



ISSN: 2456-0057
IJPNE 2017; 2(1): 23-26
© 2017 IJPESH
www.journalofsports.com
Received: 07-11-2016
Accepted: 08-12-2016

Munkaila Seibu
Department of Health,
Physical Education, Recreation
and Sports University of
Education, Winneba, Ghana

Regina Akuffo Darko
Department of Health,
Physical Education, Recreation
and Sports University of
Education, Winneba, Ghana

Analysis of effective utilisation of allocated time of interns' teaching during physical education practical lessons

Munkaila Seibu and Regina Akuffo Darko

Abstract

The purpose of this research was to analyse effective utilisation of allocated time of student interns during their practical physical education lessons. Descriptive research design was used for this study. The population comprised 10 interns from the department of Health, Physical Education, Recreation and Sports for the 2015/2016 academic year. Each of the interns' 40 minute lessons were videotaped. Their motor behaviours were coded and analyzed using the Academic learning time-physical education (ALT-PE) observational instrument with inter-observer reliability coefficient of 0.83. The results of the study under context level indicated that interns' spent most of their class time (42.13%) on general content with managerial episodes recording 24.13% as the highest. It was also observed that interns spent only 19.95% of the class time on skill practice. Finally, ALT-PE also recorded 6.33% of the class time. The study concluded that interns lack the strategies of effective management of class time. It was recommended that Physical Education lecturers and mentors should expose interns to best instructional strategies for ALT-PE to improve students' motor skill acquisition and mastery.

Keywords: Skill practice, management, technique, waiting, motor appropriate

1. Introduction

Physical education teachers worldwide today still face challenges in maximizing ALT-PE in their classes to enhance skill learning for achievement of the general educational goals. As a result, educationists continue to research into this problem from their respective fields to find out if they improve pupils' learning time in order to achieve their educational goals. Generally, pupils learning time ultimately determines the performance of learning a task and therefore is a very critical factor that may influence learning (Rink, 1998) [1].

One of the important findings in teacher effectiveness research in physical education is Academic Learning Time in Physical Education (ALT-PE). Academic learning time is a powerful way to make judgment about teacher's practices and is a strong proxy for student achievement (Vassiliki, Kyriaki, Olga, & Efthimus, 2008) [2]. Descriptive researches conducted between the 1970's and 1980's on ALT-PE of pre-service and in-service teachers concluded that allocated time fluctuated between 50% - 80% of the lesson time. Pupils were only motor engaged half of the time and the rest of the time was for management and transition. Academic learning time fluctuated between 10% - 36% (Consineau & Luke, 1990) [3]. The recent record of ALT-PE, a research conducted in Greece with specialist physical educators, dropped from 10% - 6% of the class allocated time (Vassiliki, Kyriaki, Olga, & Efthimus, 2008) [2].

In recent time, the number of children participating in daily physical education, especially in the junior high schools and senior high schools, is declining due to lack of quality in the teaching of physical education in the schools. As a result, physical education programmes in schools have been criticised for the decline in pupils' fitness levels and for failure to teach sports skills for lifespan participation (Wuest & Bucher, 2006) [4]. This seems to stem from low ALT-PE for students to master skills taught as most of the allocated time is used for managerial episodes.

In certain researches, academic learning time (ALT-PE) has been used as a dependent variable in which the investigators attempted to change teaching behaviours and assessed this change

Correspondence

Regina Akuffo Darko
Department of Health,
Physical Education, Recreation
and Sports University of
Education, Winneba, Ghana

on ALT-PE (Metzler, 1983) [5]. Other researchers also used the ALT-PE to assess the success of mainstreaming in physical education and the difference between the mainstreamed child and the “regular” child as to their achievement in physical education. Finally ALT-PE has been used as a valuable tool in helping supervisors assess a set of behaviours for student teachers in which goals can be set for improvement and also to provide information to the student teachers as to what is actually taking place in their classes.

Reviewing similar related researches in physical education, Siedentop, Mand and Taggart (1986) [6] found out that 6-22% of the class time was spent for transitional management activities, 15-22% for instructional, 22-32% for waiting, and finally only 21-30% of the class time was allocated to motor engagement. The study showed that academic learning time (time that a student is involved in motor activity at an appropriate success rate and low error rate) ranged between 10% (Metzler, 1989) [7], and 14.6% (LaMaster, & Lacy, 1993) [8] of the total class time. However, the overall findings on academic learning time were inconsistent with curriculum recommendations.

Recent studies also proved that effective physical educators minimize the time of organization, waiting and transition while they increase the time of pupils activity participation (Barret, 2000; Momodu, 2000) [9, 10]. In addition, they continuously monitor pupils’ behaviour and instantly correct inappropriate behaviour (Olivia & Pawless, 2001) [11]. Research was carried out on teachers’ effectiveness on class time management and it was found below the acceptable level (Aliferi, Derri, Avgerinos, Antoniou & Kioumourtzoglou, 2005) [12]. Physical education teachers spend 40.6% of the allocated time in managerial and organizational activities while pupils waiting time occupied 38% of the allocated time (Vasiliadou, Emmanuilidou & Derri, 2003) [13]. Similar studies showed that 28.7% of the total class time was devoted to organizational activities (Coules & Tzetzis, 2005) [14] and 30.68% to teacher instruction (Tzetzis, Amoutzas & Kourtessis, 2003) [15].

According to Hickson and Fishburne (2004) [16], 5 hours 30 minutes of training of pupils in physical education or teachers in pre-service physical education resulted in the reduction of waiting, instructional and organizational time culminating in a remarkable increase in children’s active participation time. Finally, a six week intervention programme for pre-service physical education teachers helped class management so much that the time devoted to this purpose was reduced to 10.6% of the total class time (Carlisle, Steffen, & Philips, 1986) [17].

Siedentop, the founder of the concept “academic learning time-physical education (ALT-PE)”, indicated that academic learning time in physical education classes is typically quite low, often no more than 3 to 5 minutes per pupil per 30 minute class in the secondary school. The concept of academic learning time provides a simple convenient criterion by which teaching effectiveness in practical physical education lessons can be judged.

On the issue of time management, Gallahue and Cleland (2003) [18], emphasized that; effective teachers are able to maximize participation on the part of all pupils. They device strategies for eliminating long times for sitting, waiting, and watching while others perform. This helps pupils maximize time on task and learning. He further declared that planning is a crucial element in the success of any educational programme. Without careful planning, the physical education class ends up being little more than a glorified recess period.

Experience has shown that teachers who fail to plan are really in essence planning to fail.

Vassiliki *et al.* (2008) [2], conducted a similar research on the relationship between ALT-PE categories and skill concepts acquisition and retention of the overhand throwing and catching techniques using specialist physical education teachers in Northern Greece. The results indicated 6% ALT-PE.

Despite the emphasis on effective teaching of physical education in recent times during teacher preparation and development, students’ skill levels seem to decline in our senior high schools. This problem is characterised by major indicators of ineffective physical education programmes which include incorrect execution of skills during inter-hall and inter-school games and sports competitions as well as low participation in life long physical activities. With regard to the reliability of ALT-PE as a strong proxy for effective teaching of physical education, and lack of related empirical study from the Ghanaian perspectives, the researchers decided to conduct this study. In this study, ALT-PE is used as the independent variable to analyse student teachers’ effectiveness and quality of utilising allocated time of practical physical education lesson to improve skill acquisition and mastery from Ghanaian perspective. The research questions that guided this study was “How do interns utilise their allocated time during practical physical education lesson”?

2. Materials and Methods

Descriptive research design was used for the study. The participants for this study included 10 interns from selected public Senior High Schools from Central region, Western region, eastern and Greater Accra region of Ghana where the interns had their internship. Interns taught their lessons for 40 minutes based on their personal time table. The 10 lessons were video-taped for later indirect observation and coding by three trained observers using an audiotaped programme which provided uniformity in observation and recording intervals (observe for 6 seconds and record for 6 seconds).

Data were analysed by first coding pupils’ performance from the video recording. This was done by three trained observers. The motor behaviours of the interns were coded using the ALT-PE observational instrument with inter-observer reliability coefficient of 0.83. Mean percentage and standard deviation were used to transform the coded data derived from the videotape recording into ALT-PE for easy analysis. Context level variables indicated how physical education interns utilised their time during practical PE lessons.

3. Results

The research questions set for this study was “how do interns utilise class time during practical physical education lesson”?. The focus of the researchers was to find out how interns utilize their allocated time with regards to teacher variables in the ALT-PE instrument.

Table 1: How Interns Utilised Allocated Time under General Content

1.	General Content	No.	M (%)	SD
	Management	10	8.33	0.55
	Transition	10	10.40	0.63
	Break	10	5.40	0.15
	Warm-up	10	18.00	0.30
	Total	10	42.13	1.63

In respect to the first category of ALT-PE under the context level, it was realised that warm-up recorded the highest Mean time 18.00 minutes out of 40 minute lessons. This was followed by transition (10.4.), management (8.33), and then break (5.40) as the lowest.

Table 2: How Interns Utilised Engaged Time under Subject Matter Knowledge

2.	Subject Matter Knowledge	No.	M (%)	SD
	Technique	10	7.43	0.50
	Strategy	10	3.25	0.50
	Rules	10	2.00	1.18
	Social Behaviour	10	3.25	0.33
	Background	10	3.15	0.35
	Total	10	19.08	2.86

Under the subject matter knowledge, techniques recorded the highest Mean time, (7.43). This was followed by strategy, then social behaviour (3.25), then background (3.15) and rules (2.00) respectively.

Table 3: How Interns Utilised Engaged Time under Subject Matter Motor

3.	Subject Matter Motor	No.	M (%)	SD
	Skill Practice	10	19.95	0.33
	Scrimmage	10	4.40	1.05
	Game	10	10.29	0.88
	Fitness	10	4.15	1.13
	Total	10	38.79	3.39

For subject matter motor, skill practice recorded the highest (19.95) followed by game (10.29), scrimmage (4.40), and finally fitness (4.15). However, considering the total percentage of Means of categories under context level it was found out that general context had the highest percentage of the total mean percentage of the 40 minute lessons (42.13), followed by subject matter motor (38.79) and finally subject matter knowledge with (19.08)

4. Discussion

Analyses of data revealed that physical education interns spent 61.21% of the lesson time on warm-up, transition, management and waiting which is equivalent to 24 minutes. They only spent 38.79% of the lesson time on activities relating to subject matter motor which is also equivalent to 16 minutes. However, the actual time students spent on practicing the new skill was 19.95% which is equal to 8 minutes. This was supported by the findings of Siedentop, Mand and Taggart (1986)^[6] that 6-22% of the class time was spent for transitional management activities, 15-22% for instructional, 22-32% for waiting, and finally only 21-30% of the class time was allocated to motor engagement. From other research findings, physical education teachers spent 40.6% of the class time in managerial and organizational activities while pupils waiting time occupied 38% of the class time (Vasiliadou, Emmanuilidou & Derri, 2003)^[13]. Similar studies showed that 28.7% of the total class time was devoted to organizational activities (Coules & Tzetzis, 2005)^[14] and 30.68% to teacher instruction (Tzetzis, Amoutzas & Kourtessis, 2003)^[15]. This confirmed that the low level of skill characterised by incorrect execution of skills at senior high school competitions seem to stem from low amount of time teachers spend on guiding students to practice skills relating to the lesson objective.

5. Conclusions

The results of this study under the context level clearly indicated that, the interns spent 42.13% of the 40 minutes class time on general content variables with warm-up taking the highest mean percentage of 18.00%. In the same manner, subject matter knowledge recorded 19.08% of the class time spent by interns with techniques taking the highest percentage of 7.43%. Finally, the interns spent 38.79% of the class time on subject matter motor with skill practice time of 19.95% being the highest.

Based on the findings of this study, the following recommendations were made:

1. Training institutions of physical education teachers should integrate ALT-PE in their pedagogy lessons for student teachers in order to develop their instructional strategies to increase ALT-PE in teaching physical education lessons.
2. Physical education teachers and interns should be taken through regular and intensive workshops and seminars on effective teaching pedagogies for effective planning to maximize ALT-PE for skill concept acquisition and retention. These will help increase students' acquisition and mastery of correct motor skills for effective participation and enjoyment of life long physical activities.

6. References

1. Rink J. Teaching physical education for learning. (3rd ed.) Boston: McGraw-Hill. 1998.
2. Vassiliki D, Kyriaki E, Olga V, Efthimus K. Relationship between academic learning time in physical education (ALT-PE) and skill concepts acquisition and retention: Physical Educator. 2008-2011.
3. Cousineau WJ, Luke MD. Relationship between teacher expectations and academic learning time in six grade physical education basketball class. Journal of teaching education. 1990.
4. Wuest AD, Bucher AC. Foundations of physical education and sports. (13th Ed.). U S A. McGraw-Hill Companies. 2006.
5. Metzler MW. Using academic learning time in process product studies with experimental teaching unit. In T.J. Temphin & JK. Olson (Ed.), Teaching in Physical Education. Champaign IL: Human Kinetics. 1983, 185-196.
6. Siedentop D, Mand C, Taggart A. Physical education: teaching and curriculum strategies for grades. Palo Alto: Mayfield Publishing. 1986, 5-12.
7. Metzler M. A review of research on time in sport pedagogy. Journal of Teaching in Physical Education. 1989; 8:87-103.
8. La Master K, Lacy A. Relationships of teacher behaviours to ALT-PE in junior high school physical education. Journal of Classroom Interaction. 1993, 28:21-25.
9. Barret TM. Effects of two cooperative learning strategies on academic learning time, student performance, and social behaviour of sixth grade physical education pupils. Dissertation Abstracts International Section a: Humanities and Social Sciences. 2000, 61(5A).
10. Momodu A. Academic learning time in senior secondary school physical education classes in Nigeria. Journal of the International Council for Health, Physical Education, Recreation, Sport and Dance. 2000; 36(3):51-54.
11. Olivia P, Pawless G. Supervision for today's schools (6th

- ed.). New York: John Wiley & Sons. 2001.
12. Aliferi O, Derri V, Avgerinos A, Antoniou P, Kioumourtzoglou E. Evaluation of class time management and student behaviour in physical education. Proceedings of the 2nd Forum in Physical Education. Chalkidiki, Greece. 2005, 49-53.
 13. Vasiliadou O, Emmanouilidou K, Vassiliki D. Evaluation of selected behaviours of physical educator during the lesson. Proceedings of the 1st Forum in Physical Education. Chalkidiki-Greece. 2003, 51-55.
 14. Coules E, Tzetzis G. Systematic observation of the lesson of physical education with the use of OSCD-PE. *Inquiries in Sport & Physical Education*. 2005-2008; 3:204-211.
 15. Tzetzis G, Amoutzas K, Kourtessis T. A multidimensional analysis of teacher and pupils' interactions and physical activity in physical education classes. *Journal of Human Movement Studies*. 2003; 44:339-351.
 16. Hickson C, Fishburne G. What is effective physical education teaching and can it be promoted with generalist trained elementary school teachers? Paper Presented at the AARE International Education Research Conference. Melbourne. 2004,
 17. Carlisle C, Steffen J, Phillips DA. An analysis of teacher behaviours before and after intervention programs for pre-service physical education teachers. Unpublished manuscript: University of Northern Colorado, Greeley. 1986, Co. http://www.hape.gr/emag/vol3_3.asp
 18. Gallahue DL, Cleland F. Development physical education for all children. Champaign IL: Human Kinetics. 2003.