (Mosston & Ashworth, 1994) offers a variety of teaching styles for physical education teachers to realise student learning in a most effective way, and are accepted as a framework for the teaching-learning process by enhancing the students' cognitive, affective and, psychomotor development (Donnely, 2002). Additionally, Nixon and Locke (1973) (as cited in Byra, 2000) stated the Spectrum of Teaching Styles as the most significant advance in the theory of physical education pedagogy in recent history.

This spectrum described variety of styles from teacher-centred to student-centred (Hellison & Templin, 1991). The spectrum was divided into two clusters, reproductive including the Command (A), Practice (B), Reciprocal (C), Self-check (D), and Inclusion (E), and Productive including Guided Discovery (F), Convergent Discovery (G), Divergent Production (H), Individual Program-Learner's Design (I), Learner-initiated (J), and Self-teaching (K) styles of teaching. Productive cluster focused on the production of original knowledge or skills to self or teacher, and the teacher encouraged the learner for the problem solving, creating, inventing, and critically thinking to realise new movements. However reproductive cluster encourages learners to reproduce already known knowledge, material and skills.

Spectrum also described the decision making process between the teacher and the learner before, during, and after the lesson (Mosston & Ashworth, 1994). Detailed information on the lesson decisions in Spectrum of Teaching Styles was given in Appendix C.

Donnely (2002) stated four main reasons affecting the selection of the teaching styles including teachers' personal choice, diversity of students with different cultural backgrounds, learning styles, abilities, and multiple learning outcomes. Similarly, Harrison an Blakemore (1992) reported that, in order to realise the student learning, it was crucial to consider individual differences, since no single teaching style or strategy sufficient to enhance learning for all students. In addition, they suggested to consider some factors that affect the selection of teaching styles such as students (differences in physical, intellectual, emotional, and social needs, differences in personality, aptitude, experience, and interests), subject matter content (differences in activities, and domains to be attained), teacher (differences in personality characteristics and talents, experience level), learning environment (different settings, and environment such as school garden, sports hall, swimming pool), and time (lesson duration) (p. 263).

Figure 2.4.1. describes some characteristics of the productive and reproductive styles of teaching (Mosston & Ashworth, 1994).

Common characteristics (objectives) of reproductive styles (A-E)	Common characteristics (objectives) of productive styles (F-J)
1. Re-production of knowledge and skills (known to the teacher and/or the learner). 2. The subject matter is concrete, mainly containing facts, rules, and specific skills (Basic knowledge and Fixed knowledge). 3. There is one correct way to perform the task-by emulation of the present model. 4. Time is needed for practicing and learning to adhere to the model. 5. The cognitive operations mainly engaged are memory and recall. 6. Feedback is specific and refers to the performance of the task and its approximation to the model. 7. Individual differences are accepted only within the learner's physical and emotional boundaries. 8. The class climate (the spirit of the learning environment) is one of performing the model, repetition, and reduction of errors.	1. Production of knowledge and skills new to the learner and/or the teacher. 2. Subject matter is variable, mainly containing concepts, strategies, and principles. 3. Alternatives in design and performance are called for. There is no single model to emulate. 4. Time is needed for the cognitive processes involved. 5. Time is needed to evolve an affective climate conductive to producing and accepting alternatives and options. 6. Cognitive operations engaged are comparing, contrasting, categorising, problem solving, inventing, & others. 7. Discovery & creativity are manifested through these cognitive operations. 8. Discovery by the learner is developed through convergent and divergent processes or a combination of both. 9. Feedback refers to producing alternatives and not a single solution. 10. Individual differences in the quantity, rate, and kind of production are essential to maintaining and continuing these styles. 11. Class climate (spirit of the learning environment) is one of searching, examining the validity of alternatives, and going beyond the known.

Figure 2.4.1. Characteristics of the Clusters of Teaching Styles
Note. From "Teaching Physical Education, " by M. Mosston and S. Ashworth, 1994. Copyright 1994 by Macmillan College Publishing Company.

Although the purpose of the Command style was to student learning of the performing the task accurately and within a short period of time, Practice style provides learners an opportunity to do the task independently and individually.

Learners do the task with a partner in the reciprocal style of teaching, however, self-check style offers learners to do the task and check one's owns work. Similarly, in the Inclusion style of teaching, students have opportunity to learn the select the proper level of task for themselves. The purpose of the Guided Discovery teaching style is to encourage learners to discover a concept by answering a series of questions provided by teacher. Students discover a solution to a problem and learn to explain an issue and conclude the event by rational processes, interpretation, and critical thinking in the convergent discovery style of teaching. Learners are encouraged to engage in inventing a variety of answers to a single question in the divergent production style of teaching. The purpose of the learner's individual designed program is to encourage learners to design, develop, and perform a series of tasks organised into a personal program with consultation with the teacher. Learner-initiated style of teaching is for the learner to initiating, designing, performing, and evaluating a learning experience together with the teacher based on agreed-upon criteria. And lastly, self-teaching style provides the learner the opportunity to make maximum decisions about his/her learning experience without any direct involvement by the teacher. This style is suggested to be used in leisure time activities rather than school physical education courses (Mosston & Ashworth, 1994). Detailed information on teaching styles is given in Appendix C.

Although command style of teaching was accepted as the most simple and valueless, and the problem solving and creativity is invaluable teaching styles at the initial progression of the spectrum; in the following years it is revealed that all teaching styles have equal value, and no one is better than another, rather each

teaching styles in the spectrum is met a different objectives or goals (Byra, 2000). Supporting the similar idea, Byra (2000) collected the reviewed research results answering the question of "which style(s) produces the best results?" It was reported that, these studies resulted with no significant differences between teaching styles on the amount of student learning. As an example, Doughtery (1970; as cited in Byra, 2000) founded no significant differences between the command, task, and individual program styles of teaching on students' fitness and motor skill performance. Similarly, Boschee (1972) founded no significant differences between the teaching styles on physical, social, emotional, and intellectual development of the learners. Additionally, Harrison and Blakemore (1992) also supported the idea of developing and using a variety of teaching styles and strategies for the effective teaching learning process.

Luke (1989) (as cited in Siedentopet al., 1994) declared that teaching in physical education being mostly teacher centred without questioning students, and not considering students' emotions and ideas. Additionally, teaching programs founded as monotonous, typical, unexciting, and teachers present theoretical explanations, illustrations, orders, and then students follow orders (Livingston, 1996; Silverman, 1991).

Ballinger (1993) stated that although, pre-service physical education teachers were given information about these different teaching styles to make them effective physical education teachers in the future, they became stale because of the limited class time, difficulty in managing the class. Also most of the new and inexperienced physical educators were founded as incompetent in managing the

student and classroom effectively in order to provide a maximum learning. Stevens & Bowling (2002) suggested that considering the factors (teacher personality differences, student differences, and learning environment) affecting teaching styles, teachers should take an advantage of each teaching style for the maximum student learning.

2.5. Practice Teaching of Physical Education Teachers

Student teaching experience is an essential and the most important component of learning to teach and teacher education program (Askins & Imwold, 1994; Darden, Darden, Scott & Westfall, 2001). Pre-service teachers had opportunities to observe practicing teachers and pupils in their practice teaching courses (Curtner-Smith, 1997; Strand & Johnson, 1990). They take these courses prior to student teaching (Allison, 1988). These courses are planned to give pre-service teachers chance to practice pedagogical skills, teaching strategies, and facilitate an easy transition into student teaching (Curtner-Smith, 1996). Moreover, the student teaching internship is accepted as the most influential phase of the professional preparation program (Askins & Imwold, 1994). Because pre-service teachers should develop effective teaching behaviours and effective decision making tendencies with the combination practical teaching experience and undergraduate course work early in the sequence of teacher preparation program in the actual teaching environment (Brawdy & Byra, 1995).

There are few studies that focus on observing as a teaching behaviour as it is performed in the teaching-learning environment (Allison, 1987). Curtner-Smith (1996) carried out a study to examine conceptions of pre-service teachers on

teaching learning process during practice teachings. They founded that, 40.73% of the pre-service teachers' thoughts and perceptions were concerned with management with one of the most frequently mentioned topics of organisation. Additionally, 21.47% of the pre-service teachers thoughts and perceptions were related to instructional skills and practices with one of the topic of the amount of engaged skill learning time provided for pupils. Some pre-service teachers were concerned that they were not providing pupils with enough engaged skill learning time. Moreover, they also found that pre-service teachers perceived their managerial strategies to have been effective when they had no behaviour management time. Also, pre-service teachers defined the instructional effectiveness as providing quick demonstrations or having very little planned presentation time, providing a lot of engaged skill learning time, and having the students practicing as much as possible.

Paese (1987) investigated the perceptions and teaching effectiveness of pre-service teachers. He summarised the findings that pre-service teachers spent 28% of the class time on management, 20% on instruction, and 52% in activity time.

Similarly, O'Sullivan and Tsangaridou (1992) carried out a study on 38 pre-service teachers to describe physical education majors' conceptions of the teaching learning process and their role as a teacher in that process. Student teachers were asked to describe successful incidents from their teaching. Quality of the instruction was the most frequent indicator of successful lessons. Additionally, student teachers' management and organisational skills was the second highest indicator of successful lessons. Moreover, these pre-service teachers showed great concern for students' involvement in activity.

Brown, Stephen, and Cope (1999) administered a study on 38 student teachers in order to explore how student teachers think about their classroom teaching. They suggested that student teachers were conscious of the impact of time and their timing of classroom work. In their study, student teachers founded the class time were being too short. Also, student teachers were pushed to get through the main parts of the work and so routine or substantive matters could not be accomplished. Additionally, aspects of teaching like getting pupils settled or introducing a topic took more time than were expected.

2.6. Review of Teaching Effectiveness Research Literature in Turkey

In Turkey, although, there are several studies carried out to evaluate qualities of effective teacher, effectiveness of teaching teacher education programs, and effectiveness of physical education classes, there are few studies that focus on observing teaching behaviour as it is performed in the actual teaching-learning environment.

Boztepe (1993) carried out a study to investigate the effectiveness of the physical education classes at primary grade students. He collected data trough questionnaire from 522 students and their parents. Findings of the study indicated that, 65% of the parents perceived physical education classes as ineffective for the physical development of their children. Similarly, Sönmez and Sunay (2001) administered a study on 116 physical education teachers that taught in 10 private and 10 public schools to find out effectiveness of the physical education classes at elementary grade. In their research, data were collected with Likert-type questionnaire. According to results of the study, duration of the physical education

lessons were found sufficient for the effective instruction, but crowded classes found to be affecting effectiveness of the physical education lessons negatively. Moreover, they suggested that the lesser the class size, the more active the students. Also, they stated that the teachers' ability to give instruction was one of the factors that effect effectiveness of instruction. They concluded that, instead of the some limitations (crowded classes, insufficient equipment, limited suitable physical education area, etc.) physical education teachers thought that, they were able to attain cognitive, affective, and psychomotor domains of physical education, as well as effective instruction.

Arslan and Pehlivan (1996) asked 100 primary school students for the effective teacher characteristics. Forty-five percent of the students stated that the effective teacher should have classroom organisation skill.

2.7. Systematic Observation Techniques in Physical Education

Systematic observation of teaching stated as the observation of the teacher or student behaviour by direct observation or videotaping the classes to classify teacher or student behaviour as well as to collect data about the classroom conditions (Silverman, 1991). Although there are variety of observation techniques, Metzler (1990) described the four main traditional observation techniques to collect the data; intuitive judgment (having a feel for how the teacher is doing, often based on indirect evidence), eyeballing (making on-site observations with no permanent recordings of any kind), anecdotal recording, (making notes on important events that occur in the class, based on the supervisor's designation of critical incidents during teaching), and behaviour checklists and rating scales (subjective evaluations

on pre-determined behaviour categories, recorded on a numeric or descriptive continuum reflecting the quality of performance). Also he stated that although the checklists and rating scales were accepted as valid instruments and known by teachers and supervisors, they did not provide valid evidence of effective teaching and learning processes. Moreover, he described some limitations that traditional observation techniques have such as requiring little or no treatment for the usage, and demanding no skilled observer or subject matter expert, as well as making the supervision as a passive process. Also, in spite of the popularity of traditional observation techniques, when measuring the teacher and student behaviours by these techniques, there was little or no correlation with effective teaching-learning processes. Besides, these techniques measure the supervisor's perceptions or impressions of teaching rather than actual teaching/learning processes and they are common and not sensitive to the observed teaching context. In addition, traditional systems are based on impressions and it is impossible to know whether differences over time reflect changes in the supervisor's or actual changes in teacher performance.

It was also stated, as the traditional observation techniques were insufficient for the practical attempts to improve teaching skills. Apart from the limited usefulness of the traditional observation techniques, systematic observation based on the information collection usually by live observer or by using audiotapes or videotapes. It demands sufficiently trained observers to comprehend and record the events that occurred during teaching-learning process (p. 69-70). Metzler (1990) described the advantages of the systematic observation techniques:

- They are based upon low inference data recording, rather than high inference ratings and critical incidences. Teachers can be confident that results (i.e., data) are more representative of actual performance than rating scales and other traditional techniques.

- Systematic techniques are based on predefined categories of teaching and learning processes, allowing supervisors to communicate priorities for instruction through the selection of certain categories for observation. It's a way of saying, "These processes are important to demonstrate in this lesson".

- Effective teaching/learning practices are based on observable behaviours; therefore, the most valid way to measure these practices is through direct monitoring, not impressions or opinions. Effective teaching practices are what teachers and students say and do in class, not what supervisors perceive them as doing.

- Databased observations can be used to establish baseline teaching/learning patterns; enabling supervisors to more accurately describe teaching skills before attempting to improve them.

- Such obtained baseline measures can be used to set and monitor goals for instructional skill improvement. Comparisons over time become tangible evidence of improvement and the amount of improvement.

- Systematic data can be used to verify the outcomes of supervision itself. Once a supervisor has diagnosed a problematic area and made suggestions for improvement, databased comparisons can be taken to note the direction and

strength of intended changes, verifying their impact. When used in this way, systematic observation can help supervisors be more effective, too (p. 71).

As well as its usefulness, and advantages, systematic observation technique have some limitations as indicated by Metzler (1990):

- Some systems take time and expertise to learn. Learning several systems may be prohibitive to some supervisors who cannot devote the necessary time or who lack access to assistance.

- By intentional design, many supervisory systems have tunnel vision. They provide a good picture of only one aspect of observed lesson, leaving many important teaching/learning processes unnoticed.

Nearly alike the Metzler's descriptions, McKenzie (1991) described the direct observation technique as a highly effective technique for the assessment of physical activity. Furthermore, direct observation technique mentioned as advantageous in the collection of the quantitative and qualitative data on physical activity, but stated as disadvantageous because of the requirement of the trained observers, and availability of the small number of students' observation at each attempt (Welk & Wood, 2000).

CHAPTER III

METHOD

This study was designed to analyse the classroom management behaviours, time management strategies, and teaching style preferences of in-service and prospective physical education teachers. Information was collected by using three different data collection instruments; classroom management analysis instrument, time management analysis instrument, and teaching style preferences analysis instrument.

The chapter begins with the overall design of the study, and continues with the information about participants, data collection instruments, data collection procedure, and data analysis procedure.

3.1. Overall Design

In the study, in-service and prospective physical education teachers were participated. One lesson of each in-service and prospective teachers was recorded by using both videotape and audiotape. Because three observation instruments were used in order to collect data and, it would be very hard to observe and rate all three forms in one attempt. In other words, there were need to replay the tape and observe different behaviours of teachers in several times. Additionally, videotaping of the lessons was necessary for the intra-observer agreement analysis.

Three types of forms were developed by researchers and used to collect data, (a) classroom management analysis form, (b) time management analysis form, and (c) teaching style preference analysis form.

The pilot study was carried out by researchers as a preparation to the inter-observer and intra-observer agreement analysis and to see difficulties of data collection. Following the pilot study, 15% of the observed lesson were analysed from video records by researchers. Inter and Intra observer agreement analysis was conducted during this analysis.

After gaining acceptable agreement scores from the reliability analysis, main study was carried out in order to collect data on the classroom management behaviours, time management strategies, and teaching style preferences of the in-service and prospective physical education teachers. Summary of overall design of the study is presented in Figure 3.1.

3.2. Participants

Participants of the study were 30 in-service physical education teachers (19 elementary grade and 11 secondary grade) that were selected from 14 public and 5 private schools, and 24 prospective physical education teachers who were completed their "Practice Teaching" course in four private schools in Ankara. In terms of gender of participant, seventeen females, and thirteen male in-service physical education teachers and one female and twenty-three male prospective teachers participated in the study.

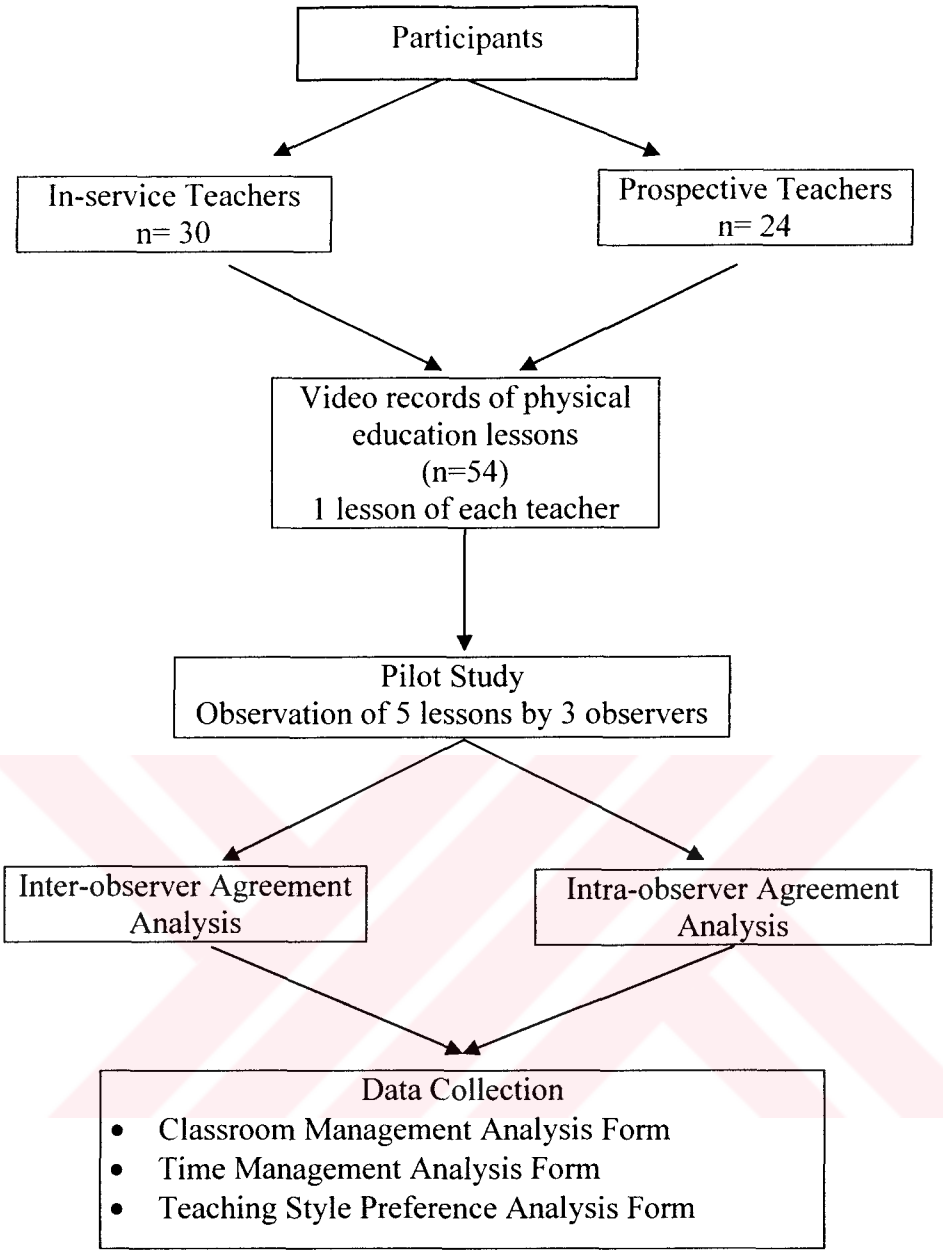


Figure 3.1. Overall design of the study

In-service physical educators were selected according to the Convenience Sampling Method (Fraenkel & Wallen, 2000). Both public and private schools that were known by the researcher were selected to find 30 in-service teachers as participant. In-service PE teachers were selected on the basis of being a volunteer for the study. At the beginning of the study, in-service physical education teachers

were given a detailed information about the purpose of the study and asked to be a volunteer to participate. Following the approval of the teachers and school principal, official permission were taken from Ministry of Education for the volunteered teachers for conducting the study in their schools. Prospective physical education teachers were senior 4th year students of Physical Education and Sports Department at METU in 2000-2001 academic year. Demographic information of the participants was given in Table 3.2.1. and the list and frequency of the courses conducted by in-service and prospective teachers were summarised in Table 3.2.2.

Table 3.2.1. Demographic Information of Participants

	In-service Teachers		Prospective Teachers	
Participants	n	(%)	n	(%)
Gender				
Female	17	56.7	1	4.2
Male	13	43.3	23	95.8
Age (year)				
24<			24	100
25-35	12	40		
36-45	14	46.7		
46≥	4	13.3		
Teaching experience (year)				
1-10	14	50	student teaching experience	
11-20	9	20		
21-30	7	30		
Teaching level				
Elementary	19	63.3	19	79
Secondary	11	36.7	5	21
School				
Public	14	73.7		
Private	5	26.3	4	100

Table 3.2.2. List and Frequency of Courses Conducted by In-service and Prospective Teachers

	In-service	Prospective
Courses	f	F
Handball	4	2
Gymnastics	5	4
Basketball	8	1
Volleyball	7	3
Track and Field	2	10
Football	1	1
Badminton	1	2
Rope	2	0
Tennis	0	1

3.3. Data Collection Procedures

Each in-service and prospective physical education teacher was desired to teach 40-minute classes. Participants were required to teach subjects in the school program at the time of the study. Duration of the lesson varied between thirty and forty minute and each lesson was totally recorded. No restrictions were placed on content, methodology, or equipment. The camera was located at an appropriate place to ensure that whole class could be recorded with a minimum discomfort to the teacher and students, and lessons were recorded to enable accurate observation for analysis. Before the study each teacher was asked to wear microphone and teachers' voice was clearly recorded by using cordless microphone.

3.4. Instruments for Data Analysis

According to the teaching effectiveness research findings derived from the studies, effective teachers' characteristics were summarised as allocating as much time as possible to learn, providing students with sufficient opportunities to learn, setting high realistic expectations for students, managing classroom and students

skilfully, organising meaningful activities for students, using different teaching methods to keep students active, communicating effectively with students, holding students accountable, presenting the material clearly, teaching enthusiastically, and providing warm classroom climate, etc. (Silverman, 1991). In this study, three characteristics of the effective teaching were selected and measured; classroom management behaviours, time management strategies, and teaching style preferences. Three different observation forms were prepared according to the literature and objectives of the study. The following three forms were used for the analysis of classroom management behaviours, time management strategies and teaching style preferences of in-service and prospective teachers.

3.4.1. Classroom Management Analysis Form

The Physical Education Classroom Management Analysis Form (PECMAF) was developed by researchers by using related the literature (Smith & Steffen, 1994; Harrison & Blakemore, 1992). The purpose of the instrument was to collect data on the classroom management behaviours of both in-service and prospective physical education teachers. PECMAF include information on the classroom formation patterns that are used by in-service and prospective physical education teachers during different contexts of the lesson, group size and active students in each group, criteria for grouping students, arrangement and picking up equipment, closure part of the lesson. Each occurred behaviour was checked and recorded on the instrument during observation. Definitions of the classroom management behaviours of the PECMAF were presented in Appendix A.

3.4.2. Time Management Analysis Form

Following the analysis of teaching effectiveness literature (Cooledge & Arbogast, 1995; Metzler, 1990; Petray-Rowcliffe, Williams, Lavay, & Hakim-Butt, 2002; Philips & Charlisle, 1983; Randall, 1992; Siedentopet al., 1986; Silverman, 1985; Silverman et al., 1988; Smith & Steffen, 1994), time management analysis forms were reviewed by the researcher. Then, a simple time management analysis form was developed. In this form, total lesson duration is mainly divided into three parts; instructional time, management time, and motor skill practice time (see Appendix B). Unit of measurement for time management analysis determined as "second".

Instructional time was the total amount of time that the teacher utilises in theoretical explanations on subject matter, demonstrations, providing cues and feedback. Management time was the total amount of time that the teacher involved in class organisation, beginning and ending class, equipment management, transitions from one drill to another, waiting without providing students with instructional or motor activity. Activity time was the total amount of time the teacher involved in warm-up running, warm-up stretching, game, and motor skill activities to provide students learn and practice motor skill.

Time management behaviours of participants were assessed by observation related behaviour from the video records. Starting and stoping time was recorded for each lesson context categories (instruction, management, beginning class, ending class, warm-up, activity, and game), and total time (in second) devoted to each lesson context categories was counted.

3.4.3. Teaching Style Preferences Analysis Form

Teaching style preferences of in-service and prospective physical education teachers were analysed according to the Mosston Spectrum of Teaching Style checklist developed by İnce (2002). Eleven types of teaching styles were listed in the form including; Command, Practice, Reciprocal, Self-check, Inclusion, Guided Discovery, Convergent Discovery, Divergent Discovery, Individual Program-learner's Design, Learner Initiated, and Self Teaching Style (see Appendix C). Each preferred teaching style was recorded on the form.

3.5. Inter-observer and Intra-observer Agreement of Data Analysis Forms

Following the recording of the lessons, two judges were asked to view 8 videotaped lessons as a group to evaluate inter-observer agreement of classroom management analysis form, time management analysis form, and teaching style preferences analysis form. Before the inter-observer agreement analysis, a pilot study was carried out that consists of observation of 5 samples of video records and ranking of the forms. After the pilot study, 15% of the videotaped lessons (n=8) were observed and two judges rated lessons in order to evaluate intra-observer agreement (the extent to which two observers simultaneously coding the same events with a given instrument). Also in order to evaluate inter-observer agreement (the extent to which one observer consistently uses a given instrument), same judge observed the 15% of the video recordings twice at two different times. Judges were observed lessons once to rank all three forms.

Inter-observer and intra-observer agreement for time management was calculated by converting the total time into seconds and dividing the shortest duration by the longest duration and multiplying it by 100 as seen in the following formula (Van der Mars, 1989; Randall, 1992).

$$\text{Percentage of agreement} = \frac{\text{Shortest duration (seconds)}}{\text{Longest duration (seconds)}} \times 100$$

Inter-observer and intra-observer agreement scores of time management were calculated for different lesson context categories (see Table 3.5.1.)

Table 3.5.1. Inter-observer and Intra-observer Agreement Scores in Different Segments of the Lesson for "Time Management"

	Beginning class	Instruction	Management	Warm-up	Activity	Game	Ending class
Inter-observer agreement	90 %	92 %	97 %	98 %	96 %	95 %	92 %
Intra-observer agreement	91 %	90 %	99 %	98 %	96 %	95 %	93 %

Note: Eight lessons were observed.

Observer agreement analysis for classroom management and teaching style preferences instrument was calculated according to the following formula:

$$\text{Percentage of agreements} = \frac{\text{Number of agreements}}{\text{Number of agreements + Disagreements}} \times 100$$

Agreements on the formula refer the number of agreements of observer on the same lesson or the number of agreements of the same observer on his/her

observations at two different times. Disagreements refer to the number of disagreements of observers on the same lesson or the number of disagreements of the same observer on his/her observations at two different times (İnce, 2002; Van der Mars, 1989). Fifteen percent of the video records (n=8) were observed to measure agreement scores. For classroom management form, inter-observer agreement was found as 88%, and intra-observer agreement founded as 98%, and for the teaching style preferences form, inter-observer agreement was found 99 %, and intra-observer agreement was found 100%.

3.6. Data Analysis

For the data analyses a) descriptive statistics (mean, percentage) was used to describe classroom management behaviours, time management strategies and teaching style preferences of in-service and prospective teachers. b) Chi-square analysis was used to analyse whether there were significant differences between in-service and prospective teachers' classroom management behaviours and teaching style preferences and c) Independent t-test was carried out to evaluate whether statistically significant differences existed between in-service and prospective teachers' time management strategies.

The Statistical Package for the Social Sciences (SPSS) version 10.0 was used for the analysis of the collected data. Alpha .05 level was accepted as a significance level.

CHAPTER IV

RESULTS

This chapter presents the findings on description and comparison of in-service and prospective physical education teachers in three areas: (1) classroom management behaviours, (2) time management strategies and (3), teaching style preferences. Results were presented as answers to the problems and sub problems presented at the beginning of this study.

First chapter begins with the results of descriptive analysis on classroom management behaviours, time management strategies, and teaching style preferences of both in-service and prospective teachers. Second, comparison of classroom management behaviours, time management strategies, and teaching style preferences of in-service and prospective teachers were given in the following sections.

4.1. Description of Classroom Management Behaviours of In-service and Prospective Teachers

Classroom management behaviours of in-service and prospective teachers were presented descriptively including information on; criteria for grouping students, arranging equipment, picking up equipment, group size preferences and

active students in each group, closure part, usage of the area, and classroom formation patterns.

According to the results derived from the descriptive data (see Table 4.4.1.), most of the in-service and prospective physical education teachers did not consider the physical characteristics and gender of the students, instead, they preferred to use other criteria for the grouping students like grouping randomly from the line. As it can be seen in Table 4.4.2. and Table 4.4.3. both in-service and prospective teachers mostly preferred to arrange the equipment and to pick the equipment up themselves.

In order to make group for activities, in-service teachers mostly used small group size where number of students in group between 1 to 5 (37%) and 6 to 10 (33%), but prospective teachers mostly preferred larger group size categories like 11-15 students (29%) in a group or more than 26 students (38%) (see Table 4.4.4.).

The overall results on frequencies and percentages of different group size, mean percentages of active students in each group size, number of groups for each group size, and number of equipment used by in-service and prospective teachers were given in Table 4.1.1. Table has shown that the mean percentage score of active students in each group size increased when group size decreases. In-service teachers mostly used 1-5 group size and mean percentage of active students were founded as 47%, but prospective teachers mostly preferred 26 and over group size, and mean percentage of active students in group was only 3.1%. Decreased group size caused an increase in the number of groups and usage of number of equipment as well.

Table 4.1.1. Frequency and Percentage Scores of Group Size, Active Students in each Group, Number of Groups and Number of Equipment

In-service				
Group size	F	Mean % of active Students	# of groups	# of equipment
1-5	11	46.81	6	6
6-10	10	19.58	4	4
11-15	3	8.18	2	2
16-20	4	6.7	2	2
21-25	1	4.34	2	2
26->	1	3.03	1	1

Prospective				
Group size	F	Mean % of active Students	# of groups	# of equipment
1-5	5	85	12	12
6-10	3	16.6	5	4
11-15	7	7.24	1	1
16-20				
21-25				
26->	9	3.11	1	1

According to the descriptive results derived from the study, it was shown that most of the in-service (80%) and prospective (83%) physical education teachers did not summarised their lessons at the end of the class (see Table 4.4.5.).

Most of the in-service physical education teachers preferred to use whole instructional area (80%) in physical education lesson, but only half of the prospective teachers preferred to use whole area (50%). They also preferred to use the half of the instructional area (38%) (see Table 4.4.6.).

Frequency and percentage scores of classroom formation patterns used in different lesson categories were given in Table 4.1.2. Single line formation was the most preferred pattern (79%) for beginning the class. During theoretical explanations, teachers mainly used single line (36%), side-by-side triple line (21%),

and fan (13%) classroom formation patterns. During running part of the warm up session, teachers generally used single line (38%), double column (36%), and side-by-side triple line (19%) formations. For the stretching part of the warm-up activities, teachers mostly preferred side-by-side triple line (45%), circle (30%), and side-by-side double line (13%) formations. Teachers principally used single line (29%), shuttle (28%), face-to-face double line (14%), and side-by-side triple line (13%) classroom formation patterns during.

Table 4.1.2. Frequency and Percentage Scores of Total Classroom Arrangement Patterns in Different Lesson Context Categories

Forms	Lesson Context Categories									
	Beginning Class		Explanation		Warm-up Running		Warm-up Stretching		Motor Exercise	
	F	%	f	%	F	%	f	%	f	%
1	43	79	19	36	22	38	2	4	48	29
2					21	36			4	2
3	3	6	3	6	2	3	2	4	23	14
4	6	11	3	6	2	3	6	13	6	3
5			11	21	11	19	21	45	21	13
6			7	13			1	2		
7									46	28
8			1	2					8	5
9			2	4	1	1	14	30	11	6
10	2	4	2	4			1	2		
11			4	8						
Total	54	100	52	100	57	100	47	100	163	100

Note: 1: Single line
2: Side by side double line
3: Side by side triple line
4: Face to face triple line
5: Face to face double line
6: Double column
7: Fan
8: Shuttle
9: Scattered
10: Circle
11: L shape

4.2. Description of Time Management Strategies of In-service and Prospective Teachers

The mean and percentage scores of in-service and prospective teachers on the use of class time in different parts of the lesson were shown in Table 4.2.1.

Table 4.2.1. Mean and Percentage Scores of Total Class Time Spent in Different Lesson Context Categories by In-service and Prospective Teachers

	In-service		Prospective	
Lesson Context	Mean	%	Mean	%
Instructional Time	411.20	19.67	272.08	16.20
Management Time				
Management	344.73	16.49	195.25	11.63
Beginning Class	96.86	4.63	72.75	4.33
Ending Class	41.76	2.00	30.16	1.80
Motor Skill Practice				
Warm-up	422.93	20.23	247.79	14.76
Motor Activity	704.50	33.70	823.29	49.03
Game	68.66	3.28	37.79	2.25

Note: Mean time is expressed in second.

As it can be seen from the Table 4.2.1. in-service physical education teachers spent approximately 20% of the class time for cognitive activities such as theoretical explanation of the subject, giving verbal feedback etc., while pre-service teachers spent 16% of the total class time for instruction. In-service teachers spent approximately 23% of the class time for managerial activities, while prospective teachers spent 18% of the total class time. Additionally, in-service teachers spent approximately 57% of the total class time in motor skill practice including warm-up, skill practices, and game, but prospective teachers spent 66%. Total time spent for motor activity was approximately 34% in in-service teachers' classes, and 49% in prospective teachers' classes. They both spent small amount of their class time for game (in-service teachers= 3.28%, prospective teachers= 2.25%). The amount of time teachers spent for different lesson contexts were classes was demonstrated in Figure 4.2.1.

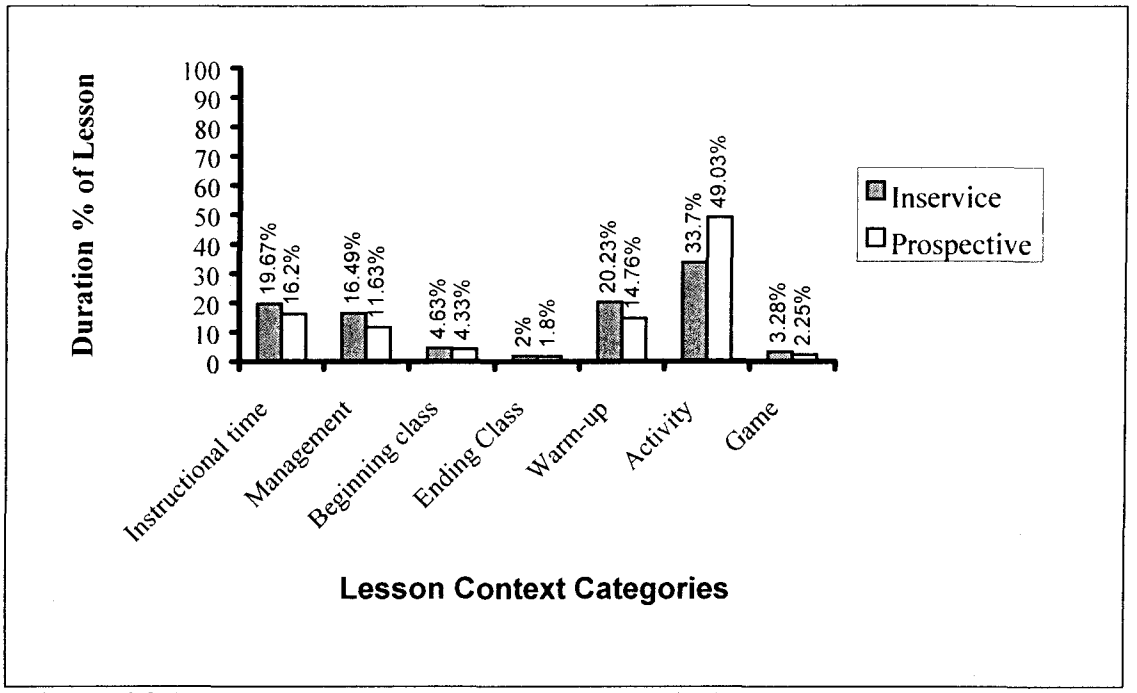


Figure 4.2.1. Time Management Strategies of In-service and Prospective Teachers

4.3. Description of Teaching Style Preferences of In-service and Prospective Teachers

The frequency and percentage scores of in-service and prospective teachers' teaching style preferences were shown in Table 4.3.1.

Table 4.3.1. Frequency and Percentage Scores of Preferred Teaching Styles by In-service and Prospective Teachers

	In-service		Prospective	
Teaching Styles*	f	%	F	%
Command	5	14.2	0	0
Practice Style	29	82.9	23	95.8
Guided discovery	1	2.9	1	4.2
Total	35	100	24	100

Note: The frequency (f) did not equal to sum of participants since some of the teachers used more than one teaching style in a lesson.
*Only the teaching styles, which were practiced, were listed.

An examination of Table 4.3.1 revealed that both in-service (82.9%) and prospective (95.8%) physical education teachers preferred mostly Practice Style of teaching style. Frequencies of teaching style preferences were presented in Figure 4.3.1.

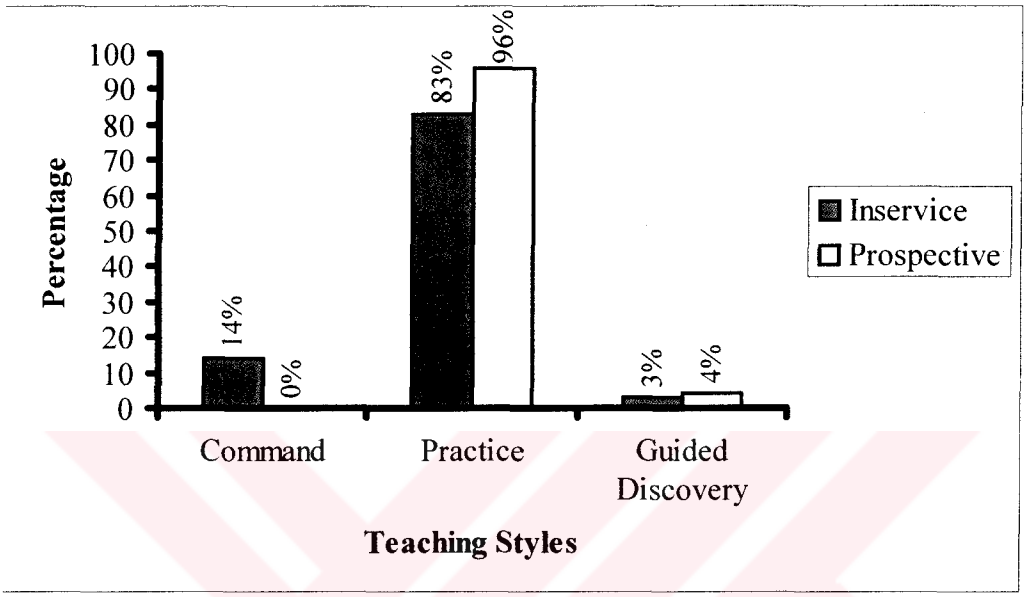


Figure 4.3.1. Teaching Style Preferences of In-service and Prospective Teachers

4.4. Comparison of Classroom Management Behaviours of In-service and Prospective Teachers

In order to find out some possible differences between in-service and prospective physical education teachers' classroom management strategies, Chi-Square analysis was performed. A two-way contingency table analysis was carried out to evaluate whether there was significant difference between in-service and prospective teachers' selected criteria for grouping students. The two variables were in-service and prospective teachers, and criteria that teachers used for grouping

students (gender, physical characteristics, and others). Significant differences were found between the in-service and prospective teachers' criteria for grouping students, Pearson χ^2 (1, n= 54)= 6.43, p= .011.

Frequency distributions of in-service and prospective teachers' preferences for grouping students were presented in Table 4.4.1. Findings indicated that none of the teachers considered physical characteristics of the students while grouping them for exercises. In contrast, 23.3% of in-service teachers and none of the prospective physical education teachers grouped students according to gender criteria as girls and boys. However, in-service (76.6%) and prospective (100%) teachers mostly preferred different criteria rather than physical characteristic and gender.

Table 4.4.1. Chi-Square Analysis Results on Criteria for Grouping Students

	Criteria for Grouping Students							
Teacher	Physical Characteristics		Gender		Others		Total	
	F	%	F	%	F	%	F	%
In-service	0	0	7	23.33	23	76.66	30	100
Prospective	0	0	0	0	24	100	24	100
Total	0	0	7	12.96	47	87.03	54	100

$\chi^2 = 6.434$; df: 1; $p<0.05$

A two-way contingency analysis was carried out to evaluate whether there was a significant difference between in-service and prospective teachers' behaviours in the arrangement of the equipment. The two variables were in-service and prospective teachers and arrangement of the equipment with student, teacher, and both. Significant differences were found between in-service and prospective

teachers' behaviours on arrangement of the equipment, Pearson χ^2 (1, N= 54)= 7.51, p= .006.

The frequency distributions of in-service and prospective teachers' preferences for the arrangement of the equipment were presented in Table 4.4.2. It seemed that in most of their lessons both in-service (75%) and prospective (95.8%) teachers preferred to prepare the equipment by themselves rather than assigning student(s) to prepare. In none of the classes both in-service and prospective teachers preferred to arrange equipment together with students.

Table 4.4.2. Chi-Square Analysis Results on Arranging Equipment

	Arranging Equipment							
Teacher	Student		Teacher		Both		Total	
	F	%	f	%	F	%	f	%
In-service	7	25	21	75	0	0	28	100
Prospective	1	4.16	23	95.83	0	0	24	100
Total	8	15.38	44	84.61	0	0	52	100
χ^2= 7.513; df: 1; p<0.05								

Note: No equipment was used in two of the observed classes.

A two-way contingency table analysis was carried out to evaluate whether there was a significant difference between in-service and prospective teachers' behaviours on picking up the equipment. The two variables were in-service and prospective teachers, and picking up the equipment with student, teacher and both. Significant differences were found between in-service and prospective teachers' behaviours on picking up the equipment, Pearson χ^2 (2, n= 54)= 8.62, p= .013.

Frequency distributions of in-service and prospective teachers' preferences for picking up the equipment were presented in Table 4.4.3. Table has shown that,

in most of their classes in-service (60%) and prospective (95.8%) teachers preferred to pick up equipment by themselves. Additionally, 15% of the in-service teachers' classes and equipment were picked-up by the students, and prospective teachers did not use the students to pick equipment up. Moreover, in 25% of the classes, both in-service teachers and students picked equipment up; however, only in 4.1% of their classes, prospective teachers picked up equipment together with students.

Table 4.4.3. Chi-Square Analysis Results on Picking up Equipment

	Picking up Equipment							
Teacher	Student		Teacher		Both		Total	
	F	%	f	%	f	%	f	%
In-service	4	15	17	60	7	25	28	100
Prospective	0	0	23	95.83	1	4.16	24	100
Total	4	7.69	40	76.92	8	15.38	52	100

χ^2= 8.621; df: 2; $p<0.05$

Note: No equipment was used in two observed classes.

A two-way contingency analysis was carried out to evaluate whether there was significant difference between in-service and prospective teachers' preferred group size during instruction. The two variables were in-service and prospective teachers, and different group sizes categories with 1-5 students, 6-10 students, 11-15 students, 16-20 students, 21-25students, and 26 students and over. Significant differences were found between in-service and prospective teachers' preferred group size, Pearson χ^2 (5, n= 54)= 18.582, p= .002.

The frequency distributions of in-service and prospective teachers' preferences for the selection of different categories of group size were presented in Table 4.4.4. Findings revealed that in-service teachers mostly preferred group sizes

of 1-5 students (37%), and 6-10 students (33%), but prospective teachers particularly selected larger group size categories such as, 26 students and over (37%), 17-15 students (29%), and 1-5 students (21%).

Table 4.4.4. Chi-Square Analysis Results on Group Size Preferences

	Categories of Group Size (Number of Students)													
Teacher	1-5 students		6-10 students		11-15 students		16-20 students		21-25 students		26> students		Total	
	F	%	F	%	f	%	f	%	f	%	f	%	f	%
In-service	11	36.7	10	33.3	3	10	4	13.3	1	3.3	1	3.3	30	100
Prospective	5	20.8	3	12.5	7	29.2	0	0	0	0	9	37.5	24	100
Total	16	29.6	13	24.1	10	18.5	4	7.4	1	1.9	10	18.5	54	100

χ^2= 18.582; df: 5; $p<0.05$

A two-way contingency analysis was carried out to evaluate whether there was a significant difference between in-service and prospective teachers' preference of summarising the lesson or not. The two variables were in-service and prospective teachers, and closure part with "Yes" and "No". No significant difference was found between in-service and prospective teachers' preference of summarising the lesson at the end of the class, Pearson χ^2 (1, $\underline{n}$= 54)= 0.98, $\underline{p}$= .754.

The frequency distributions of in-service and prospective teachers' application of closure part in their classes were presented in Table 4.4.5. Table has shown that both in-service (80%) and prospective (83.3%) teachers did not summarise their lessons at the end of the class, only 20% of the in-service teachers' classes, and 16.6% of the prospective teachers' classes, they summarised the lesson at the end of the class.

Table 4.4.5. Chi-Square Analysis Results on Closure Part of the Lesson

	Closure Part					
Teacher	Yes		No		Total	
	F	%	f	%	f	%
In-service	6	20	24	80	30	100
Prospective	4	16.66	20	83.33	24	100
Total	10	18.51	44	81.48	54	100

χ^2= 0.098; df: 1; p>0.05

A two-way contingency table analysis was carried out to evaluate whether there was significant difference existed between in-service and prospective teachers' usage of the instructional class area. The two variables were in-service and prospective teachers, and usage of the area with 4/4, 2/4, and 1/4. It was founded that there was no significant difference between in-service and prospective teachers' usage of instructional area, Pearson χ^2 (2, n= 54)= 5.54, p= .063.

The frequency distributions of in-service and prospective teachers' preferences on the usage of the lesson area were presented in Table 4.4.6. Table has shown that in-service teachers used whole area (4/4) during their lessons in their 80% of the classes, but prospective teachers preferred to use whole area in their 50% of the classes. Additionally, 16% of the in-service teachers' physical education classes and 37% of the prospective teachers' during physical education classes used half of the lesson area (2/4). Moreover, in-service teachers used 1/4 of the total instructional area in 3.3% of their classes, and prospective teachers used 1/4 of the total class area in 12.5% of their total classes.

Table 4.4.6. Chi-Square Analysis Results on Usage of the Instructional Area

	Usage of the class area							
Teacher	4/4		2/4		1/4		Total	
	f	%	f	%	f	%	f	%
In-service	24	80	5	16.66	1	3.33	30	100
Prospective	12	50	9	37.5	3	12.5	24	100
Total	36	67	14	25	4	8	54	100
χ^2= 5.545; df: 2; p> 0.05								

A two-way contingency table analysis was carried out to evaluate whether there was significant difference between in-service and prospective teachers' selected classroom arrangement patterns. The two variables were in-service and prospective teachers, and eleven different class formation patterns. Preferred classroom formation patterns of in-service and prospective teachers were found to be significantly different, Pearson χ^2 (10, n=745)=114.75, p= .00.

Similarly, two-way contingency table analysis was also carried out to determine whether there was significant difference between in-service and prospective teachers' selected classroom arrangement patterns in different lesson context categories. The two variables were eleven different types of class formation patterns and five different lesson contexts (instruction, beginning class, warm-up running, warm-up stretching, and skill practice). Class formation patterns and lesson context categories were found to be significantly different, Pearson χ^2 (40, n=745)=507.97, p= .00.

Table 4.4.7. showed the frequency and percentage scores of in-service and prospective teachers' preferred classroom formation patterns in different lesson

context categories. An examination of table revealed that both in-service (80%) and prospective (79%) teachers preferred to use single line formation for beginning the class (roll up and ceremony).

During explanation of the subject in-service teachers mainly preferred single line formation (49%), but prospective teachers particularly used different formations such as, fan (26%), side-by-side triple line (26%), and single line (22%). Warm-up part consisted of two parts; running and stretching. For the running part, in-service teachers mainly used single line (55%) and double line (33%) formations; however, prospective teachers mostly preferred double column (42%), and side-by-side triple line (33%) formations.

Scattered formation was principally used in stretching part of the warm-up session by in-service teachers (36%), however, prospective teachers used side by side triple line (50%) formation. In-service teachers preferred to use shuttle (44%) formation and prospective teachers used single line (52%) formation for the exercise.

Table 4.4.7. Contingency Table Analysis of Classroom Formation Patterns in Different Lesson Context Categories

		Lesson Context Categories																
		Beginning class			Explanation			Warm-up running			Warm-up stretching			Drills			Total	
	Form	f	r%	C%	F	r%	c%	f	r%	c%	f	r%	c%	f	r%	c%	f	r%
									In-service									
1		24	32	80	14	19	49	18	26	55				17	23	17	73	100
2								11	73	33				4	27	3	15	100
3		3	13	10	2	8	7	1	4	3	1	4	4	17	71	17	24	100
4		1	12	3							3	38	11	4	50	3	8	100
5					5	19	17	3	11	9	11	41	41	8	29	8	27	100
6					1	50	3				1	50	4				2	100
7														45	100	44	45	100
8					1	33	3							2	67	2	3	100
9											10	62	36	6	38	6	16	100
10		2	40	7	2	40	7				1	20	4				5	100
11					4	100	14										4	100
t	f	30			29			33			27			103			222	
	c%	14			13			15			12			46				
									Prospective									
1		19	31	79	5	8	22	4	7	17	2	3	10	31	51	52	61	100
2								10	100	42							10	100
3					1	12.5	4				1	12.5	5	6	75	10	8	100
4		5	36	21	3	21	13	1	7	4	3	21	15	2	15	3	14	100
5					6	16	26	8	22	33	10	27	50	13	35	22	37	100
6					6	100	26										6	100
7														1	100	2	1	100
8														6	100	10	6	100
9					2	17		1	8	4	4	33	20	5	42	8	12	100
10																		0
11																		0
t	f	24			23			24			20			60			155	
	c%	16			15			16			13			40				

Note:
f= frequency of the applied classroom formation patterns
r=Percentage of formation patterns used among total formation patterns in row
c=Percentage of formation patterns used during specific lesson context in column
t=Total

4.5. Comparison of Time Management Strategies of In-service and Prospective Physical Education Teachers

An independent-samples t-test was carried out to evaluate the hypothesis that there was no statistically significant difference between in-service and prospective physical education teachers' use of class time spent on; instruction, management, beginning class, ending class, warm-up, motor activity, and game. The t-test results were found significant in (for instruction part of the lesson), (for management part of the lesson), t (52)= 2.70, p= .009, t (52)= 3.27, p= .002), (for warm up part of the lesson), t (52)= 4.00, p= .000. Thus, the results were rejected the hypothesis that "there is no statistically significant differences between in-service and prospective teachers' time management strategies". In-service teachers spent more time on giving instruction (M= 411.20 sec., SD= 221.88), management of the classroom (M= 344.73 sec., SD= 176.98), and warm up activities (M= 422.93 sec., SD= 186.16) in their physical education lessons than prospective teachers. Also there were no significant differences between in-service and prospective physical education teachers' use of time at the beginning of the class, ending of the class, motor activity, and game ($p<.05$). T-test results can be seen in Table 4.5.1.

Table 4.5.1. Independent-samples T-test Scores for In-service and Prospective Teachers in Terms of Time Management Strategies

Lesson Contexts	Teacher*	Mean±sd	df	t-value	Sig. 2-tailed
Instructional time	In-service	411.2 ± 221.8	52	2.701	**.009****
	Prospective	272 ± 133.7			
Management	In-service	344.7 ± 176.9	52	3.277	**.002****
	Prospective	195.2 ± 152.3			
Beginning class	In-service	96.8 ± 68.3	52	1.254	.215
	Prospective	72.7 ± 72.5			
Ending class	In-service	41.76 ± 29.7	52	1.447	.154
	Prospective	30.1 ± 28.7			
Warm-up	In-service	422.9 ± 186.1	52	4.007	**.000****
	Prospective	247.7 ± 117.9			
Activity	In-service	704.5 ± 277.1	52	-1.508	.138
	Prospective	823.2 ± 300.3			
Game	In-service	68.6 ± 103.3	52	1.203	.234
	Prospective	37.7 ± 79.8			

* In-service teachers (n= 30), prospective teachers (n= 24)
**p<0.05

4.6. Comparison of Teaching Style Preferences of In-service and Prospective Teachers

To examine some possible differences between in-service and prospective teachers' teaching style preferences, Chi-square analysis was performed. A two-way contingency table analysis was carried out to evaluate whether there was a significant difference between in-service and prospective physical education teachers' preferred teaching styles. The two variables were in-service and

prospective teachers, and teaching styles with command, practice and guided discovery. In-service and prospective teachers were not different in their preference of teaching style during instruction, Pearson $\chi^2(2, n= 59)= 3.77$, $p= .152$.

Table 4.6.1. Chi-Square Analysis Results of Teaching Style Preferences

Teachers	Teaching Styles*							
	Command		Practice		Guided Discovery		Total	
	f	%	f	%	f	%	f	%
In-service	5	14.3	29	82.9	1	2.9	35	100
Prospective	0	0	23	95.8	1	4.2	24	100
Total	5	8.5	52	88.1	2	3.4	59	100

$\chi^2= 3.773$; df: 2; $p> 0.05$

Note: The frequency (f) does not equal to sum of participants since some of the teachers are used more than one teaching style in a lesson.
*Only the teaching styles, which were utilised by in-service and prospective physical education teachers, were listed above.

CHAPTER V

DISCUSSION

The purposes of this study were to investigate the classroom management behaviours, time management strategies, and teaching style preferences of in-service and prospective physical education teachers, and to compare in-service and prospective physical education teachers' classroom management behaviours, time management strategies and teaching style preferences.

5.1. Analysis of Classroom Management Behaviours of In-service and Prospective Teachers

The Chi-square analysis was carried out to evaluate whether there was a significant difference between various classroom management behaviours of in-service and prospective physical education teachers. The findings of the study demonstrated that there was a significant difference between various classroom management behaviours of in-service and prospective teachers. The results of the study indicated that there were significant differences between in-service and prospective teachers' selected criteria for grouping students, arranging and picking up equipment, selection of group size categories, and preferred classroom formation patterns. However, there were no significant differences between the in-service and

prospective teachers' preferences for the execution of the closure part. Overall results failed to support the hypothesis that "there was no significant difference between in-service and prospective teachers' classroom management strategies".

Kirchner and Fishburne (1995) stated that, although there are various grouping categories as age, height, ability, and so on, the major aim should be to provide benefits for both children and teacher. Children should be considered for ability level, gender, or physical characteristics before grouping procedure. In the present study, none of the teachers considered the physical characteristics of the students for grouping procedure, although it was an important issue. In-service teachers mostly considered gender for grouping children. Graham (1992) stated that using gender as a way to group children might discourage boys' and girls' cooperation. Both in-service and prospective teachers preferred to use other criterion to group children. One of the mostly used other techniques that both in-service and prospective teachers preferred was asking children to be organised into two-three-four groups etc. from directly the line, without considering any ability groups or physical characteristics of children. The grouping procedures seemed to be taught to whole class at the beginning of the semester. All students learn how to organise groups with commands. One of the main reasons for the teachers' not considering criteria for grouping students might be because of the limited time, equipment, etc. If they consider physical characteristics or abilities, they also have to prepare different exercises, appropriate movement experiences for these students that have different physical characteristics and ability groups. Also there will be need for the different teaching styles for these students. As it is stated before, in the

present study physical education teachers mainly focusing on the traditional teaching methods neglecting the different ability groups, and also spending more time on management activities causing to limit practice time. But they should think about the students' physical characteristics, ability levels, gender, etc. while grouping them for the exercises in order to provide more effective teaching-learning environment.

The study indicated that both in-service and prospective teachers preferred to arrange the equipment before the class and pick-up after the class by themselves which might be due to the fact that students generally had limited break time to change their clothes. Teachers also came directly to the class after the break time finishes. Teachers generally brought the equipment by themselves to save time. Similarly after the class teachers collected the equipment, since generally class ended with the break time bell and students went to change their clothes for the next class. However, it was suggested in the literature that, the students or an aide distributes and collects the equipment, and such duty should not always be done by teachers. Similarly, Humphries and Ashy (2000) suggested that children should help teachers for the equipment management. These speed things up and prevent boredom. Because teachers should help the students with other needs (Harrison & Blakemore, 1992; Siedentop et al., 1986).

According to the findings of the study, in-service teachers and prospective teachers differed in the selection of group size categories for exercises. In-service teachers mostly preferred 1-5 student group size, and 6-10 students group size categories in their classes, however prospective teachers mostly used 26 students

and over group size, 11-15 students group size, and 1-5 students group size categories. One of the main reasons for the prospective teachers' selection of larger group size category might be related with controlling whole class during physical education lesson. Hellison and Templin (1991) indicated that, the group size should mainly be considered to provide opportunities for students to experience physical activity. It was clear in this study that, students in in-service teachers' classes had more opportunity for trial than prospective teachers' classes. As one of the effective teaching characteristics is evaluated by student involvement (Siedentop, 1991), it can be said that in-service teachers provide more effective learning opportunities. Another main reason for the prospective teachers' ineffective grouping procedure might be that, prospective teachers mostly taught individual sport (track and field-high jump) at the time of the study. During the lesson, while one of the students were jumping, whole class was waiting for their turn. Although group size varies with the type of and characteristics of the activity, the number of turns for each individual, and the learning of the task strongly related (Hellison & Templin, 1991). In order to provide maximum learning with more practice, physical education teachers should organise different stations, drills, etc.

During various lesson context categories, in-service and prospective teachers used different group formation patterns. Both in-service and prospective teachers used mostly single line formation at the beginning the class (roll call and ceremony). Similarly, single line formation is the most preferred formations for roll call (Harrison and Blakemore, 1992). Next, at the beginning the class session, during the brief explanation of the lesson, in-service teachers mainly preferred

single line formation, but prospective teachers particularly used different formations such as, fan, side-by-side triple line, and single line regarding the explanation of the subject. According to the literature, during theoretical explanations, single line and fun formations were stated as one of the most appropriate formations (Kirchner & Fishburne, 1995). Although circle and scattered formations were stated as the suitable formations for the warm up session, for running part of warm-up, in-service teachers mainly used single line and double line formations. However, prospective teachers mostly preferred double column, and side-by-side triple line formations. Similar with the suggested formation patterns for warm-up session, scattered formation is principally used in stretching part by in-service teachers, however, prospective teachers used mostly side by side triple line formation. In-service teachers mostly preferred shuttle formation and prospective teachers generally used single line formation for the application of drills. Literature suggested the single line for teaching basic skills, and/or exercises on floor or mats (gymnastics), and scattered formation for creative activities (Harrison & Blakemore, 1992). Although, the selection of classroom formation patterns depends on the activity, students, and available space, experience of each child with the activity should be considered (Kirchner & Fishburne, 1995).

According to results of the present study, in-service teachers preferred to organise small size groups, and the mean percentage of the active students in-groups during exercises increased normally. However, prospective teachers preferred to organise larger groups and mean percentage of active students decreased as usual. One of the main reason for that, prospective teachers preferred

larger groups to control whole class. In other words, because of the managerial concerns, prospective teachers preferred whole class instruction. It is suggested in the literature that small and more groups are better than larger groups in which students experience with less practice trials (Siedentop et al., 1986). Additionally, Divya (2003) suggests that, instead of having children lining up to do various activities with one or two ball, like relays and dribbling, it would be better to do the activity using 12-15 balls, because students need many opportunities to learn a motor skill (Randall, 1992). Shortly, the findings of the present study has shown that the larger the group size, the lesser the active students in each group, and the lesser the effectiveness and student learning (Hellison & Templin, 1991).

Closure part is one of the most important lesson context categories. At the end of the class, students understand what was accomplished in the lesson, what important elements were learned, and they cool down physically and psychologically by the closure part (Siedentop, 1991). It is also suggested that each lesson should end with a formal closure allowing students to focus on the present lesson (Poole & Anderson, 2000). According to the results of the present study, no significant differences were founded between in-service and prospective teachers' use of closure part in their lessons. They both generally did not summarise the lessons at the end of the class. Teachers spent most of the class time for other activities (management, motor skill practices), and they generally did not prefer to implement closure part because they did not believe in its importance and necessity (Siedentop, 1991). It was also observed that, most of the lessons continue until the break time, and no time were left for the closure part.

5.2. Analysis of Time Management Strategies of In-service and Prospective Teachers

Independent t-test was conducted to evaluate whether there was a significant difference between in-service and prospective teachers' use of class time for different lesson context categories. The findings of the study demonstrated that there were significant differences between in-service and prospective teachers' use of class time in three lesson context categories including; instructional time, management time, and warm-up. However, according to the results, no significant differences founded between some other lesson context categories of beginning class, ending class, activity time, and game practices. This finding failed to support the second hypothesis that "there is no significant difference between time management strategies of in-service and prospective teachers".

The results from present study indicated that experienced teachers spent more time on instructional activities, managerial activities, and warm up part of the lesson. Similar with the findings derived from the literature, in present study in-service teachers spent significantly greater amount of time on instructional activities. Supporting the findings on use of instructional time, Griffey and Housner (1991) indicated that experienced teachers were more concerned with instruction and providing students with information that would facilitate motor skill acquisition than were inexperienced teachers. Their findings suggested that inexperienced teachers were less focused on the instructional intent of lessons than were the experienced teachers who had markedly greater amounts of information giving in their classes. Furthermore, they declared that, students in experienced teachers'

classes were given much more information during lessons than were students in inexperienced teachers' classes (Housner & Griffey, 1985). Further, although traditionally physical education teachers emphasised skills and activities as the content of physical education, integration of concepts, and verbal transmission from the teacher on psychomotor activity stressed as necessary to learn a motor skill (Harrison & Blakemore, 1992). Similarly, Philips and Charlisle (1983) supported that the most effective teachers did spend approximately 5% of their classroom time in teacher instruction time and in planned presentation. Additionally, Graham (1988) stated that the most effective teachers explained the subject matter clearly for student comprehension. Moreover; Silverman et al. (1988) stated that time spent on explanation and demonstration of the skill correlated with the student achievement. They also concluded that, explanation and demonstration of skills was a positive way of engaging the student with the subject matter. Cooledge and Arbogast (1995) suggested that time in instruction episodes should be between 25% - 35% of total class time. In the present study, findings indicated that the amount of instruction time spent by in-service teachers on instructional activities is still less than the suggested amount in literature.

Findings of the present study also showed that there was a significant difference between the in-service and prospective teachers' amount of time spent on management. Experienced teachers were spend more time on organisational activities than prospective teachers did. Spending more time on organisational activities limits students' time on movement activities, instead, this causes them to do nothing (waiting for their turn, for organisation of the groups, transitions from

one activity to another) (Siedentop et al., 1986). In the present study, it seems that in-service teachers used class time ineffectively by spending much time on managerial activities. In fact, according to the literature, in-service teachers spent less time on managerial activities, because it was suggested that teachers should spend approximately 20-30% of class time on management tasks (Siedentop et al., 1986). In the present study, in-service teachers spent 16% of the total class time on management of the classroom. Cooledge and Argobast (1995) suggested according to the research findings based on the literature that, time spent in management episodes should be under 15%. This information declared that, in-service physical education teachers in the present study just spent more time on managerial activities than prospective teachers, but the amount of time is still less than the literature. Moreover, the time spent on managerial acts by in-service teachers was close to the amount suggested by Cooledge and Arbogast (1995). One of the main reasons for in-service teachers' use of class time for management is being more concerned with managing activities during their lessons. Additionally, inexperienced teachers were found to be abrupt and prone to spontaneously shift activities during lessons for no obvious curricular reason (Griffey & Housner, 1991).

Although a proper warm-up activity is necessary before any activity in a typical one hour physical education class to more professional activities (Lauffenburger, 1992), it is mentioned in the literature that generally little time is spent on warm up activities during physical education classes (Hoyle & Smith, 1989). It is also suggested that warm-up activities should take ten to fifteen minutes of total 50 minutes class time (Çiçek, 1998). In the present study, significant

differences were found between in-service and prospective physical education teachers in terms of time spent for warm-up activities. In-service teachers spent more time for warm-up session than prospective teachers in present study. Time spent for warm-up by in-service teachers were founded closer to the suggested amount of time in the literature. It can be stated that time devoted to warm-up activities by in-service teachers is more adequate than prospective teachers are.

The results also indicated that no significant differences were founded between in-service and prospective teachers' use of time on other lesson context categories (beginning class, ending class, activity, and game). Similarly, Philips and Charlisle (1983) stated that there were no differences between the most and the least effective teachers on the use of total class time for beginning and ending class. However, they mentioned that the most effective teachers utilised less time than the least effective teachers did for beginning and ending the class. Their findings showed that the most effective teachers spent 1.90% of class time, and least effective teachers spent 2.64% of their total class time on beginning class. In the present study, in-service teachers spent 4.63% and prospective teachers spent 4.33% of the total class time on beginning class. It is clear that, teachers in the present study spent more time on beginning the class. Additionally, Philips and Charlisle (1983) stated that the most effective teachers spent 0.71%, and the least effective teachers spent 2.46% of the total class time on ending the class. Similarly, both in-service and prospective teachers in present study spent more time to be accepted as the most effective. In order to decrease the time spent for beginning the class, it is

better to take attendance during the lesson activities, rather than taking it at the beginning of the class.

The findings also indicated that, in-service and prospective teachers were not different in the use of class time for activities. In-service teachers spent 33.70%, and prospective teachers spent 49.03% of the total class time on motor activities. Similarly, Griffey and Housner (1991) founded that there was no difference between experienced and inexperienced teachers in the amount of on-task behaviour during lessons. Siedentop et al. (1986) stated according to the research results that students were engaged in motor activity only 21-30% of the total class time. Similarly, Shute, Dodds, Placek, Rife, Silverman (1992) (as cited in Harrison 1987), founded that skill practice time were 30% of the total class time. Present study revealed that, amount of time that in-service and prospective teachers spent on motor practice was similar with the results gathered from the literature, but they were still less than the suggested amount. Cooledge and Arbogast (1995) suggested that time separated for activity should be at least 50% of the total class time. Longer activity time is suggested to be provided by lessening the management time and transitional periods during physical education lesson (Langford & Griffin, 2003).

Games have been accepted as an important part of most physical education programs (Holt, Strean, & Bengoechea, 2002; Lynn, 2002; Werner, 2001). It is necessary to organise games to help all ability levels of children to develop skills, to prevent boredom, and to make the lesson enjoyable (Mandigo & Anderson, 2003). Moreover, gamelike practices increase success. The findings in this study indicated that there is no significant difference between in-service and prospective teachers'

use of time for game activities. Moreover, both in-service and prospective teachers in present study spent very short time on game activities in their lessons. Since both in-service and prospective teachers spent much time on management and other organisational drills, no or limited time left for games. Harrison and Blakemore (1992) stated the gamelike practices as necessary for students to learn skills. Additionally, it is suggested that games should enhance maximum participation for all levels of students (Prusak & Darst, 2000), and games should be used throughout a unit rather than organising at the end of the lesson (Humphries & Ashy, 2000).

5.3. Analysis of Teaching Style Preferences of In-service and Prospective Teachers

The chi-square analysis was carried out to evaluate whether there was a significant difference between in-service and prospective teachers' teaching style preferences. The results of the present study indicated that both in-service and prospective physical education teachers were preferred mostly practice type of teaching style. This finding supported the third hypothesis that "there is no significant difference between teaching style preferences of in-service and prospective teachers".

Donnely (2002) described the traditional physical education class as teacher explanation of the task or lesson objectives, and demonstration of the task by student or teacher. Followed by allocation of practice time for students. As it can easily be seen, the description is practice type of teaching style. Çiçek (1998) also revealed in his research that prospective teachers preferred command and practice type of teaching style to other types of styles. He also declared that the prospective

teachers were incompetent in the use of variety of teaching methods. Reasons for this result explained as disciplinary concerns. The most important reason for the preference of practice teaching style by both in-service and prospective teachers is having too many sport skills to teach children in the physical education classes. These sport skills consist of many parts. For example, in order to teach basketball, students should learn how to grasp the ball, how to dribble, how to pass, how to shoot etc. Due to limited class time teachers prefer to teach sport skills simply by "explain, demonstrate, practice" method. Ministry of National Education prepared physical education curriculum for elementary school children consisting of activities such as; basic gymnastics skills, running activities, jumping activities, rhythmical gymnastics, apparatus gymnastics, basketball, volleyball, handball, football, wrestling, and folk dances (MEB, 2000). Moreover, these sport skills and tasks have only one correct way to perform. In their physical education classes, teachers demonstrate the subject matter, and in practice type of teaching style, the subject matter becomes a model, and fixed standard. All students are expected to practice and perform that sport skill without individual variations and adjustments (Mosston & Ashworth, 1994). Since teaching styles are stated as one of the factors that affect the effectiveness of instruction, the important question whether teachers using practice teaching style in their classes were effective or not. Teaching styles are stated as equally effective. In other words, "each style of teaching is not inherently better or more effective than others, but rather that each style met a specific set of unique objectives or goals" (Mosston & Ashworth, 1994; Byra, 2000). Thus, it is apparent that, both in-service and prospective physical educators mostly apply practice teaching style in order to attain "specific set of unique

objectives or goals". These objectives can be summarised as; "teaching specific sports skills to crowded classes within a very short period of time". As it is stated before, the emphasis is given on curriculum where the primary purpose was to teach particular activities such as volleyball, basketball, football, etc. rather than to use a variety of activities and teaching styles to achieve program goals such as improving fitness, developing skills, problem solving abilities and creative thinking (Kovar et al., 2001). However, Harrison and Blakemore (1992) stated that lecture, demonstration, drill, practice, and feedback are more effective for students who learn basic academic skills. In Griffey and Housner's study (1991) in-service teachers focused on content and student mastery of that content more than prospective teachers did. Similarly, Garn and Byra (2002) described the practice type of teaching style as the most frequently used teaching style in everyday physical education classes. Moreover, they stated that in the practice style, the emphasis was given on learners' psychomotor performance, and in order to attain psychomotor domains of education, the practice style of teaching is appropriate.

Additionally, there are some factors (student, subject matter content, teacher, learning environment, time) that affect the selection of a teaching style. It also negatively affects the effective instruction that regards all students the same, and applies the same teaching procedure. Furthermore, physical education program has variety of objectives on three different domains; psychomotor, affective, and cognitive, but practice style of teaching mostly helps attaining psychomotor domain. In order to develop the whole child, and provide effective teaching, all three domains should be attained (Garn & Byra, 2002). Stevens-Smith and Bowling

(2002) stated that rather than using single teaching style; utilisation of different teaching styles enhances the student learning. Similarly, it is suggested that the usage of different teaching styles encourage students to select the most suitable style for them. As a conclusion, to reach all children and to provide them with meaningful and exciting movement experiences, spectrum of teaching styles is essential (Donnely, 2002).

In short, physical education is an important school subjects which psychomotor, cognitive, and affective skills of students are developed. To accomplish maximum student learning physical educators should develop and apply effective teaching-learning procedures. In physical education research literature, there are some listed effective teaching-learning indicators such as; time management, resource management, behaviour management, teaching methods, class climate, etc. (Metzler, 1990). Additionally, classroom management was stated as a major problem for physical education setting, and physical educators have not been able to organise the classroom effectively, and use the time efficiently (Rink, 1996). Moreover, the ways that teachers use during instruction (teaching styles) were mentioned as a guide to manage the time, space, and equipment (Donnely, 2002).

As a general conclusion about the classroom management behaviours, both in-service and prospective teachers did not consider the physical characteristics of children during grouping students, although it is recommended to be considered as an important factor (Graham, 1992). What's more, they both preferred to arrange the equipment before the class and collect after the class. However, it is suggested in

the literature that, teachers should help the students with other needs, rather than arranging and picking up equipment (Siedentop et al., 1986). In-service teachers mostly used small size groups that provide students more opportunity to practice the skills, however, prospective teachers mostly preferred the whole class instruction and more crowded groups that give less opportunity for students to practice the skill. It is stated that the practice is directly related with the skill learning (Silverman, 1990). Similar results were found with the literature on preferred classroom formation patterns. Both in-service and prospective teachers mostly used single line formation for the beginning the class. In other lesson context categories, physical education teachers use different types of formations.

According to the results derived from the time management strategy analysis, in-service teachers founded to spent more time on instructional activities, managerial activities, and warm-up activities than prospective teachers. The findings were supported by the literature. Both in-service and prospective teachers were found to have been using the class time effectively for instruction and management. However, they were found to have been ineffective in the usage of time for beginning the class, ending the class, and game. Furthermore, prospective teachers spent sufficient time for activity, unlike in-service teachers.

On the aspects of style preferences, both in-service and prospective teachers were found to have been using the traditional teaching style (direct style) that mostly helps to attain psychomotor domain. So, it is recommended that teachers use different types of teaching styles for the development of the whole child, and the attainment of three domains of physical education.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

This study was designed to describe and compare the classroom management strategies, time management strategies, and teaching style preferences of in-service and prospective teachers.

Based on the descriptive findings of this study, the following conclusions can be made:

1. Both in-service and prospective teachers mostly preferred to arrange the equipment at the beginning of the lesson and to pick up at the end of the lesson.

2. Both in-service and prospective physical education teachers preferred to group students directly from a line without considering any differences in physical characteristics and gender while grouping students during class.

3. In-service teachers mostly preferred small group size categories (1-5 and 6-10), but prospective teachers preferred more crowded group size categories (11-15 and 26>).

4. Most of the in-service physical education teachers preferred to use the whole instructional area, but prospective teachers varied in the amount of area they used for instruction (whole area and half of the area).

5. Single line is most preferred classroom formation pattern for beginning the class by both in-service and prospective teachers. For the theoretical part, teachers mainly used single line, side-by-side triple line, and fan formations. During running part of the warm-up session, teachers generally used single line, double column, and side-by-side triple line formations. For the stretching part of the warm-up session teachers mostly used side-by-side triple line, circle, and side-by-side double line formations. Single line, shuttle, face to face double line, and side-by-side triple line formation patterns are most preferred ones by in-service and prospective physical education teachers.

6. Because in-service teachers selected less crowded group size categories and used more equipment during their classes, students were more active in in-service teachers' classes. Nonetheless, prospective teachers preferred more crowded group size categories and less equipment causing less active students in their classes.

7. In-service teachers spent more time on theoretical explanations, management, and warm-up part than prospective teachers did. They both spent small amount of their class time for game.

8. Both in-service and prospective physical education teachers mostly preferred practice type of teaching styles.

Based on the comparative findings of this study, the following conclusions can be made:

1. There were significant differences between in-service and prospective physical education teachers' classroom management behaviours of criteria for grouping students, arrangement and picking up the equipment, selection of group size preferences, and selection of classroom formation patterns. However, there were no significant differences between the classroom management behaviours of application of closure part, and use of instructional area.

2. There were significant differences between in-service and prospective teachers' use of time in different lesson context categories: instruction, management, and warm-up. However, there were no significant differences between in-service and prospective teachers' use of class time on beginning-ending the class, motor activity, and game.

3. In terms of teaching style preferences, there were no significant differences between in-service and prospective teachers' preferred teaching styles during their classes.

6.2. Recommendations

Taking the limitations of this study into consideration, the following recommendations can be made for further studies:

1. Since the present study descriptively analysed the physical education setting, process-product research would be beneficial to evaluate the effectiveness of the instruction.

2. In the present study, observed lessons were not distributed equally, it is advised to observe various lessons to have more generalizable data for physical education classes.

3. Follow-up interviews will be beneficial to use in order to make in-depth analysis of in-service and prospective teachers' classroom management behaviours, time management strategies and teaching style preferences.

4. This study should be done with the prospective teachers of other universities.

REFERENCES

Allison, P. C. (1987). What and how preservice physical education teachers observe during a practice teaching. *Research Quarterly for Exercise and Sport,* 58(3), 242-249.

Allison, P. C. (1988). Strategies of observing during field experiences. *Journal of Physical Education, Recreation, and Dance,* 59(2), 28-30.

Arslan, C., & Pehlivan, Z. (1996). *Beden eğitimi ve spor yüksekokullarına/bölümlerine merkezi ve mahalli sınav sistemiyle alınan öğrencilerin, akademik, ve bazı fiziksel özelliklerinin karşılaştırılması (Fırat Üniversitesi örneği).* Eğitim Kurumlarında Beden Eğitimi ve Spor III. Ulusal Sempozyumu, MEB Okuliçi Beden Eğitim, Spor ve İzcilik Dairesi Başkanlığı, Ankara.

Askins, J. C., & Imwold, C. H. (1994). The existence of conflicting perceptions in a secondary physical education student teaching experience. *Physical Educator,* 51(1), 35-46.

Ballinger, D. A. (1993). Becoming an effective physical educator. *Physical Educator,* 50(1), 13-19.

Beighle, A., & Pangrazi, R. P. (2002). The seven habits of highly effective physical education teachers. *Teaching Elementary Physical Education,* 13(4), 6-9.

Beydoğan, Ö., & Şirinkan, A. (1998, 16-18 Mart). *İlköğretimde beden eğitimi spor ihtiyacı ve karşılanabilme düzeyi.* I. Spor Kongresi Bildirileri, Erzurum.

Boschee, F. (1972). *A comparison of the effects of command, task, and individual program styles of teaching on four developmental channels.* Dissertation Abstracts International, 33, 2066A. (University Microfilms No. 72-29, 343).

Boyce, A. B., & Kelly, L. (1992). Developing pedagogical skills of preservice teachers through goal setting and computer generated feedback. *Physical Educator,* 49(4), 213-218.

Boztepe, H. (1993, 16-18 Aralık). *İlköğretim çağındaki çocukların bedensel ve sosyal gelişmelerinde beden eğitimi ve sporun önemi.* Eğitim Kurumlarında Beden Eğitimi ve Spor II. Ulusal Sempozyumu. Meb, Okuliçi Beden Eğitimi Spor ve İzcilik Dairesi Başkanlığı, Manisa.

Brawdy, P., & Byra, M. (1995). Supervision of preservice teachers during an early field teaching experience. *Physical Educator,* 52(3), 147-149.

Brown, S. Stephen, C., & Cope, P. (1999, 2-5 September). *How student teachers think about their classroom teaching.* Paper presented at the British Educational Research Association Conference, University of Sussex, Brighton.

Bucher, C. A. (1987). *Management of physical education and athletic programs* (9th Ed.). St. Louis, Toronto, Santa Clara: Times Mirror / Mosby College Publishing.

Byra, M. (2000). A review of spectrum research: The contributions of two eras. *Quest,* 52, 229-245.

Cooledge, N. J., & Arbogast, G. W. (1995). Busy, happy, and good is not enough in physical education. *People & Education,* 3(3), 273-283.

Curtner-Smith, M. D. (1996). The impact of an practice teaching on preservice physical education teachers' conceptions of teaching. *Journal of Teaching in Physical Education,* 15, 224-250.

Curtner-Smith, M. D. (1997). Student teachers' conceptions of the teaching-learning process: Case studies of recruits with coaching and teaching orientations. *Physical Educator,* 54(4), 196-207.

Çamlıyer, H. (1992). *Beden eğitimi ve spor öğretmeni yetiştirme programları ve öğretmenlik uygulamalarının değerlendirilmesi.* Spor Bilimleri II. Ulusal Kongresi, Ankara.

Çiçek, Ş. (1998). *Evaluation of physical education teacher education program at METU.* Unpublished doctoral dissertation, Middle East Technical University, Ankara.

Çiçek, Ş., & Bizati, Ö. (2000). *Beden eğitimi öğretmenliğinde ilk yıl: Stajerlik programı, rehber öğretmen ve çalışma ortamlarına ilişkin değerlendirmeler.* VI. Spor Bilimleri Kongresi, Ankara.

Darden, G., Darden, A., Scott, K., & Westfall, S. (2001). The student-teaching experience. *Journal of Physical Education Recreation and Dance,* 72(4), 50-53.

Demirhan, G., Açıkada, C., & Altay, F. (1996, 1-3 Kasım). *Beden eğitimi ve spor öğretmeni niteliklerinin öğrenci gözüyle değerlendirilmesi.* IV. Spor Bilimleri Kongresi, Ankara.

Divya, M. (2003). Physical education in schools inadequate. *Nation's Health,* 33(3), 16.

Donnely, F. C. (2002). The spectrum connection: Assessment, social responsibility, and critical thinking. *Teaching Elementary Physical Education,* 13(4), 10-13.

Fraenkel, J. R., & Wallen, N. E. (2000). *How to design and evaluate research in education (4th ed.).* New York: The McGraw-Hill Companies.

Garn, A., & Byra. M. (2002). Psychomotor, cognitive, and social development spectrum style. *Teaching Elementary Physical Education,* 13(2), 8-13.

Gensemer, R. E. (1991). *Physical education: Perspectives, inquiry, applications* (2nd Ed.). United States: WM. C. Brown Publishers.

Gilberts, G. H., & Lignugaris-Kraft, B. (1997). Classroom management and instruction competencies for preparing elementary and special education teachers. *Teaching and Teacher Education,* 13(6), 597-610.

Godbout, P., Brunelle, J., & Tousignant, M. (1983). Academic learning time in elementary and secondary physical education classes. *Research Quarterly for Exercise and Sport,* 54(1) 11-19.

Graham, G. (1992). *Teaching children physical education: Becoming a master teacher.* Champaign, Illinois: Human Kinetics.

Graham, G., & Heimerer, E. (1981). Research on teacher effectiveness: A summary with implications for teaching. *Quest,* 33(1), 14-25.

Graham, K. C. (1988). A qualitative analysis of an effective teacher's movement task presentations during a unit of instruction. *Physical Educator*, 45(4), 187-195.

Griffey, D.C., & Housner, L. D. (1991). Differences between experienced and inexperienced teachers' planning decisions, interactions, student engagement, and instructional climate. *Research Quarterly for Exercise and Sport,* 62(2), 196-204.

Harrison, J. C. (1987). A review of the research on teacher effectiveness and its implications for current practice. *Quest,* 39, 36-55.

Harrison, J. M., & Blakemore, C. L. (1992). *Instructional strategies for secondary school physical education (3rd ed.).* Dubuque: IA: Wm. C. Brown Publishers.

Hellison, D. R., & Templin, T. J. (1991*). A reflective approach to teaching physical education.* Champaign, Illinois: Human Kinetics Books.

Holt, N. L., Strean, W. B., & Bengoechea, E. G. (2002). Expanding the teaching games for understanding model: new avenues for future research and practice. *Journal of Teaching in Physical Education,* 21(2), 162-176.

Housner, L. D., & Griffey, D.C. (1985). Teacher cognition: Differences in planning and interactive decision making between experienced and inexperienced teachers. *Research Quarterly for Exercise and Sport,* 56(1), 45-53.

Hoyle, R. J., & Smith, R. F. (1989). Warm-up with skill. *Journal of Physical Education Recreation and Dance,* 60(9), 15-16.

Humphries, C., & Ashy, M. (2000). The games students play: selecting and teaching activities. *Journal of Physical Education Recreation and Dance,* 71(4), 13-14.

İnce, M. L. (2002). *The effects of teacher-centered and learner centered teaching on practice teaching of prospective physical education teachers.* Unpublished doctoral dissertation, Middle East Technical University, Ankara.

Johnston, B. D. (1995). "Withitness:" Real or fictional? *Physical Educator,* 52(1), 22-28.

Kirchner, G., & Fishburne, G. J. (1995). *Physical education for elementary school children.* Madison, Wisconsin-Dubuque, Iowa: Brown & Benchmark Publishers.

Kovar, S. K., Ermler, K. L., Mehrhof, J. H., & Napper-Owen, G. E. (2001). Choosing activity units to promote maximum participation: Creative physical education curricula. *Physical Educator,* 58(3), 114-123.

Lacy, A. C., & LaMaster, K. J. (1996). Teacher behaviors and student academic learning time in elementary physical education. *Physical Educator,* 53(1), 44-50.

Langford, G. A., & Griffin, M. R. (2003). Modifying activities to enhance continuous movement and participation. *Teaching Elementary Physical Education,* 14(2), 35-39.

Lauffenburger, S. K. (1992). Efficient warm-ups: Creating a warm-up that works. *Journal of Physical Education Recreation and Dance,* 63(4), 21-25.

Livingston, L. A. (1996). Re-defining the role of physical activity courses in the preparation of physical education teaching professionals. *Physical Educator,* 53, 114-121.

Lumpkin, A. (1990). *Physical education and sport: A contemporary introduction (2nd ed.).* Times Mirror / Mosby College Publishing.

Lynn, S. (2002). Pedagogical content knowledge for the games teacher. *Teaching Elementary Physical Education,* 13(3), 17-19.

Mandigo, J. L., & Anderson, A. T. (2003). Using pedagogical principles in net/wall games to enhance teaching effectiveness. *Teaching Elementary Physical Education,* 14(1), 8-11.

McCallister, S. G., & Napper-Owen, G. (1999). Observation and analysis of skills of student teachers in physical education. *Physical Educator,* 56(1), 19-32.

McKenzie T. L. (1991). Observational measures of children's physical activity. *Jounal of School Health,* 61(5), 224-227.

MEB (2000). *İlköğretim okulu ders programları: Beden eğitimi programı 6-7-8.* İstanbul: Milli Eğitim Basımevi.

Metzler, M. W. (1990). *Instructional supervision for physical education.* Champaign, Illinois: Human Kinetics.

Mosston, M., & Ashworth, S. (1994). *Teaching in physical education.* New York: MacMillan College Publishing Company.

O'Sullivan, M., & Tsangaridou, N. (1992). What undergraduate physical education majors learn during a field experience. *Research Quarterly for Exercise and Sport,* 63(4), 381-392.

Paese, P. C. (1987). Analyzing the perceptions and teaching effectiveness of preservice interns. *Physical Educator,* 44(3), 349-354.

Parker, J. (1995). Secondary teacher's views of effective teaching in physical education. *Journal of Teaching in Physical Education,* 14, 127-139.

Petray-Rowcliffe, C. K., Williams, E. W., Lavay, B. W., & Hakim-Butt, K. L. (2002). Ongoing, systematic self-assessment of preservice physical educators' teaching behaviours. *Journal of Physical Education, Recreation, and Dance,* 73(7), 49-55.

Philips, D. A., & Charlisle, C. (1983). A comparison of physical education teachers categorised as most and least effective. *Journal of Teaching in Physical Education,* 2(3), 55-67.

Poole, J., & Anderson, T. (2000). Review your teaching actions. *Teaching Elementary Physical Education,* 11(2), 26-29.

Prusak, K., & Darst, P. W. (2000). Teaching strategies and game modifications to promote maximum participation in middle school physical education. *Teaching Elementary Physical Education,* 11(3), 18-23.

Randall, L. E. (1992). *Systematic supervision for physical education.* Campaign, Illinois: Human Kinetics.

Rink, J. E. (1996). Effective instruction in physical education. In S. J. Silverman, & C. D. Ennis (Eds.), *Student learning in physical education: Applying research to enhance instruction* (pp. 171-198). Campaign, Illinois: Human Kinetics.

Sariscsany, M. J., & Pettigrew, F. (1997). Effectiveness of interactive video instruction on teacher's classroom management declarative knowledge. *Journal of Teaching in Physical Education,* 16, 229-240.

Schemp, P. G. (1988). What do you say to a student teacher? *Journal of Physical Education, Recreation, and Dance,* 53(2), 86-95.

Shuel, T. J. (2002). Teaching and learning in the classroom. *International Encyclopedia of the Social & Behavioral Sciences,* 15468-15472. Retrieved January 28, 2003, from http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WVS-46RR9GPV.

Siedentop, D. (1990). *Introduction to physical education, fitness, and sport.* Mountain View, California: Mayfield Publishing Company.

Siedentop, D. (1991). *Developing teaching skills in physical education (3rd ed.).* Mountain View: Mayfield Publishing Company.

Siedentop, D., Doutis, P., Tsangaridou, N., Ward, P., & Rauschenbach, J. (1994). Don't sweat gym! An analysis of curriculum and instruction. *Journal of Teaching in Physical Education,* 13, 375-394.

Siedentop, D., Mand, C., & Taggart, A. (1986). *Physical education: Teaching and curriculum strategies for grades 5-12.* Mountain View: Mayfield Publishing Company.

Silverman, S. (1985). Student characteristics mediating engagement-outcome relationships in physical education. *Research Quarterly for Exercise and Sport,* 56(1), 66-72.

Silverman, S. (1990). Linear and curvilinear relationships between student practice and achievement in physical education. *Teaching and Teacher Education,* 6(4), 305-314.

Silverman, S. (1991). Research on teaching in physical education. *Research Quarterly for Exercise and Sport,* 62(4), 352-364.

Silverman, S., Tyson, L. A., & Morford, L. M. (1988). Relationships of organization, time, and student achievement in physical education. *Teaching & Teacher Education,* 4(3), 247-257.

Silvestri, L. (2001). Pre-service teachers' self-reported knowledge of classroom management. *Education,* 121(3), 575-580.

Smith, M. D., & Steffen, J. P. (1994). The effects of different schedules of feedback on the time management of student teachers. *Physical Educator,* 51(2), 81-92.

Sönmez, T., & Sunay, H. (2001, 21-23 Aralık). Ankara'daki ortaöğretim kurumlarında uygulanan beden eğitimi ve spor dersinin etkinliği üzerine bir araştırma. *II. Ulusal Beden Eğitimi ve Spor Öğretmenliği Sempozyumu. Görükle Kampüsü, Bursa.*

Stevens-Smith, D. A., & Bowling, T. (2002). Teaching with style for learning and understanding in physical education. *Teaching Elementary Physical Education,* 13(4), 18-22.

Strand, B. N., & Johnson, M. (1990). The pre-student teaching practicum: Don't leave it to chance. *Physical Educator,* 47(4), 197-203.

Van der Mars, H. (1989). Observer reliability: Issues and Procedures. In P. W. Darst, D. B. Zakrajsek &, V. H. Mancini (Eds.), *Analyzing physical education and sports instruction* (pp. 55-80), Illinois: Human Kinetics.

Virgilio, S. J., & Krebs, P. S. (1984). Effective time management techniques. *Journal of Physical Education Recreation and Dance,* 55(4), 68-73.

Welk, G. J., & Wood, K. (2000). Physical activity assessments in physical education: A practical review of instruments and their use in the curriculum. *Journal of Physical Education, Recreation and Dance,* 71(1), 30-40.

Weng, C. (2001). *The relationship between learning style preferences and teaching style preferences in college students.* Unpublished doctoral dissertation, University of Northern Colorado, Greeley, Colorado. (UMI No: 3025111)

Werner, P. (2001). More tactical approaches to playing games. *Teaching Elementary Physical Education,* 12(1), 6-8.

Woods, A. M., & Earls, N. F. (1995). An examination of physical education teachers from a research-based preparation program. *Physical Educator,* 52(2), 78-92.

APPENDICES

APPENDIX A

PHYSICAL EDUCATION CLASSROOM MANAGEMENT ANALYSIS FORM

Physical Education Classroom Management Analysis Form

(PECMAF)

School		**Teacher**	
Subject		**Experience**	
Grade		**Gender**	
Class size		**Date**	
Observer			

1. Classroom Formation Patterns during Introduction Part of the Lesson

a. Beginning the class	
b. Theoretical explanation	

2. Classroom Formation Patterns during Warm-up Activities

Warm-up	**a. Running**	
	b. Stretching	

3.

Group size / Active students	
Ex.1	**Ex.5**
Ex.2	**Ex.6**
Ex.3	**Ex.7**
Ex.4	**Ex.8**

4.

Criteria for Grouping		
a. Physical characteristics	**b. Gender**	**c. Others**

5. Arranging Equipment

Arranging Equipment		
1. Teacher	2. Student	3. Both

6. Number of Equipment and Group Size for Each Exercise

Number of equipment / Student number in each group	
Ex.1	Ex.5
Ex.2	Ex.6
Ex.3	Ex.7
Ex.4	Ex.8

7. Classroom Formation Patterns During Motor Exercises

Formation Patterns		
	Ex.1	Ex.5
	Ex.2	Ex.6
	Ex.3	Ex.7
	Ex.4	Ex.8

9. Instructional Area

Instructional Area				
a. Sports Hall	b. School Garden	c. Football Field	d. Swimming Pool	e. Others

10. Usage of the Instructional Area

The amount of used instructional area			
1. 4/1	2. 4/2	3. 4/3	4. Total area

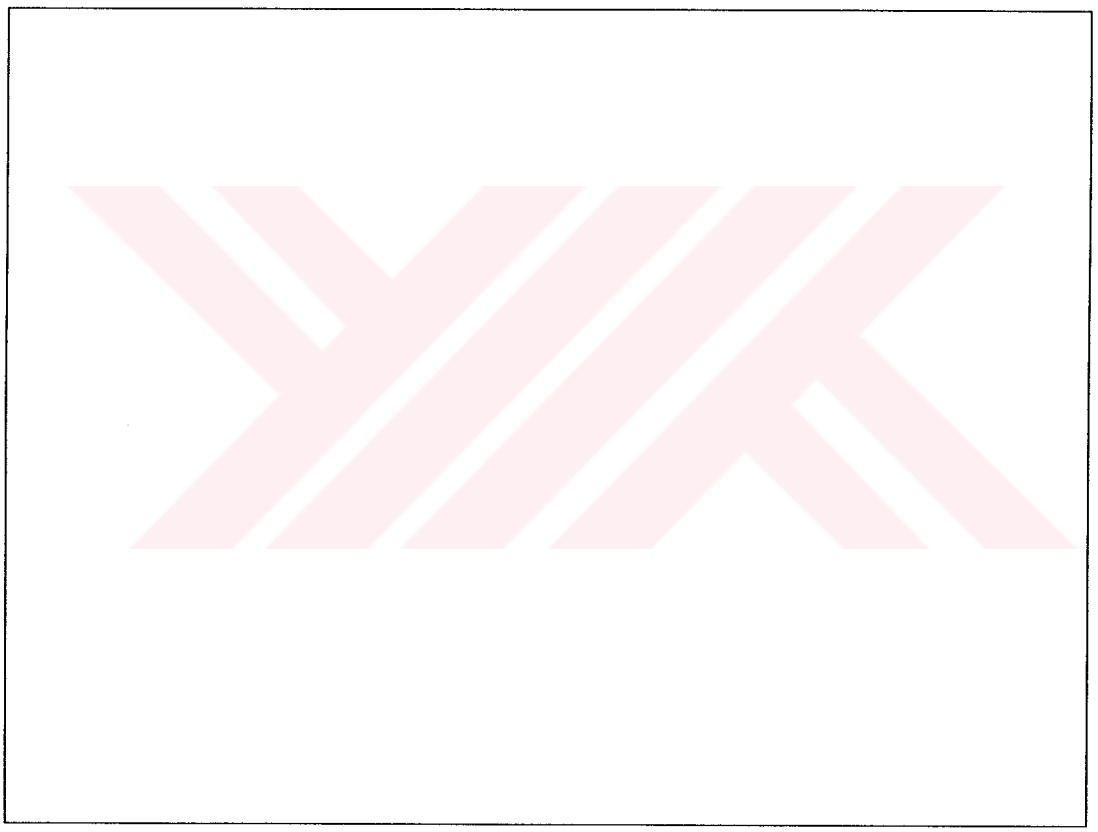
11. Closure Part

Teacher summarised the lesson at the end of the class	
a. Yes	b. No

12. Picking up the Equipment

Picking up the equipment		
a. Teacher	b. Student	c. Both

13. Overall impression about the instruction



Description of Physical Education Classroom Management Analysis Form

(PECMAF)

1. Classroom formation patterns during introduction part of the lesson
   a. At the beginning of the lesson (ceremony, roll call)
   b. Theoretical explanation (presentation of the subject, technical explanations of the movement)

*Teacher draws the classroom formation types on the empty space with simple figures at the beginning of the lesson and during theoretical explanations)

2. Classroom formation patterns that are used during warm up session
   a. Running part (teacher draws the formation type of aerobic activity; it may be whether running around the teaching area, or stable running with the teachers commands)
   b. Stretching part (teacher draws the formation type that is used during stretching exercises)
3. Group size / active students
   a. Group size refers to the number of students in each group
   b. Active students refer to active students in each group (data will be written for each drill)
4. Criteria for grouping: It refers to the criterion that teachers used for grouping students for the exercises
   a. Physical characteristics (height, weight, etc.)
   b. Gender (girls, boys)
   c. Others (other than physical characteristics and gender)

5. Information about the arrangement of the equipment (teacher, student, both)
6. Information about the number of equipment and students for each equipment (number of equipment / student number will be written for each drill)
7. Classroom formation patterns that were used during physical exercises (teacher will draw the classroom formation patterns with simple figures for each drill)
8. The area that classes took place (sports hall, school garden, football field, swimming pool, etc.)

9. Information about the teachers' use of total area during instruction (4/1, 4/2, 4/3, total area)
10. Information about whether the teacher summarised the lesson or not
11. Information about the picking up the equipment (teacher, student, both)
12. Overall impression

Description of Classroom Formation Patterns

Most of the explanations are taken from Kirchner, G., Fishburne, J. G. (1995). Physical Education for Elementary School Children (9th ed. pp.115).

Formation	Explanation	Uses
1. Single line		
X X X X X X X X X X X O	Organise children in a straight line whether standing on the lines on the teaching area.	Roll taking Warm-up exercises Explanation of the subject
2. Double column		
X X X X X X X X X X O	Place two child for each line desired equidistant apart, then signal the class to line up behind these children.	Relays Simple games Marching Teaching stunts on floor or mats Roll taking Teaching basic skills
3. Face to face double line		
X X X X X X X X X X X O X X X X X X X X X X X	Group children into two single lines facing each other.	Roll taking Teaching basic skills Explanation of the subject Warm-up activities
4. Side by side double line		
X X X X X X X X X X X X X X X X X X X X X X O	When the class size is large, arrange children into two single lines one after the other.	Roll taking Teaching basic skills Explanation of the subject Teaching dance skills
5. Side by side triple line		
X X X X X X X X X X X X X X X X X X X X X X X X X X X O	When the class is so Crowded organise children into three single lines one after another.	Roll taking Warm-up exercises Stretching exercises Explanation of the subject
6. Fan		
X X X X X X X X O X X X X X X X	The fan formation is used for small group activities. Arrange children in a line Facing their leader, then have them join hands and form a half-circle	Throwing and kicking drills Relays Mimetics Simple floor stunts Teaching dance skills

7. Shuttle		
5 3 1 ⟶ 2 4 6 X X X ⟵ X X X	Arrange children in 2, 3 or more equal lines, then separate lines the distance required for the activity. Player 1 performs the skill, then shifts to the rear of the opposite line; player 2 performs and shifts to the rear of the opposite line, etc.	Throwing and kicking drills Relays Tumbling activities from opposite ends of mat Activities requiring close observation by teacher
8. Scattered		
X X X X X X X X X X X X X X X X X	Allow children to find a spot in the play area. Have each child reach out with his arms to see if he can touch another person. Require the children who can touch others to shift until they are free of obstruction	Warm-up exercises Mimetics Tag games Simple floor stunts
9. Circle		
X X X X X X X X O X X X X X X X X	Teacher may form a circle by following the teacher as she walks around a circle. Other methods include all joining hands and forming a circle, or having the class take positions on a circle printed on the floor or play area	Simple games Warm-up exercises Circle relays Teaching simple stunts Teaching basic dance steps Teaching throwing and kicking skills Marching Mimetics
10. L shape		
X X X X X X X X X X X X X X X X O	Teacher may organise students to form a L shape on the basketball or volleyball court line when the class is crowded	Roll up Warm-up exercises Teaching simple skills Marching
11. Face to face triple line		
X X X X X X X X X X X X X X X X X X O X X X X X X X X X X X X X X X X X X	Teacher may choose four to eight students as leaders and have other students line up behind one of the leaders in designated areas of floor	Roll up Relay games Warm-up exercises Explanation of the subject

APPENDIX B

TIME MANAGEMENT ANALYSIS FORM

TIME MANAGEMENT ANALYSIS FORM

Name of the teacher	Date
Subject	School
Observer	Grade

	Lesson Context	Duration
	Instruction	
Management	Beginning class	
	Ending class	
	Management	
Motor Skill	Warm up	
	Activity	
	Game	

Definitions of Teacher's Time Management Behaviours in each Lesson Context Category

1. **Instructional Time:** Less than 50 percent of the class is active and teacher give information about the subject matter of physical education such as explanation of movement and fitness concepts, motor skill performance, how to play game, or presenting feedback about students' performance. Explanations can be provided directly by the teacher by using visual aids, talking and demonstrating (teacher or student demonstration); or by requesting information from students. Instruction time starts when the teacher give "stop, listen, or wait" signal by whistle or voice, and ends with the "continue, or go on" signal.
2. **Management Time:** Management time includes the sum of time spent in beginning/ending class, equipment management, organisation, behaviour management, and other tasks such as transitions from one drill or

explanation/demonstration to another, the time neither skill practice nor cognitive activity is occurring and student is ready to practice or move on to another activity, distribution and collection of equipment, organise class into groups, changing teams, moving from inside to outside etc.

a. **Beginning the class:** The time the teacher utilises to begin class including waiting for class to come to teaching area, and listening the roll being called. It typically occurs as students are standing in line and waiting.
b. **Ending the class:** The time teacher utilises to end including gathering students into line, and organising ceremony to end the class.

3. **Motor Skill Practice:** Motor skill practice time includes the motor activity, game and warm-up
    a. **Motor activities:** At least 50 percent of the class is performing subject matter related motor activities including physical fitness activities, motor skills, explatory movements, fundamental movements, sport skills, and drills.
    b. **Game:** The time when students are in game a game situation, but where the specific purpose is skill practice of one or both skills without.
    c. **Warm-up:** The times spend with preparatory or repetitive exercises for warm up or fitness enhancement. Warm-up includes;
        i. **Jogging:** Students' activity to warm-up whether by running around the teaching area (school garden, sports hall, etc.), or running in line.
        ii. **Stretching:** Students' activity to warm-up by stretching muscles.

APPENDIX C

TEACHING STYLE CHECKLIST

Teaching Style Checklist

Name of the teacher	**Date**
Subject	**School**
Observer	**Grade**

Teaching Style	Practiced
Command (A)	
Practice (B)	
Reciprocal (C)	
Self-Check (D)	
Inclusion (E)	
Guided Discovery (F)	
Convergent Discovery (G)	
Divergent Discovery (H)	
Individual Program – Learner's Design (I)	
Learner Initiated (J)	
Self Teaching (K)	

Description of Mosston Spectrum of Teaching Styles

THE COMMAND STYLE (A)

The purpose of this style is to learn to do task(s)
accurately and within a short period of time,
following all decisions by the teacher.

Role of Teacher

- To make subject matter decisions
- To make all impact decisions:

Subject matter
Order of task
Starting time
Pace and rhythm
Stopping time
Interval
Attire and appearance
Initiating questions for clarification

- To provide feedback to learner about role and subject matter

Role of Learner

To follow and perform the task when and as described

THE PRACTICE STYLE (B)

The purposes of this style are to offer the learner time to work individually,
And to provide the teacher with time to offer the learner
both individual and private feedback.

Role of Learner

- To do the task
- To make the following nine decisions

Order of task(s)
Starting time
Pace and rhythm
Stopping time
Interval
Posture
Location
Attire and appearance
Initiating questions for clarification

Role of Teacher

- To be available to answer questions by the learner
- To gather information about the learner's performance and offer individual and private feedback

THE RECIPROCAL STYLE (C)

The purposes of this style are to work with a partner, and to offer feedback to the partner, based on the criteria prepared by the teacher.

Role of Learner

- To select the roles of doer and observer
- The doer does the task (as in style B)
- The observer compares the work of the doer with the criteria, draws conclusions, and offers feedback to the doer
- When the task is completed by the does, doer and observer switch roles

Role of Teacher

- To monitor the observers
- To give feedback to the observers
- To answer the observers' questions

THE SELF-CHECK STYLE

The purposes of this style are to learn to do a task, and to check your own work.

Role of Learner

- To perform the task
- To make the following nine decisions

Order of task(s)
Starting time
Pace and rhythm
Stopping time
Interval
Posture
Location
Attire and appearance
Initiating questions for clarification

- To check his or her own task performance

Role of Teacher

- To prepare the subject matter and criteria
- To answer questions by the learner
- To initiate communication with the learner

THE INCLUSION STYLE (E)

The purposes of this style are to learn to select
a level of a task you can perform,
and to check your own work.

Role of Learner

- To make the following nine decisions

Order of task(s)
Starting time
Pace and rhythm
Stopping time
Interval
Posture
Location
Attire and appearance
Initiating questions for clarification

- To examine the different levels of the task
- To select the level appropriate for you
- To perform the task
- To check your own work against criteria prepared by the teacher
- To ask the teacher questions for clarification

Role of Teacher

- To prepare the task and the levels within the task
- To prepare the criteria for the levels in the task
- To answer questions by the learner
- To initiate communication with the learner

THE GUIDED DISCOVERY STYLE (F)

The purpose of this style is to discover a concept
answering a sequence of questions
presented by the teacher.

Role of Learner

- To listen to the teacher's question or clue
- To discover the answer for each question in the sequence
- To discover the final answer, which constitutes the concept sought

Role of Teacher

- To design the sequence of questions, each designed by for a small discovery by the learner
- To present the questions to the learner, in a sequence
- To provide periodic feedback to learner
- To acknowledge the learner's discovery of the concept

THE CONVERGENT DISCOVERY STYLE (G)

The purpose of this style is to discover the solution to a problem, Clarify an issue, arrive at a conclusion by employing Logical procedures, reasoning, and critical thinking.

Role of Learner

- To examine the problem or issue
- To evolve his or her own procedure toward a solution or conclusion
- To use the minihierarchy that will lead to the solution or conclusion
- To verify the process and the solution by checking them against criteria appropriate for the subject matter at hand

Role of Teacher

- To present the problem or issue
- To follow the learner's process of thinking
- To offer feedback or clues (if necessary) without providing the solution

THE DIVERGENT PRODUCTION STYLE (H)

The purpose of this style is to engage in producing (discovering) multiple responses to a single question.

Role of Learner

- To make the following nine decisions

Order of task(s)
Starting time
Pace and rhythm
Stopping time
Interval
Posture
Location
Attire and appearance
Initiating questions for clarification

- To produce divergent responses (multiple responses to the same question)
- To ascertain the validity of the responses
- To verify responses in some subject matter tasks

Role of Learner

- To make the decision about the question to be asked
- To accept the responses
- To serve as source of verification in subject matter tasks

THE INDIVIDUAL PROGRAM-LEARNER'S DESIGN STYLE (I)

The purpose of this style is for the learner to design, develop, and perform Series of tasks organised into a personal program.

Role of Learner

- To select the topic that will be focus of his or her study
- To identify questions and issues appropriate for the topic
- To organise the questions, organise the tasks, and design a personal program-a course of action
- To collect data about the topic, answer the questions, and organise the answers into a reasonable framework
- To verify his or her procedures and solutions based on criteria intrinsic to the subject matter at hand

Role of Teacher

- To select the general subject matter area from which the learner selects his or her topic
- To observe the learner's progress
- To listen to the learner's periodic presentation of questions and answers

THE LEARNER-INITIATED STYLE (J)

The purpose of this style is to provide the learner with the opportunity To initiate his or her learning experience, Design it, do it, and evaluate it.

Role of Learner

- To initiate the style
- To design the program for him-or herself
- To do it
- To evaluate it
- To decide how to use the teacher

Role of Teacher

- To accept the learner's decision to initiate his or her own learning
- To provide the general conditions for the learner's plans
- To alert the learner to any discrepancies between the learner's intent and action

*Mosston and Ashworth (1994). Teaching physical education (4th ed.). New York: Macmillan College Publishing Company.

Mosston and Ashworth's Anatomy of Any Teaching Style: Lesson Decisions

Sets of decisions	Decisions that must be made
Pre-impact (content: preparation)	1. Objective of the episode 2. Selection of the teaching style 3. Anticipated learning style 4. Whom to teach 5. Subject matter 6. When to teach (time): a. starting time b. pace and rhythm c. duration d. stopping time e. interval f. termination 7. Modes of communication 8. Treatment of communications 9. Organisational arrangements 10. Where to teach (location) 11. Posture 12. Attire and appearance 13. Parameters 14. Class climate 15. Evaluative procedures and materials 16. Other
Impact (content: execution and performance)	1. Implementing and adhering to the pre-impact decisions (1-14) 2. Adjustment decisions 3. Other
Post impact	1. Gathering information about the performance in the impact set (by observing, listening, touching, smelling, etc.) 2. Assessing the information about against criteria (instrumentation, procedures, materials, norms, values, etc.) 3. Providing feedback (corrective, value, neutral, and ambiguous statements) 4. Treatment of questions 5. Assessing the selected teaching style 6. Assessing the anticipated learning style 7. Adjustment decisions 8. Other

Note: From *Teaching Physical Education* (p. 12) by M. Mosston and S. Ashworth, 1994, Macmillan College Publishing Company, New York.