The Effect Of Different Teaching Styles Used In Phsycial Education Courses On Academic Learning Time*

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Abstract

This study aims at seeing the effects of different teaching styles on student behaviours and course content activities and academic learning time in physical education scores. The participants are 30 grade four students at Abant İzzet Baysal University, Department of Teaching Physical Education during 2010–2011 academic year. Forty minute lessons of 30 pre-service teachers using command style (n=10), practice style (n=10) and reciprocal style (n=10) were videotaped and recordings were examined using the "observation form of academic learning time in physical education". The results of the analysis revealed that significant differences among academic learning time and three different teaching styles were utilized by pre-service teachers in physical education and sport classes. As a result of this study, academic learning time has been concluded in lessons using practice style at most, then the reciprocal style, at least the command style.

Keywords: Physical Education Course, Academic Learning Time, Teaching Styles, Pre-service Teacher.

Introduction

One of the most important aims of education is to help meeting the goals included in the curriculum. It is intended to reach this aim through Physical Education, which is an inseparable part of general education. With its dynamic nature, Physical Education is different from other sedentary classes.

The aim of Physical Education courses is to develop skill learning, health related physical fitness, physical skills and the perception of physical activity (Graham, 1987). Each student must have the opportunity to attend Physical Education classes, which support the development of the physical qualities such as flexibility, cardiovascular endurance and muscle power and durability (Heyward, 1991). In this context, Physical Education teacher should be able to identify the motor development needs of the students, choose the motor activities that can meet the students' needs at the optimum level and provide education in such an environment that is suitable to their developments (Hawkins, Wiegand and Behneman, 1983).

As it is seen, the area where the limits of the responsibilities and duties of Physical Education teachers is drawn requires professional efficiency. Many educational researchers have studied valid and realistic models related to determining the efficiency of the teacher. During these studies, a variety of models were applied in order to determine the efficiency of the teacher in Physical Education classes (Placek and Randall, 1986).

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Carroll (1963), Bloom (1976), Harnischfeger and Wiley (1976) have established the basis of the teaching efficiency assessment studies by determining how the student uses his or her time during the lesson based on the process – process approach, which is the base of the most used studies today (cited by Placek and Randall, 1986). Process – process approach has been handled in the Teacher Evaluation Studies made by California Teacher Training and Preparation Commission, and the term Academic Learning Time (ALT), one of the most important criteria on student's usage of the course time in teacher's efficiency has emerged.

The studies on academic learning time are based on the theory of School Learning by Carroll (1963) who defends the hypothesis "learning is the functionality of participation time required for learning". The relationship between the learning time and the aims and acquisitions of the lesson were emphasized in the project Beginning Teacher Evolution Study (BTES) which later happened to be the prime study that enlightens the concept of time (Denham and Lieberman, 1980). In BTES studies, it is argued that the teaching activities and classroom environment directly affects student's learning. ALT has come out as a result of the observations on different courses over six years in the frame of BTES studies. ALT can be defined as a piece of time when students are interested in learning in an active, successful and productive way (Fisher and Berlinger, 1985). The most important finding of the BTES studies is that academic learning time is a very powerful determiner of academic acquisition (Gettinger and Seibert, 2002).

Academic learning time is a good way to evaluate the teacher's efficiency. A teacher is considered more effective if he or she has a better level of academic learning time in Physical Education courses (Siedentop, 2000; Rink, 1996; Siedentop, 1983). In Physical Education course ,increasing the time allocated to the activity, choosing an activity appropriate to the students' level and keeping them organized are the indicators of an efficient teaching (Siedentop, 1991; Parker and O'Sullivan, 1983). Moreover, since it is an indicator of keeping the student interested and active in learning the motor activity, ALT becomes an important concept for the teacher (Metzler,1980). The time provided for motor activities in a lesson, and the time student actually spends on this motor activity are distinct concepts (Yıldırım and Çiçek, 2002; Harrison, 1992). That is why how students spend their time in class is an important issue for teachers, sports psychologists, school administrators and educational researchers, and studies on this subject are needed (Gettinger and Seibert, 2002).

Three types of educational time is defined in BTES studies conducted in early 1970's, as allocated time, participation time and academic learning time (Yıldırım,2003). However, together with the findings of later studies, today, the learning time in education is defined in four levels as allocated time, teaching time, engaged time and academic learning time (Gettinger and Seibert, 2002; Ekici, 2007). These levels fall within each other. The time becomes shorter when moving from allocated time to academic learning time (Ekici, 2007: 102).

Another issue directly related to reaching the aim and using the time is the different teaching styles applied in Physical Education classes. Teaching styles in Physical Education expresses the teaching tools, materials, the use of teaching techniques and their organization by putting the question "How can I teach?" in the centre (Clark and Starr, 1991: 25). In order to increase the quality of education, Physical Education teachers use styles such as command, practice and reciprocal styles, self-evaluation, participation, directed discovery, problem solving and personal program –student's design, student initiation and self-teaching (Mosston, 1981; Mosston and Ashworth, 2009; Demirhan, 2006). Command, practice and reciprocal styles can be counted as the widely used styles used in Physical Education courses (Yoncalık, 2009). Command style, also known as the classical or traditional style in its basic meaning, is the teaching style in which the teacher determines when the student starts and finishes the practice, how many times does the student repeat, and the duration and type of the exercise (Byra, 2000). In practice style, however, after delivering the exercise to the students, students are free to start and finish the exercise whenever they want, do it for as long as and as many times as they wish. In this style, exercise time and the frequency of repetition is up to the student and planning the station activities is common with this style (Demirhan, 2006). Reciprocal style can be referred as a

style, in which the students are matched as observer and doer, and the observer student gives the implementer student feedback, correction and reinforcement based on the paper the teacher writes the skill or exercise criteria (Mosston, 1981; Demirhan, 2006; Byra, 2000).

There are many studies aiming to determine the academic learning time. This studies indicate that the increase in ALT-PE also increases the efficiency of the learning environments in Physical Education courses (Hastie, 1994; Godbout et al., 1987; Derri et al., 2007; Placek and Randall, 1986; Derri et al., 2007); furthermore, the ALT level of Physical Education teachers is higher than primary school teachers (Placek and Randall, 1986) and prospective Physical Education teachers (Yıldırım et al.,2007). Besides, since ALT-PE sublevels are indicators that show evaluating the efficiency through time analysis of Physical Education courses is an effective way (Silverman et al. 1991; Cousineau and Luke, 1990; Fink and Siedentop, 1989; Oslin, 1996; Birdwell,1980). It is also used for many sports such as ice hockey (Godbout et al., 1987), badminton (Beckett, 1989), volleyball (Godbout et al., 1987; Silverman et al., 1991), golf (Metzler, 1983), basketball (Dixon, 1997) and swimming (Silverman, 1985).

When the literature is analyzed, it is seen that many studies are conducted on the importance of academic learning time and the application of teaching styles. However, no research has been found analyzing the effects of the teaching styles on academic learning time in Physical Education courses. As a result, studying the effects of teaching styles on academic learning time will contribute to the literature. Therefore, the aim of this study was to determine the effects of the different teaching styles used in physical education and sport courses on academic learning time.

Method

Research Model

The study is conducted through cross sectional approach, which is one of the general survey model that expresses the studies done on a group or sample in order to reach a judgement about the population (Karasar, 2005: 79) and relational survey model. Relational survey model is a model of study which aims to determine the level and / or existence of covariance among two or more variables.

Study Group

The study group consists of the fourth grade students in Abant İzzet Baysal University School of Physical Education and Sports in 2010-2011 educational year. The number of pre-service teachers included was 30 with a command group (n:10), practice group (n:10) and reciprocal group (n:10). The groups were formed by random assignment. 8 of the participants were female and 22 of them were male. All the pre-service teachers who participated in the study have taken and passed Teaching Styles in Physical Education Courses I and II, School Experience Course and Classroom Management Course, and they were capable of using different styles in their field. The reason why pre-service teachers were chosen for the study was to increase validity since these teachers have taken the courses related to teaching styles and classroom management from the same instructors.

Data Collection Models and Tools

Structured field study observation method is used in data collection. Physical Education pre-service teachers were not observed through direct observation; instead, recorded observation technique, which is more reliable and objective and which prevents data loss, was used (Turner and Meyer, 2000; Balcı, 2005).

Despite the efforts to equalize classes, units and teaching styles, it was not possible as a testing pattern, so in order to get expedient results and provide internal validity, the units pre-service teachers will cover were determined as football, basketball, volleyball and track and field, and two units for each teaching style. The study was applied in six, seven and eight grade students in secondary education level. Physical Education course annual plan was taken as the basis of course contents since the study was done in real school environment.

Before pre-service teachers were recorded, all the necessary permission was taken from Bolu Provincial Director of National Education, school management and the physical educators, and the teachers were recorded in their natural environment of a 40 minute Physical Education lesson. The camera was placed in a position that it can view all the students, the classroom environment and the teachers. Moreover, a wireless microphone was used to record the behaviour and verbal communication of the pre-service teachers. Video records were taken between April and May in 2011, in five weeks. By 10 videos for each teaching style, a total of 30 videos were taken. After each observation, these records were transferred to computer environment.

During the process of evaluating the video records, ALT-PE systematic observation tool, which was developed by Parker (1989) was used. In Physical Education courses, since the activity is both theoretical and practical, it is very difficult to evaluate student success. ALT-PE observation tool is an effective tool which provides information on what the in class activities consist of, what students do during the course and for how long they participate in the physical activity (Anderson, 1983). This observation tool that Parker (1989) developed consists of two main areas and levels and sub-levels which are under this area (Figure 1).

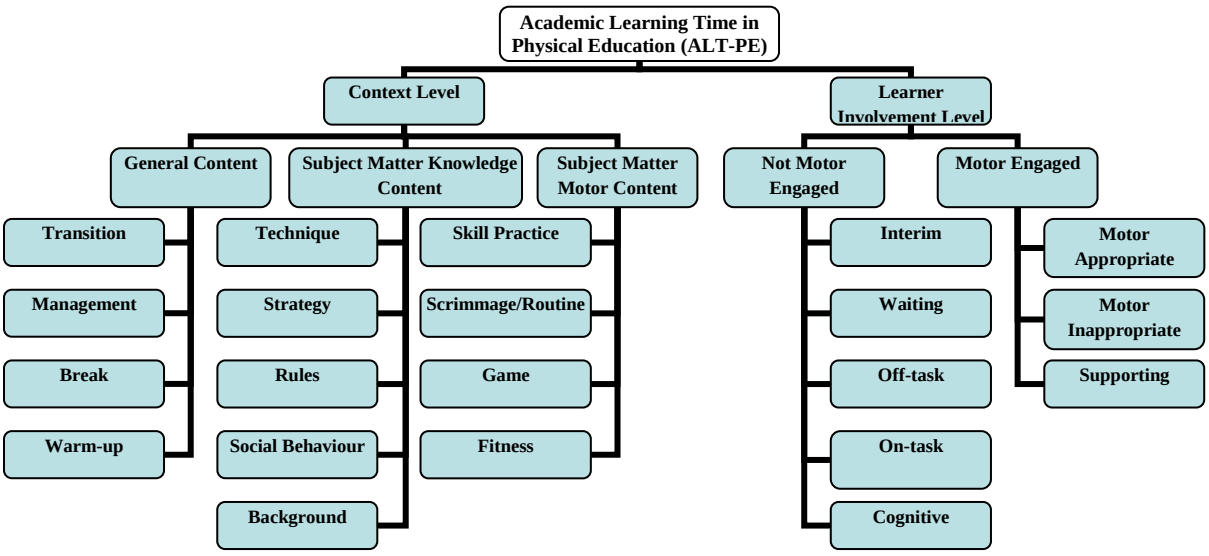

Figure 1. *Main Fields, Levels and Sub-Levels of Academic Learning Time in Physical Education (Parker, 1989; Yıldırım et al., 2007).*

The main area of class environment and content gives information on the activities and behaviours in the allocated time while the main area of student participation provides information on student behaviour in the allocated time (Parker, 1989; Siedentop, Mand, and Taggart, 1986; Yıldırım, 2003).

Processing the Data

The observation technique of watching six seconds and recording six seconds is used (Parker, 1989: 199- 200) to grade the data. In order to determine these six second periods, a pre-recorded tape including "watch" and "record" commands was used. Depending on the literature, the observer who evaluated in this study first determined three students with different motor skill level. After that, by looking at the activity, each of these students are doing at that time, with the technique of watch six seconds record six seconds, and appropriate to the main area, level and sub-levels that were in the observation tool, the observer coded the activity (Parker, 1989: 199- 200; Yıldırım et al., 2007).

In order to calculate the time of levels and sub-levels in the lesson, every recorded behaviour was multiplied by six. When evaluating ALT-PE data, many approaches can be used. However, the basic and simplest evaluation is to study on the percentages of the sum of the observation data. Metzler (1983, cited: Parker, 1989: 203) states that this process consists of three steps. First of all, the

lost and wrong data on the observation tool should be determined and calculated for each student. Later, the data is tabulated and transferred into a percentage by dividing the total number of observation into the frequency of each behaviour. For instance, if you need ALT values, all the "appropriate motor activity" observation is divided into the total observation time. If the total observation time is multiplied by the percentage, the total ALT time will be obtained. Finally, if desired, this style can be applied for all the levels and sub-levels of class environment and content main area and student participation main idea. In the end of this process, a percentage for each level can be obtained (Parker, 1989: 203-204). Depending on the literature, applying the data evaluation process, percentages were obtained from the data on every level and sub-level in the study.

Each of the 30 pre-service teachers evaluated in the study were recorded by the same observer, and they were evaluated by the same person. Van der Mars (1989: 54) stated that there are two observer agreement procedures as interobserver and intraobserver. Intraobserver agreement refers to the situation in which one observer makes an observation of events on one day and then comes back at a later point in time to observe the same events. In this situation the term "agreement" is closest in meaning to the term reliability in observational studies (Van der Mars, 1989: 54). In this study, according to the calculations made depending on the coherence between observations (Van der Mars, 1989: 56), the Intraobserver agreement rate is 93% in the main area of class environment and content, and 95% in the main area of student participation. Metzler (1983:187) stated that when there are more than 10 observation categories, a consistency of 70% was required; on the other hand Van der Mars stated that with three or less behaviours are observed the Intraobserver agreement rate should be 90% but with four and more behaviours, 80-85% shows high validity.

Data Analysis

Levene test and Kolmogorov-Smirnov test were done to control the distribution of normality and homogeniety of variance of the data. Descriptive statistics and one way variance analysis (ANOVA), Tukey HSD of Post Hoc tests were used to analyze the data. The significance level was taken 0.05.

Findings

One way variance analysis was made to compare the time of student participation in main area and class environment and content which form academic learning time in Physical Education courses, and the results are given in Table 1.

Table 1.

The Distribution and Comparison of ALT-PE Levels according to the Different Teaching Styles

		Command Style *(n:10)*		Practice Style *(n:10)*		Reciprocal Style *(n:10)*				
		$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	F	p	Significant Difference
Context Level	General Content	40,17	9,14	49,03	5,31	51,01	6,14	6,68	,004**	1-2 1-3
	Subject Matter Knowledge Content	15,17	8,33	12,46	5,07	10,03	4,12	3,06	,063	-
	Subject Matter Motor Content	43,41	6,19	38,25	6,78	38,95	6,55	1,84	,177	-
Learners Involvement	Not Motor Engaged	85,09	5,10	71,73	3,06	80,21	3,44	29,30	,000**	1-2 1-3 2-3
	Motor Engaged	14,91	5,10	28,26	3,06	19,38	3,44	29,30	,000**	1-2 1-3 2-3

** p< 0.01 * p< 0.05 1. Command Style 2. Practice Style 3. Reciprocal Style

When Table 1 was examined, it was seen that in the level of class environment and content, the most time was spent on general content in courses taught with practice and reciprocal style, and on subject related motor knowledge in courses taught with command style. As a result of the analysis, there was statistically meaningful differences among the command, practice and reciprocal styles used in Physical Education courses ($F_{(2,27)}$ =6,68; p<0.01). According to the Tukey HSD analysis, there was the significant difference between command style, and practice and reciprocal styles at the general content sub-level.

According to Table 1, it was seen that at the level of student participation, the most time was allocated to non-motor activity behaviours in three styles. Non-motor activity behaviours took the most time in the lessons used command style (85,3%) and the least time in the lessons used practice style (71,73%). Motor activity behaviours took the most time in the lessons used practice style (28, 26%) and the least time in the lessons used command style. In the level of non-motor activity behaviours ($F_{(2,27)}$ =29,30; p<0.001) and motor activity behaviours ($F_{(2,27)}$ =29,30; p<0.001) that form the main area of student participation, there was significant difference between the command, practice and reciprocal styles which are used in Physical Education courses. According to the analysis made to determine between which groups the difference was, the significant difference was found among the three styles in both of the levels.

Table 2.*The Distribution and Comparison of Sub-levels of Context Level according to the Different Teaching Styles*

		Command Style (n:10)		Practice Style (n:10)		Reciprocal Style (n:10)				
		$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	F	p	Significant Difference
General Content	Transitions	10,42	5,22	14,88	2,95	20,61	4,39	14,17	,000**	1-3 2-3
	Management	11,61	4,99	11,83	2,54	10,08	3,17	0,66	,523	-
	Break	3,47	2,06	5,36	3,86	1,33	2,08	5,19	,012*	2-3
	Warm-up	14,67	6,65	16,94	3,66	18,99	4,54	1,78	,187	-
Subject Matter Knowledge Content	Technique	6,94	2,20	6,95	3,39	5,33	2,86	1,05	,360	-
	Strategy	4,12	1,67	2,30	0,98	1,87	1,04	8,84	,001**	1-2 1-3
	Rule	3,25	2,03	2,35	1,16	2,11	1,33	1,50	,241	-
	Social Behaviour	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-
	Background	1,26	2,03	0,84	1,17	0,70	1,04	0,38	,683	-
Subject Matter Motor Content	Skill Practice	41,31	4,96	36,47	6,83	37,30	6,90	1,69	,203	-
	Scrimmage/Routine	1,47	1,72	0,43	0,63	0,05	0,16	4,76	,017*	1-3
	Game	0,95	2,04	1,59	3,38	1,59	3,37	0,15	,858	-
	Fitness	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-

*** p< 0.01* * * p< 0.05* *1. Command Style* *2.Practice Style* *3. Reciprocal Style*

According to Table 2, it was seen that more time was allocated to management (11,83%) and transition (5,36%) sub-levels in physical education courses which were conducted by practice style. On the other hand, more time was allocated to transition (20,61%) and warm-up (28,99%) sub-levels in physical education courses which were conducted by reciprocal style when compared to the other two styles. No significant difference was observed between the sub-levels of management and warm-up that forms the general content level and teaching styles. Nonetheless, a statistical significant difference was observed in transition ($F_{(2,27)}$ =14,17; p<0.01) and break ($F_{(2,27)}$ =5,19; p<0.05) sublevels among

command, practice and reciprocal styles. According to the Tukey HSD analysis results, the significant difference was seen between the reciprocal style and the other styles in transition sublevel and between practice and reciprocal styles in break sublevel. Therefore, it can be said that, while the teachers allot more time on context level to transitions comparing to other two styles in the lessons which were conducted by reciprocal style.

Table 2 has shown that, the maximal time was allocated to technique sub-level in every three styles, and no time was allocated to social behaviours. However, it was seen that the least time was allocated to background knowledge after social behaviours. Within the comparisons made in different styles belonging to subject matter knowledge level, no significant difference was observed between technique, rules, social behaviours, and background knowledge sub-levels and teaching styles. On the contrary, in the strategy ($F_{(2,27)}$ =8,84; p<0.001) sub-level a statistical significant difference was found between each three styles. According to Tukey HSD analysis results, it was stated that the significant difference was between the command and practice styles, and reciprocal style. As far as these results were concerned, it can be said that teachers allot more time on strategy sub-level comparing to other two styles during the lessons conducting with command style.

When the findings of the sub-levels of the subject matter motor content is examined, in physical education courses, within 41,31% of courses conducted by command style, within 36,47% of courses conducted by practice style, and within 37,30% of th courses conducted by reciprocal style, it was seen that time was allocated to skill practice. Besides, according to these findings, more time was allocated to skill practice in the courses conducted by command style comparing to the other two styles. In the study, unfortunately, in the physical education courses, pre-service teachers allocated no time on the physical fitness sublevel. It was determined that no significant difference was found between teaching styles and sub-levels of game, fitness and skill practices which forms the subject matter motor knowledge level. However, within the scrimmage/routine ($F_{(2,27)}$ =8,84; p<0.001) sub-level, a statistical significant difference was found between command, practice and reciprocal styles that were used in physical education courses. According to Tukey HSD analysis results, it was stated that the significant difference was between the command and reciprocal styles.

Table 3.

The Distribution and Comparison of Sub-levels of Learner Involvement Level according to the Different Teaching Styles

		Command Style (n:10)		Practice Style (n:10)		Reciprocal Style (n:10)				
		$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	$\bar{X}$ (%)	ss	F	p	Significant Difference
Not Motor Engaged Behaviours	Interim	5,22	2,59	4,83	2,83	3,18	2,61	1,62	,216	-
	Waiting	25,94	7,71	5,99	2,04	10,93	3,89	41,04	,000**	1-2 1-3
	Off-Task	6,58	3,89	2,91	1,71	2,79	2,73	5,42	,010*	1-2 1-3
	On-Task	24,41	6,09	28,54	5,42	27,38	4,05	1,63	,213	-
	Cognitive	22,73	7,40	29,46	5,91	36,33	6,97	10,01	,001**	1-3
Motor Engaged Behaviours	Motor Appropriate	13,43	4,83	25,45	3,12	15,56	2,61	30,85	,000**	1-2 2-3
	Motor Inappropriate	1,12	0,87	2,81	1,88	2,38	2,06	2,69	,086	-
	Supporting	0,39	0,92	0,00	0,00	1,43	3,06	1,60	,219	-

** *p< 0.01* * *p< 0.05* *1. Command Style* *2. Practice Style* *3.Reciprocal Style*

When Table 3 is examined, it is seen that more time was allocated to interim (%5,22), waiting (%25,94) and off-task (6,58%) sub-levels for the courses conducted by command style. Besides, comparing to other styles, it was also seen that more time was allocated to on-task (%28,54) sub-level for the courses conducted by practice style comparing to other styles. It, finally, was seen that more time was allocated to cognitive behaviours for the courses conducted by reciprocal style comparing to other styles. According to the results of the one-way analysis of variance, no differences were determined between sub-levels of on-task and interim which forms not motor engaged behaviours level and teaching styles. On the contrary, a statistical significant difference was observed between three styles and waiting sub-level ($F_{(2,27)}$ =41,04; $p<0.001$), off-task sub-level ($F_{(2,27)}$ =5,42; $p<0.01$) and cognitive behaviours ($F_{(2,27)}$ =10,01; $p<0.05$). According to Tukey HSD analysis results, it was stated that the significant difference was between practice and reciprocal styles within waiting and off-task sub-levels. Besides, the other significant difference was observed between reciprocal and command styles within cognitive sub-level. As far as these results were concerned, it can be said that learners wait more within the courses conducted by command style, and they spend more time within the off-tasks. However, it also can be said that within the courses conducted by reciprocal style, students spend more time on cognitive behaviours comparing to two other styles

In Table 3, when motor engaged behaviours were examined through different styles, it is seen that the maximum time was allocated to motor appropriate for the courses conducted by all three styles, however, in the courses conducted by practice style, more time (25,45%) was allocated to motor appropriate comparing to the other two styles. In addition, within each of the three styles the least time was allocated to supporting. According to the results of the one-way analysis of variance, no significant differences were determined between motor inappropriate and supporting sub-levels and the teaching styles. However, within the motor appropriate sub-level, a statistical significant difference was determined between the command, practice and reciprocal styles that were used in physical education courses ($F_{(2,27)}$ =30,85; $p<0.001$). The very difference was determined between the practice and reciprocal styles and command style. According to these findings, it can be said that learners spend more time on motor appropriate for the courses conducted by practice style comparing to the other two styles.

According to Table 3, it was detemined that the academic learning time in the physical education courses, was realized mostly in the courses conducted by practice style (25,45%), and then in the course conducted by reciprocal style (15,56%), and was realized at the least in the courses conducted by command style (13,43%). In the findings of the academic learning time, a statistical significant difference was determined between the command, paractice and reciprocal styles ($F_{(2,27)}$ =30,85; $p<0.001$). According to Tukey HSD analysis results, the significant difference was determined within the practice and reciprocal styles. As a results of the findings, it can be said that more academic learning time was realized in the courses conducted by practice style comparing to the other two styles.

Discussion

The aim of this study was to determine the effects of variability of sub-time levels of academic learning time to the different teaching styles used in Physical Education courses. According to the results, it can be said that maximum time was allocated to the transition and cognitive sub-levels in the courses conducted by reciprocal style. The reason for this situation can be explained as the use of worksheet, the structure of this style and the partners who were depending on the tasks like role exchange. In the command and the practice styles while the teacher or teacher's role is upon one's responsibility, depending on the characteristics of the reciprocal style most of the teacher's duties were assigned to the most of the observers (Mosston and Ashworth, 2009). Within the light of this structure, it can be said that, in the reciprocal style less time was allocated to transition sub-level. In the style, observing partners are continuously acting as the executives, while the partner is giving feedbacks and correction by observing, and is assessing through the worksheet. Besides, it can also be said that executives are more interested in the physical activities.

In this study, it was determined that the pre-service teachers conducting the courses by different teaching styles allocated 16,8% of the time for warm-up within the total course time. This finding was concluded as on an average of 5,1% in the study of Randall and Placek (1996), on an average of 2,8% in the study of Randall and Imwold (1989), on an average of 8,9% in the study of Derri et al (2007), 3,2% in the study of Dars et al (1990). In our country in the study of Yıldırım (2007), the time allocated to warm-up was on an average of 16,3% among the pre-teachers and novice teachers.

Çiçek (1998) stated that the period allocated for warm-up should cover the 20% - 25% of the course in accordance with the aims of the course. In this study, the time allocated for warm-up was below the very period. However, when compared with the other studies, we can said that more time was allocated to warm-up in Physical Education courses in our country. This situation can be stated as more importance is set on warm-up in Physical Education courses in our country than the courses in different countries. The findings about subject matter knowledge support the findings of the studies of Yıldırım et al (2007), Randall and Placek (1986), Darst et al (1990), and Randall and Imwold (1989).

There are many studies supporting the fact that the least time was allocated to physical fitness and scrimmage/routine sub-level in the subject matter motor content level (Randall and Placek, 1986; Darst et al., 1990; Randall and Imwold, 1989; Evans et al., 1999; Ward et al., 1999). Even, no data was observed to be evaluated under the fitness sub-level. In this sub-level, there are customized practices and implementations to enhance fitness parameters. In the primary education curriculum in accordance with constructivist approach, it was stated that the acquisitions of the fitness in the regular physical activities sub-learning content of the curriculum of 6^{th}, 7^{th}, and 8^{th} grades should constitute at least 19% of the active involvement and healthy living learning context. However, although this knowledge was clearly stated in the curriculum, it was seen that pre-service teachers did not conduct any applications for developing the physical fitness of the students. This situation can be seen as the pre-service teachers have the thought of making a progress related to this field, or can be concluded as the pre-service teachers have insufficient knowledge on the new curriculum.

In the subject matter motor content level, the findings of allotting more time to the sub-levels of skill practice support the findings of the studies of Randall and Placek (1986), Darst et al. (1990), Randall and Imwold (1989), Evans et al. (1999), Ward et al. (1999). Another finding which is concluded is that in the skill practice sub-level the command style is more efficient than the other two styles. In other words, it can be said that more time was allocated to students for performing the skill practices in the courses conducted by command style. However, this does not mean that the students learn more of motor skills. Since, Martinek and Karper (1983) stated that effective learning in Physical Education courses does not determined by the time allocated to the skill practices, but involvement of the students to the skill practices in accordance with the objectives and allocated time. Therefore, in this study, we can said that the courses conducted by command style is being the least allocated time for the motor appropriate activities. Since, in the courses conducted by the command style, while the pre-service teachers allot more time on skill practices than the other styles, students wait for the command for improving their skills, moreover, due to the lack of equipment in our schools, students wait for the turns too much and they could not participate in the activities at the same level. The causes of the main problem of the participation to the skill practices in the command style can be stated as over-crowded classes, the lack of course area and the lack of the equipment. Within the practice and reciprocal styles, the need of using worksheet and more materials in addition to allocating more time to transition and management sub-levels due to the realization of the activities by separating them into the stations or by matching-up can be considered as an another reason for this situation.

These findings can be seen as during the courses conducted by command style while the students are waiting for the activities and related to this, they alienated from the course by off-task activities, within the courses conducted by practice style, the students make their own decisions for the activity and allocate more time to the activity they wanted. Besides, they can wait less and participate in the activities (Mosston and Ashworth, 2009). The students having the chance to

determine when to start and end the activity and having the chance to determine which activity to participate in and due to allowing individual activity, the time allocated to motor engaged activities would be more in practice style.

One of the findings which was found in the study is the fact that students realized the tasks about the cognitive behaviours in the reciprocal style. In fact, if the structure of the reciprocal style is considered, this finding is a desirable one. Because within the nature of reciprocal style the use of materials like worksheets consisting of student's decisions and behaviours and the need to build up a communication between the students is a matter of fact. Moreover, Byra (2000) stated that the command style is the style that student decision and communication is kept at the least, the course is conducted by the command and the discourse of the teacher, and within the every phase of the course the teacher is effective. Thus, the difference between the cognitive sub-level, these two styles should be accepted as normal in favour of reciprocal style.

In the learner involvement level, it can be said that more time was allocated to not motor engaged activities, yet less time was allocated to motor engaged activities, and this finding is supported by the findings of the many studies (Yıldırım, 2003; Randall and Placek, 1986; Darst et al., 1990; Randall and Imwold, 1989; Evans et al., 1999; Ward et al., 1999; Derri et al., 2007). The practice style can be seen as a controversy to which more time allocated for the both motor appropriate activity and motor inappropriate activity, yet the finding can be explained as the nature of the very style. In the practice style, the students make their own decisions on which activities to be conducted and allot the amount of time to the activity they wanted (Mosston and Ashworth, 2009). On the other hand, the maximum time allocated for the the sub-level of motor activity can be seen in the reciprocal style. As a matter of course of this style, the above situation can be the result of the students' mutual contribution on their own learning and teaching.

In the practice style, the time allocated for motor appropriate activity is more than the other styles. The reasons of this findings may be explained with the structure of the style. In this style the teacher , as a model, shows and explains the practices, presents worksheets to the students and the students choose the practices, which they want from the presented worksheets, and performs them. So, as a result of this type of implementing physical education courses, the students had more opportunity to participate motor appropriate activities than the other styles.

Conclusion and Recommendations

According to the results of the study, it can be said that, the time allocated to the skills practice in the courses conducted by the command style is more than the reciprocal and practice style, however, regarding the two other styles, depending on allocating more time to waiting, management, theoretical knowledge transfer and off-task, the command style was the one which the academic learning time was realized at its lowest level. In the reciprocal style, it can be seen that, enough time was allocated for the skill practices. However, in this style using worksheets, continuous shifting of both doers and observers is considered as the reason for the maximum time allocation for the cognitive behaviours and transitions. Thus, in this style, while academic learning time is observed at a higher level comparing to the command style, it is observed at a lower level comparing to the practice style. The results of the study showed that courses conducted by the practice style were the most possible teaching style that allots considerable time to skills practice and providing students to participate in the courses appropriate for the motor appropriate motor activities.

Templin (1983) stated that waiting period in the Physical Education courses could sometimes cover the half of the course, and concluded that this period could be shorten with the chosen activities and games. Within the findings of this study, the very teaching style can be said among the factors that shortens the waiting period.

In brief, it was concluded that in Physical Education courses academic learning time is realized mostly in practice style, and then in reciprocal style, and at the least in command style.

Regarding the results of the study, it is suggested that Physical Education teachers and pre-service teachers should involve the practice style which the academic learning time is realized most as well as the other alternative styles besides the command style that is also known as the traditional style in their courses. Moreover, the fact that the period allocated to academic learning time is 1/5 of the lesson is considerably insufficient. Reducing the time allocated to the class management, transitions between the subjects and exercises, theoretical knowledge transfer and waiting, students should mostly be provided by the goal-oriented physical activities. In order to offer an insight into the further studies, this study can also be suggested to be carried out; in a bigger workgroup by increasing the number of the people in the teaching style groups, also in a workgroup consisting of physical education teachers who has the appropriate and sufficient knowledge on teaching styles, and as a study using different teaching styles within the same class and by the same teachers, and also as a study designed by the other teaching styles in physical education teaching by comparing various teaching styles, and equalizing the course contents of the current units.

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