STATE UNIVERSITY PHYSICAL EDUCATION SKILL AND TECHNIQUE AND ACTIVITY CLASSES

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A SURVEY OF MANAGERIAL TIMES WITHIN APPALACHIAN STATE UNIVERSITY PHYSICAL EDUCATION SKILL AND TECHNIQUE AND ACTIVITY CLASSES

## A thesis

Submitted to the Graduate Faculty of Appalachian State University in Partial Fulfillment of the Requirement for the Degree of Master

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in
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TITLE

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A Survey of Managerial Times Within Appalachian State University Physical Education Skill and Technique and Activity Classes

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The primary purpose of the study was to determine the amount of time spent by selected physical education instructors at Appalachian State University, Boone, North Carolina, on managerial episodes within activity and skill and technique classes. A second purpose of the investigation was to identify differences between perceived managerial times and actual managerial times recorded. A third purpose of the investigation was to determine if there was an observable comparison between the age and the amount of teaching experience of the instructors and the amount of management time recorded. A fourth purpose of the investigation was to report any differences between specific activities and skill and technique courses and indoor and outdoor courses to the amount of recorded management time. Nore specifically the study attempted to reveal any substantial percent differences between the amount of time spent on managerial tasks and the total amounts of class times allotted

The subjects were all physical education skill and technique and activity course instructors at Appalachian State University during the 1977 summer school second session. Data was accumulated for the perceived and recorded managerial times of all the instructors. A score shect for perceived managerial times was administered to the instructors and a score sheet for recorded managerial times from the visited and timed courses was used to record all the accumulated data on managerial task items. The instructors classes were visited twice during eight days, specifically from July 20, 1977, through July 28, 1977, and the managerial times were accumulated.

Limitations of this study were as follows:

1. Not being able to know if the quantity of samples were sufficient due to the amount of time it had taken to attend the classes and time them.
2. Not being able to control bad weather for outdoor activities.
3. Not being able to take into account a management time (s) that was not expected.
4. Not being able to accurately distinguish when managerial
time started and ended.
The conclusions of the study were as follows:
5. Male instructors employed a higher percent of class time for management than the fcmale instructors.
6. More managerial time was spent in teacher preparation classes than in basic activity classes.
7. Indoor courses had less recorded management time than the outdoor courses.
8. Male instructors were more perceptive as to times spent on managerial endeavors.
9. The more teaching experience an instructor has the more management time he or she employed in the classroom.
10. More total class time was used for instructional, student performance and management purposes in activity courses than was used in teacher preparation courses.

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## DEDICATION

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## Chapter I

## INTRODUCTION

During teacher preparation an individual goes through a strict outline of courses pertaining to the subject area and how to effectively present that information in a classroom situation. Identifying the characteristics or traits which contribute to the competence of a teacher is one of the large problems which confronts education today (16:79). Students can distinguish between a good teacher and a poor teacher (9:34) There are acceptable personal characteristics, proper instructional and interaction styles, healthy perceptions of self and others, and other qualities of effective teachers. There does not seem to be a large inefficiency with a teaching understanding of the content of the subject area but on the other hand, more and more emphasis could be directed toward meaningful ways of presenting that material to the students.

Methodology is the term that encompasses the area of preparation which emphasizes the how rather than the what of a teaching field. The master teacher of physical education searches for better ways of doing things rather than being satisfied with the methods that seem to be successful (32:26). All teaching needs to be and can be improved if a teacher attempts to be more efficient. The best medicine for the problems that currently plague our profession can be achieved by doing an excellent job of teaching physical skills (32:26).

Classroom management, which involves all those things which are not considered formal learning, instruction or performance, is one
of the topics in methodology which should be studied within a teacher oriented degree. This means that learning must take place by the future teacher on the specific tasks which are involved in management and ways to alleviate as much of the time possible which is spent on managerial tasks. When speaking about the classroom management learning process there are some behavioral patterns which should be learned in order to create the best learning situation for both the teacher and the student.

Within the physical education program which is a different type of classroom situation due to the area size, equipment used and the number of students, management really becomes important. The improper use of time within an activity situation could become a hindrance to effective teaching and learning.

Managerial endeavors involve such items as roll taking, switching from place to place or station to station, getting organized to start a game, attending to instruction once a signal for such attention has been given, taking care of inappropriate behavior or a disruption problem within a class, setting up equipment during a class, class announcements, handing out and collecting equipment, record keeping and allowing students to take showers and change clothes (26:168). Again, knowledge of how to reduce to a minimum the amount of time spent on managerial endeavors should be taught and learned by the teacher and the students. During the time used for management tasks, little if any formal learning takes place and the chance for disruptive or inappropriate behavior increases.

To help clarify exactly what management and managerial tasks involve, explaining them within the realm of supervision may be helpful. Burton stated supervision was related "to the improvement of the
teaching act and the improvement of teachers in service (15:18)." Supervision is basically the improvement of instruction. The factors which would commonly be seen under supervision involve facilities, equipment and supplies, previous student experience, time allotment, class size, and climatic conditions. Supervision of physical education entails responsibilities with a number of tasks related to but not actually a part of the instructional phases of the program.

Although class management and managerial episodes are relatively new words and are concerned about some unique concepts about teacher preparation, they are of primary importance. It is not the terminology used to describe the area of methodology but the importance, concern and ideas which are presented and learned. If the learning is presented, learned and used, it would improve education for the teacher, student and community.

In actually attacking the problem of management tasks and reducing the amount of time used for specific tasks the prospective teacher should be made aware of some of the techniques used and the practicing teacher should incorporate some of the techniques within their specific situation. Within the actual classroom environment the students should be made aware of management and their appropriate roles in reducing the amount of time spent on specific tasks.

Letting the students know what is expected of them becomes very important if the teacher wants to achieve any degree of self-management. The contention is that effective teacher preparation activities and behaviors serve to reduce management problems, both in terms of managerial episodes and rate of inappropriate behavior. Some ground rules should be stated in the class, for example, for attending class, being on time,
being dressed out, and going in appropriate places at the start of class. These ground rules must be consistent and used with frequency if they are going to become appropriate behvaviors.

Some guidelines for class organization and change of an activity are (26:170):

1. Handout guidelines with information of sufficient generality.
2. Specific guidelines for the day's activities may be posted conspicuously.
3. Even more specific information may be posted at different stations.
4. Guidelines need to be spelled out clearly.
5. Guidelines must be posted at the outset of class.
6. Guidelines should be referred to often so students can
be cued as to what behavior roles are expected of them within the context of the activity environment.
7. Signals can be used for engaging attention and the start of a goal.

Today discipline in the schools has been a primary concern and is one of the largest problems of education within city or urban schools. Having to take care of the problems reduces the time to learn and move and increases the amount of management time. There must be some behaviors presented by the teacher to assist students in discriminating roles in management (26:168). Along with this there should be incorporated a student self-management program. Students should be able to spend as little time as possible on managerial activities with as few prompts as possible. Obviously, for this to be effective and for the students to
know what to do on their own initiative with appropriate behavior, they must be taught what was expected of them. "Purpose determines orderliness and when a class is disorderly the teacher knows that the learning situation lacks meaning for the pupils as a purposeful activity (18:182)".

Discipline can become a problem in relation to increasing the amount of time spent on managerial tasks. The behavior must be appropriate for the setting, must be productive or contribute to learning and there must be behavior toward physical involvement (26:168). 'More teachers fail because they cannot maintain classroom control than for any other reason. Until classroom order and decorum are established, teaching and learning are minimal (28:22)". The ultimate situation was to have the highest percentage of appropriatc, productive and active behavior. This can be measured by the number of students actively engaged in one or more appropriate behaviors.
"Discipline is not punishment (26:8)". In a very disruptive class, in an attempt to alleviate or lessen the time spent to initiate appropriate behavior, there are some ideas which may be used. One of these methods was the use of games and contracts. Within this method a number of challenges are given to the students who have stipulations on how long they have to complete the challenges. Some type of reward system can be used as well as some form of disqualification. That was, if they complete their challenges correctly there will be a reward and if not done correctly then the student will be removed from the activity and all opportunities to get rewarded. A progression or step by step system could also prove to be useful when doing an activity.

Teacher reactions may be used for management. A desist ('be quiet," "stop that," a hard glare), or a teacher reacting in a negative
manner to inappropriate behavior may be effective (26:171). These should be used dispassionately and not frequently. The importance of positive manners should be stressed. Praise should be consistent and frequent even after the most minor positive behavior by students. If the teacher uses negative teacher reactions he should remember a number of ideas (22:173):

1. It works quickly.
2. It may increase frequency of student misbehavior.
3. It may produce an atmosphere of fear and coercion.
4. It must be dispassionate; the behavior is negative--not

## the worth of the student.

5. When it is used with behavior contracts the negative reaction or punishment is administered as a fulfillment of the agreed upon contract.

Another form of discipline which may be used is what is re-
ferred to as time out. It is used when a student displays inappropriate behavior while executing an activity. This was the removal of the student from all potential sources of reinforcement for a specific time period (26:173). This period does not mean sitting a student in a corner but it should be apart from other students and void from any positive ends. For example, by taking a student out of a game situation and making him do drills instead may improve his actions. The key concept was that the activity from which the student is removed is more reinforcing than the time-out space $(26: 173)$.

Associated with time-out is extinction (26:173). Extinction was simply ignoring the misbehavior. It must be done consistently so that attention is not given to the student's misbehavior.

Prevention of discipline problems before they start has more value than many individuals realize. Usually discipline is not attended to until a problem arises and it needs immediate attention. Here are some thoughts on minimizing discipline problems in the physical education classroom (31:1):

1. Be yourself.
2. Gain respect of your students.
3. Control your students in the gym in an organized fashion, such as having them seated when you are talking to them. Also attempt to sit them down at the start, during demonstrations and at the end of class.
4. Keep all of your students active.
5. Be friendly to a degree. The distance from your students depends on you. It may be best to stay socially further away from your students in the beginning and then get closer rather than vice versa.
6. Have a spirit of cooperation between you and your stu-
dents.
7. Treat your students as people not things.
8. Keep your students interested in your class by using competition, changing your routine, offering challenges, being creative, using monotony breakers periodically, and using different teaching methodologies.
9. Get to know your students. Make sound use of the backgrounds of your students when you are attempting to create an atmosphere conducive to learning. Learning the names of your students is a starting point. Make use of office files in order to obtain background
information of students. Obtain written responses from your students during first class meeting on the following items: interests; backgrounds; hobbies; future plans; home address; and other pertinent information.

Minority white or black or majority white or black population schools have unique discipline problems for the teachers employed in these systems. "Black or other minority teachers may be less than enthusiastic about their assignments to a school attended mostly by white students staffed by an almost total white faculty and service personnel. Minority teachers may find it difficult to discipline majority students because of their apprehensions over contact with irate parents or because their own school experience (desegregated, resegregated) may have been too unpleasant (2:7)". This will show in the classroom in the organizational and functional aspects which could lead to discipline problems.

There are some managerial preparations which might be helpful in reducing conflicts in the classroom at an urban school. Some of these are (2:18-20):

1. No student should be preferred or rejected because of cultural background, race or creed. Democratic classroom practices increase a student's sense of his own worth and worth of others.
2. Start the class year with firmness and fairness. This will be expected.
3. Call all students by the names which their parents gave to them.
4. Do not expect all students to say, "yes sir", or "no sir", or "ma'am", as the case may be.
5. Handle discipline problems in the same judicious manner as in any other classroom.
6. Talk to the students, and by all means listen to them.
7. Use colors (including black) as the names of teams so
there is no indication of prejudice. Physical education classes offer a good opportunity to employ this strategy.
8. Remember that students like to play games irrespective of their race, and when they play games, they usually do not think of race.
9. Cast aside erroneous generalizations, such as: all black students sing, dance and are polite; all white students are studious and intellectually superior.

Roll taking is completely managerial and takes away from the amount of time that could be used for teaching, learning and performance by students. Techniques of taking attendance efficiently would increase the amount of time spent in class for teaching, learning and performance by all involved. Too much time used for calling roll will also increase the chance for inappropriate behavior and boredom by the students.

Roll taking would become a timely task if not done in the most efficient manner possible. With the size of classes constantly increasing the use of the following techniques could be helpful (15:193):

1. Provide warm-ups and take roll at the same time (not more than five minutes).
2. Call roll yourself (to learn names for several days).
3. Use numbers painted on the wall with each student assigned to stand in front of a number (uncovered numbers are absentees).
4. Students call their names or numbers as they pass a table or window in the corridor leading to the gym.
5. Check is made when they enter the dressing room at the same time towels are taken.
6. On the field roll is taken in squads or teams (student, clerk or teacher can easily check while squad is playing or practicing).
7. Use squad cards for recording attendance.

In retrospect, a high amount of classroom management can aid the degree of effectiveness within a teaching situation by both the teacher and the students. Some major points which deserve attention are (26:173):

1. Consistency.
2. Specificity.
3. Sincerity.
4. Immediacy.
5. Varicty.
6. Informal and natural.
7. Less time spent in managing the more time spent learning and acting.
8. Positive discipline rather than negative discipline.

When emphasizing class management as part of teaching methodology to prospective teachers, time and the proper use of that time comes into play. Of course, most teachers will not have a personal timer to attend all his or her classes to time them and indicate how much time was spent during class, but an idea of how much time was used should be of concern. "The nature of time is an intellectual construction. It is a relationship between an action and the speed with which
it is done (4:825)." To function efficiently and successfully, everyone needs a time sense. Having a time sense means being able to estimate the time needed for different activities (17:60). Lack of this sense can be serious because it may lead to inefficiency and a tendency to procrastinate.

Time is the thing people live by and here are some questions and answers that may undo some of the confusion that may be encountered (10:50-51) :

1. What makes time go fast or slow for a person? The time you really feel and live by is measured by a "mental clock" in the time sense centers in the brain not by the clock on the wall. Many people's mental clocks run faster than actual clock time so time seems to drag on while other people's clocks tend to run slow and time seems to fly by.
2. Are there some people whose mental clocks keep perfect
time? Studies conducted at Agnes Scott College have shown that some people have a time sense which functions with a fair degree of accuracy a good percentage of the time. But in most cases, human clocks tend to run slow at one time, and fast at another.
3. How does temperature affect the passage of time? Research at Clark University has shown that time passes quickly when you are cold and much slowly when you are overheated.
4. How does your state of mind affect your time sense? Depression or anxiety makes time appear to pass more slowly than it actually does. And when you really have the blues, time passes so slowly that it may scarcely appear to move at all.
5. Does time tend to pass more swiftly for you as you grow older? Yes. Veterans Administration Mental Hygiene Clinic Studies have shown that time passes slowest for us when we are young and goes by faster as age increases.
6. Does time go by quicker for women or men? Women. Experiments conducted at Arizona State Teachers College indicate that time passes more swiftly for the average woman than it does for the average man.
7. Does coffee affect your time sense? Studies at the psychological laboratory of the University of Graz, Austria, concluded that beverages which contain caffeine--such as coffee--have a direct affect on your time sense. Caffeine makes time appear to go by quicker, and continues to do so. until its effects are worn off. Caffeine simply telescopes the minutes, makes them seem to slip by faster

If an instructor has a good time sense then the amount of time he or she perceives to use will be closer to the actual time. Having a closer perception of the actual time used will help the instructor to plan a period of instruction to better utilize the entire time span of the class period. If the period is structured with the amount of perceived time that might be used for specific activities in mind, the percent of the total class time that may be utilized should be of a more acceptable level. If most of the total class time is being used, with low managerial time, then instruction, learning and performance should be high. If learning, instruction and performance times are high, the students and instructor are or should be more of a functional part of the class. Involvement of all is one of the keys to an effective teaching/learning situation. By keeping in mind all the finite aspects
of effective teaching, an instructor will alleviate many of the problems he may encounter and will be able to proceed to the task of teaching.

## Statement of the Prob1em

The purpose of the investigation was to determine the amount of time spent by selected physical education instructors at Appalachian State University, Boone, North Carolina, on managerial episodes within skill and techniques and activity classes.

A second purpose of the investigation was to report any
differences in how the instructors perceived their managerial times in relation to recorded managerial times.

A third purpose of the investigation was to report similarities of sex, age and teaching experience of instructors and the amount of recorded managerent time.

A fourth purpose of the investigation was to report any differences between specific activities and skill and technique courses and indoor and outdoor courses to the amount of recorded management time.

The sub-problems of this study were as follows:

1. To construct an appropriate score sheet to be answered by all activity and skill and technique instructors.
2. To gather data on actual managerial times.
3. To organize and analyze the data.
4. To organize and conduct the objective observation.

## Definition of Terms

Terms employed in this study were defined in the following manner:
do not involve learning how to teach the specific skills involved but implied the learning of skills to perform that specific activity.

Desist. Desist refers to the teacher reacting in negative manners to inappropriate behaviors by students.

Disqualification. Disqualification is used in a game situation to remove participants when a number of inappropriate behaviors are recorded.

Extinction. Extinction is the simple process of ignoring the misbehavior of students.

Management games and contracts. Management games and contracts are the using of formal, systematic program for teaching proper organization and appropriate behavior patterns.

Managerial endeavors. Managerial endeavors refers to roll taking, switching from station to station, moving from place to place, getting organized to start a game, and attending to instruction once a signal for such attention has been given, tending to discipline, showering and changing clothes, class announcements, fixing activity equipment, class environment preparation and maintaining time of the class.

Methodology. Methodology refers to the area of teacher preparation that emphasizes the how to teach rather than the what is taught.

Skills and techniques class. Skills and techniques class refers to classes emphasizing how to teach and to perform the specific skills and strategies involved in an activity.

Student self-management. Student self-management refers to students spending a minimal amount of time in managerial activity with as few prompts as possible.

Time out. Time out refers to the removal of a student from all potential sources of reinforcement for a specific period of time.

Time sense. Time sense is being able to estimate the tine needed or used for different activities.

## Delimitations of the Study

This study was delimited to the four instructors of four activity and four skill and technique courses in the Health, Physical. Education and Recreation Department at Appalachian State University, Boone, North Carolina, during the summer school term, 1977. The times assessed for managerial tasks from the score sheet and visited activity and skill and technique classes were recorded in minutes and seconds.

## Limitations of the Study

Within this study the limitations were as follows:

1. Not being able to know if the quantity of samples were
sufficient due to the amount of time it had taken to attend the classes and time them.
2. Not being able to control bad weather for outdoor activities.
3. Not being able to determine if instructor \#3's results were reliable since he was knowledgeable about the study and what the timer was attempting to do.
4. Not being able to take into account a management time (s) that was not expected.
5. Not being able to accurately distinguish when managerial time started and ended.

## Chapter II

## REVIEW OF LITERATURE

Most of the research and literature related to managerial endeavors can be found in the areas of behavior within the classroom, teacher preparation and qualities of good teachers. There is importance in appropriate behavior and teaching preparation in reducing the amount of time spent on trying to control or alleviate inappropriate behavior and providing the most effective learning environment. Along with reducing management or the amount of unproductive time is the awareness the individual instructor has about how much time is used for specific activities. Perception, or the time sense which an instructor has, can aid in the proper organization of his or her specific activity time span. The less time spent on classroom management, the more time that would be available for instruction and physical performance. The review of related literature has been divided into four sections: (1) Discipline and classroom orderliness; (2) Teacher traits and preparation; (3) Perception of time; (4) Summary.

## Discipline and Classroom Orderliness

An investigation of the effects of different motivational techniques on physical proficiency of educable mentally retarded and normal boys by Solomon (12:22) in 1968 showed: (1) Normal boys responded equally well to continuous verbal encouragement plus monetary reward; and (2) Monetary incentives caused the best performance in both EMR
groups supporting the theory that these individuals were more highly attuned to material rewards.

McKenzie (23:17) in a study in 1972 employed a behavior game to control a number of behaviors of a swimming team. He used a swimming team and each member had strict guidelines as to what and how they were to swim a number of laps in the game. They had to abide by the rules or were disqualified by fellow swimmers. Disqualification was the game used and this game quickly removed problem behaviors. Rushall and Pettinger (23:19) in 1969 completed a study where three kinds of rewards were contrasted as to their effect upon swimming work volune. The rewards ranged from verbal praise to monetary awards. The reinforcers were discriminatory in their effect upon work volume. The best results or behaviors came when the monetary reinforcers were used.

An investigation by Stevenson and Snyder (17:329) used blame and praise as criteria for appropriate behavior. They found that blame followed by praise led to increased performance but a decrement in performance was apparent for blame followed by no incentive.

Metz (17:329) in 1961-62 completed a study of stress and praise on creativity. It was found that stress facilitated performance of low scholastic-aptitude subjects, inhibited high scholastic-aptitude subjects and praise facilitated the performance of all subjects.

A study to determine the possible effects of a contingency management program upon the emission of behavior and the performance tasks of mentally retarded children was done by Huber (12:73-74) in 1973. It attempted to determine the relative effects of a token economy program for controlling appropriate behavior and performance of motor tasks of educable mentally retarded children within an
adaptable physical education environment. The study indicated the following:

1. Reinforcement directly applied to appropriate behavior resulted in behavior improvement and an increase in the level of motor task performance.
2. Contingencies structured for motor task performance caused a minimal positive change in appropriate behavior while the number of motor tasks completed declined.
3. When reinforcement was contingent on both appropriate behavior and the number of tasks completed, a significant increase in the level of appropriate behavior occurred.

A study by Young (34:76-77) in 1973 investigated the effects of various reinforcement contingencies on behavior and skill acquisition of second grade children in physical education classes. The study yielded the following: (1) Appropriate behavior in the gymnasium was increased due to an intervention with a positive reinforcement contingency; (2) an increase in appropriate behavior was not accompanied by an increase in skill acquisition; (3) the number of skills a student could do in a given period of time was not increased by the use of positive reinforcement contingencies; and (4) no definite conclusions could be drawn about the effect an intervention on skill had on behavior.

Stoops and Stoops (28:24-25) mentioned that it is the duty and respensibility of the teacher to make sure student behavior conforms so that maximum classroom learning takes place. They advise setting up classroom standards of behavior in writing and giving each student
a copy. Here are some Do's and Don't's in making up your class rules. Do:

1. Know district and school policies and follow them closely.
2. Develop written classroom standards and supply the reasons for them.
3. Explain "why" when you have to deny students requests.
4. Point out the consequences of poor student behavior.
5. Expect students to behave well and praise students for their good behavior.
6. Separate students who behave poorly toward each other.
7. Have well-planned, motivating, and meaningful lessons and teach in an interesting and enthusiastic manner.
8. Permit students to grow toward independence and self-
discipline.
9. Acknowledge desirable behavior and good work and reward students in a variety of ways.

Don't:

1. Make too many rules, talk too much, or shout at pupils.
2. Make threats or promises that you may not be able to keep.
3. Show favoritism or tolerate begging for special privi-
leges.
4. Say 'no" habitually, or before all the evidence is in.
5. Reward undesirable behavior or slip-shod work.
6. Apply rules to all students arbitrarily, but watch for individual and unique differences.

They also offered some general tips on actual classroom control. Here are some of those general ideas:

1. Be in the room ahead of time and start class promptly.
2. Set standards and limits the first day; in writing.
3. Learn and use student's names as soon as possible.
4. Be prepared; teacher preparation is critical.
5. Be consistent; never discipline one time and ignore the next.
6. Employ the three F's: friendly, fair and firm.
7. Maintain a reserve; do not paint yourself into a verbal corner with too many threats or promises.
8. Use surprise; an interesting film, an outside speaker, a change in the classroom routine.
9. Know what you should do next; be organized.
10. When challenged by a student, do not take it personally.
11. Speak with a low, well-modulated voice.
12. Ask a misbehaving student a direct question and look him straight in the eye.
13. Be your strictest at the beginning of the term.
14. Praise a student before the class and reprimand in private if you must.
15. See that each student experiences success.

Barr (1:169-74) in his investigation mentioned six factors contributing to student classroom enjoyment as follows: (1) Teacher's methods of teaching; (2) teacher's personality; (3) confidence in teacher's knowledge of subject matter; (4) mark obtained in the course; (5) short assignments; and (6) no special emphasis on discipline. If the classroom was enjoyable then the incidence of inappropriate behavior would be lessened. He also cited a study by Cellar (1) who suggested four
practices relating to good discipline. They are: (1) Use of all available equipment and visual aids; (2) routinizing of various classroom procedures; (3) presentation of subject matter in a vital and enthusiastic manner; and (4) skillful use of techniques of teaching.

## Teacher Traits and Preparation

Quick and Wolfe (22:133-34) surveyed 483 University of Oregon students on what they felt were characteristics of an ideal professor. Forty-seven percent of the subjects were men and fifty-three percent were women. According to the results of the questionnaire the ideal professor should: (1) Encourage independent thought; (2) have the subject matter and course well organized; and (3) have a deep and sustained enthusiasm for the subject. Other attributes that should be considered were the ability to explain clearly, the ability to welcome differences in points of view and to become a careful evaluator. One of the least important factors was scholarly appearance and active participation in research. Sixteen and seven-tenths percent of the total responses on ideal characteristics put 'has subject matter and course well organized," which was second only to "encourages independent thinking, not memorized knowledge."

Hoffman (11:21-24) in 1963 interviewed a number of Hofstra College seniors and asked them to list the qualities of a poor instructor. According to them, poor teachers arrive late, repeat or skip topics, do not prepare, lecture on irrelevant matters and waste class time in numerous ways. They are involved in research and personal interest items, run out of class time, test on items not taught, cancel classes and tolerate disorder. If teachers could use this as a guide and
avoid as many of these circumstances as possible, it would make for a better learning environment.

Heilman and Armentrout (10:197-216) had 2115 students at the Colorado State College of Education rate 46 of their college teachers on the Purdue Scale. This scale provides for a graphic rating of each of ten traits which are regarded as important in the personality of a good teacher. The following ten traits were rated:

1. Interest in the subject.
2. Sympathetic attitude toward students.
3. Fairness in grading.
4. Liberal and progressive attitude.
5. Presentation of subject matter.
6. Sense of proportion and humor.
7. Self-reliance and confidence.
8. Personal peculiarities.
9. Personal appearance.
10. Stimulating intellectual curiosity.

The authors found that most of the teachers ranked high on some itens and low on others. In the overall rating most of the teachers ranked highest on personal appearance and lowest on presentation, stimulating curiosity and personal peculiarities.

Bowsefield (4:253-56) asked sixty-one undergraduates to construct a list of five traits or qualities which they regarded as most desirable in a college professor. They were told to arrange the list in order of importance giving the most desirable quality first. From the list a 19 -item rating profile was conceived on a $0-10$ scale and administered
to a group of 507 undergraduate students at the University of Connecticut and Tufts College. The top ten qualities were:

1. Fairness.
2. Mastery of subject.
3. Interesting presentation.
4. Well organized material.
5. Clearness.
6. Interest in the students.
7. Helpfulness.
8. Ability to direct discussion.
9. Sincerity.
10. Keenness of intellect.

During a two-year period, McComan (20:135-36) had asked education
students to indicate the characteristics of their best and poorest teachers in elementary and college schooling. The best teachers had a sense of humor, an excellent knowledge of their subjects, held student interest, were always prepared for class, prepared exams that made you think, were fair in grading, showed no favoritism, respected student views, loved their work, were never too busy to help the students, used examples in their teaching, always had plenty to do in class, were friendly, were neat in dress, admitted to own errors, encouraged students to do better and recognized causes for students errors. The poorest teachers had insufficient knowledge of the subject, poor organization, showed partiality in grading, referred to only a few students, ridiculed students, jumped from one point to another, were often late to class, lacked enthusiasm, dressed sloppily, were unsympathetic, were bad tempered, talked to the blackboard, were late returning exams, dealt with their own
personality and life, were difficult to hear, avoided questions, failed to convey information and were unable to maintain order in the class.

Turner (29:17-22) studied the desirable characteristics of a college level physical education skills instructor at the University of Maryland Campus in College Park, Maryland. A total of 119 questionnaires were administered to undergraduate students, graduate students and faculty members. There were some disagreements between the faculty group and the graduate and undergraduate groups. The graduate and undergraduate groups rated the following traits the highest:

1. Rapport with students.
2. Planning.
3. Presentation techniques.
4. Knowledge and ability of skill and theory.
5. Poise.
6. Knows strengths and weaknesses of students.
7. Friendly and authoritarian with students.
8. Unit planning.
9. Demonstration and skill.
10. Skills testing.
11. Ethics, character, dynamic.
12. Intelligent, knowledgeable of subject.
13. Enthusiasm.
14. Clear explanation.

The faculty group rated the following traits the highest:

1. Rapport with students.
2. Presentation techniques.
3. Personal characteristics.
4. Knowledge and ability in skill and theory.
5. Poise.
6. Grooming.
7. Know strengths and weaknesses of students.
8. Friendly and authoritarian with students.
9. Overall curriculum guide.
10. Command of language.
11. Skill ability.
12. Ethics, character, sympathetic, intelligent.
13. Skill testing.
14. Practical teaching experience.
15. Enthusiasm.
16. Good knowledge of subject.

Haggard (8:238-40) in 1942 asked New Jersey State Teacher's College seniors to list the qualities they most desired in college teachers. They established the eight qualities with the highest frequencies which were: (1) Knowledge of subject matter; (2) personality to put course across; (3) fairness or impartiality; (4) ability or skill in teaching and organizing the subject matter; (5) ability to get along with students; (6) sincerity and honesty; (7) sense of humor; and (8) appearance. A group of 49 Western Washington College of Education freshmen when asked the same question in 1943 came up with the following eight qualities: (1) Ability or skill in teaching and organizing the subject matter; (2) personality to put the course across; (3) sense of humor; (4) ability to get along with students; (5) broadmindedness; (6) knowledge of the subject matter; (7) patience and helpfulness; (8) consideration in giving assignments.

Turner (30) in his paper on helpful teaching tips gives a number of ideas which may help physical education teachers to be more effective. His paper is broken into the following three categories: (1) Tested tips to effective teaching; (2) points for positioning pupils; and (3) demonstration techniques.

1. Tested tips to effective teaching:
a) Be yourself--there is nothing worse than an insincere and false teacher. Students quickly see through a teacher who is putting on a front. It will most likely turn them off to the teacher. Be honest with your statements.
b) Get to know your students. Make sound use of the backgrounds of your students when you are attempting to create an atmosphere conducive to learning. Learning the names of your students is a starting point. Make use of office files in order to obtain background information of students. Obtain written responses from your students during first class meeting on following items: interests; backgrounds; hobbies; future plans; home address; and other pertinent information.
c) Treat your students as people--they really are human. Teachers teach human beings not students. Be humanistic. Each of us was once a student--reflect to those times and how we liked to be treated.
d) Smile and be personable. It is worth more than can be measured to both you and your students. Be pleasant and enthusiastic even if you are down--there is nothing which will turn a class off quicker than an unenthusiastic
teacher. If the teacher is not personable or does not show enthusiasm then how can we expect the students to smile and show enthusiasm?
e) Give individual attention whenever possible--be simple in your explanations. Make it easy to understand. Remember, more than likely your student will be a beginner. A little individual attention is worth a thousand explanations to the class as a whole. It takes extra effort in order to give individual attention, but the final results are well worth this effort.
f) Be fair--don't let prejudiced and biased feelings affect your relationships with students. This is difficult to do since all people are prejudiced to certain degrees. Specifically, don't allow skill ability level to influence your relationship with your students. Show a keen interest in all students regardless of skill ability. Be especially careful in the case of the gifted athlete and the spastic motor moron as well as with the average student.
g) Provide encouragement to your students on small correct points even though the major portion of the skill performance is poorly executed. Frustration is easily attained by students in skill performance. One good comment on skill acquisition is worth twenty comments on skill mistakes.
h) Refer to your students as men, women, young men, young women--but not boys and girls. By high school age your students are physically mature adults. Treat them as such and they will appreciate it.
i) Be creative, try new ideas--teach for the future, not the past. One will never know whether a teaching technique or teaching concept will work until it is tried a number of times with constant revision. Effective teaching employs creative techniques.
j) Take roll efficiently--don't spend five minutes or more on this procedure. Roll taking is a necessary evil in many schools since it is an administrative rule. There are a number of roll calling techniques employing squads, spots and numbers. However, the learning of names is most efficient. All one needs to do in a free moment is to look around and see who is or is not present.
k) Keep your students active--don't have half of the class observing and half playing. Inactive students can cause discipline problems. Even though it may be felt that space warrants only a portion of the class playing in a game situation, involve the class in modified games instead of regulation situations. Have portions of the class using skill drills and relays while others are playing. The concept of allowing students to sit and watch at the secondary level is an open invitation to loss of interest and this leads to possible discipline problems.
1) Don't talk too much. Give your students a chance to actively participate. A skills activity class should be as the name states--time for active participation. Talking to the class is an integral part of instruction. However, too much talk can interfere with class productivity. Some
teachers can talk more than others on a given subject and they may be very successful. Talk as little as possible in order to make your point.
$\mathrm{m})$ Be prepared by taking the time now to learn about the opposite sex and their problems and views on physical education. There is a good chance that you will be teaching students of the opposite sex. If you will not be teaching coed or opposite sex classes you will be working with peer teachers of the opposite sex. Separation of sexes is not the answer to our teaching problems.
2. Points for positioning pupils:
a) Do not have the students looking into the sun. It is difficult enough for the student to observe and understand demonstrations under optional conditions. Looking into the sun hinders their attention and their ease of viewing. The instructor should be facing the sun, not the students.
b) Sit your students down--this enables you to gain control and it enables all students to see what is going on. With students standing those in the back have trouble seeing over those in the front. Sitting your students down also contributes to their interest in that they can all see and this in turn contributes to fewer discipline problems. Any time you start, finish or call your class in, sit them down.
3. Demonstration techniques:
a) You demonstrate if you have some ability. It is
highly important for the teacher to interact with the class
and also to establish to the class some level of expertise in the skills being taught.
b) If you are successful in demonstrating a skill which is difficult for you to do, one demonstration is sufficient. In other words, don't push your luck. The chances are that you will not be successful again. Play the percentages. After the initial successful demonstration talk through the skill.
c) If you cannot demonstrate, use a class member to help you--use a highly skilled student if possible, but an unskilled student will do. You can talk the student through a skill explaining all how's and why's of the skill.
d) If possible, demonstrate the correct technique and the most common error (s) of a skill. This aids in the student's understanding of concepts. It is difficult for some instructors to perform the skill correctly let alone incorrectly, but you will find it to be a great aid for the students skill understanding. It helps the student to see his basic skill errors.
e) Give individual help and individual demonstrations as the need arises. Once again with individual emphasis on demonstration the student will comprehend his problems more readily.
f) Physically move students through skill--touch is an important part of teaching. Touching the student shows your personal interest and it also enables the student to
actually feel the correct and incorrect techniques of skill performance.
g) Demonstrate drills and lead ups along with explaining them verbally. Drills may seem easy to you the teacher, but even the simplest drill can be confusing to students if they do not see a demonstration of it. There is nothing worse than confusion when fifty students attempt a drill and everyone is trying to do it differently from what the instructor hoped for.

Shannon (25:168-76) in 1941 attempted to find elements that most contribute to successful teaching. He held interviews with 164 experienced public school supervisors concerning 430 of the best and 352 of the worst teachers who ever worked under their supervision. On the basis of the interviews he included ten items and definitions of each as follows: (1) Knowledge of subject--teacher's knowledge of subject taught, including curriculum and extracurriculum assignments; (2) knowledge of other things--english, related subjects and general culture;
(3) teaching skill--good teaching procedures well executed and resulting in maximum pupil learning; (4) professional attitude--conscientiousness, progressiveness, professional affiliations, professional ethics; (5) cooperation-with the administration and with other teachers in all the school's relationships; (6) discipline--maintenance of accepted standards of pupil decorum; (7) other classroom management--attentiveress to heat, light and ventilation, cleanliness and orderliness of classroom and equipment, and other activities conducive to effective learning; (8) personality--the personal attributes of a teacher which contribute to success; (9) community relations--making good with the
community; (10) teacher-pupil relations--sympathetic understanding of pupils and mutual respect in and cut of the classroom.

Van Denburg ( $32: 698-704$ ) introduced a rating scale that can be used as a guide for teaching efficiency for Biology teachers. He had a number of groupings used in his rating scale but wrote specifically on class management. Under his class management grouping he posed the following questions: Does the teacher

1. Aim to have the class take part in the lesson?
2. Train the class to judge the value of a pupil's recitation?
3. Train the class in class routine?
4. Train the class to manage its routine automatically?
5. Train the class in the care of textbooks and supplies?
6. Consider pupil's excuses for non-preparation before the lesson begins?
7. Train each pupil to recite to the class instead of to the teacher?
8. Know the name of every pupil early in the term?
9. Give attention to all pupils, not merely to the very bright or to the very slow?
10. Go over written records, reports, books, etc. to see that they are complete?
11. See that the seating plan is followed?

Sartor (24:448) created a checklist to help evaluate attitudes, behaviors, and teaching techniques. She broke them down into four major categories: (1) Philosophy and personality; (2) classroom procedures and activities; (3) community relationship; and (4) professional
attitudes. The wrtier has related only the relevant questions of Sartor's under the "Classroom Procedures and Activities" at this time. Is my classroom physically conducive to learning--clean, well ventilated, bright, and cheerful? Do I make my assignments clear and specific so that each pupil knows what is expected of him? Do I provide for individual differences in the classroom? Do I encourage my pupils to work rather than drive them? Am I able to communicate with my pupils in all areas of their interests? If not, do I try to learn about the things which interest them? Do I make good use of all available teaching materials and watch for new materials as they are developed? Am I fair and impartial in evaluating students work? Coffman (6:277-286) in 1954 presented 18 traits which were used as a rating list for students to evaluate teacher effectiveness. He used two thousand students at Oklahoma $A$ and $M$ College to rate 55 teachers. The rating scale consisted of 18 specific traits. The most relevant of these was: (1) Preparation for class meetings; (2) teacher's interest and enthusiasm in subject; (3) organization of class; (4) thinking demanded of students; (5) assignments;
(6) enunciation; (7) scholarship; (8) ability to express thought; (9)
feeling between instructor and student; (10) self-confidence; (11) punctuality in meeting and dismissing classes. Preparation for class meetings and organization of the course had relatively high correlations with the over-all rating. There were also high positive correlations with punctuality and personal appearance.

Jensen (16:79-85) listed some positive and negative qualities for teachers in his study. The positive and negative qualities of teachers were divided into the categories of personal, professional,
and social. The positive qualities of two of the three categories were: (1) Personal qualities--teacher is alert, cheerful, enthusiastic in expression and manner, exhibits self-control and good organization ability in the midst of classroom demands, likes fun and possesses a sense of humor, recognizes and admits own mistakes graciously, is fair and impartial; (2) professional qualities-teacher evidences a planned but flexible procedure anticipating individual needs and interests, stimulates pupils through interesting and original materials and teaching techniques, conducts well planned, clear, practical demonstrations and explanations, is clear and thorough in giving directions, is skilled in encouraging fupils to work through their problems and evaluate their own work, disciplines in a quiet, dignified, positive and fair manner, gives constructive help willingly and enthusiastically, foresees and resolves potential difficulties.

Mamman and Traicoff (21:98-101) attempted to study the characteristics of an ideal professor. Of the ten characteristics to rate the top three were: (1) Encourages independent thinking, not memorized knowledge; (2) has the subject matter and course well organized; and (3) has the ability to explain clearly. These top three characteristics constituted 50 percent of all responses for the most important attributes of an ideal professor. Methods students and graduate students rated "has the subject matter and the course well organized," as number one in priority.

Hamachek (9:341-44) accumulated related research in 1969 and introduced his characteristics of good teachers in the following four categories: (1) Personal characteristics; (2) instructional procedure and interaction styles; (3) perception of self; and (4) perception of
others. According to Hamachek, a good teacher has: (1) Willingness to
be flexible, to be direct or indirect as the situation demands; (2) ability to perceive the world from the students' point of view; (3) ability to "personalize" his or her teaching; (4) willingness to experiment and try out new things; (5) skill in asking questions; (6) knowledge of subject matter and related areas; (7) provisions of definite study; (8) provisions of well-established examination procedures; (9) reflections of an appreciative attitude; and (10) a conversational maner of teaching.

Bash (2:25-26) stated that one of the basic areas in the educational program is the teaching methodology necessary to present the curriculum. Here are some suggestions that may better learning conditions for all students. Daily lessons should be planned in detail so that class periods may be utilized fully. Routine matters, such as taking attendance and collecting materials, should be assigned to student assistants or teacher aids, if available, in order to relieve the teacher to perform the professional task of instruction. In a large group instructional period, the teacher should avoid carrying on a discussion with an individual student. Presentations by teachers to large groups should include the use of a variety of technical teaching aids. The rules of behavior should be developed cooperatively with the students. All students should have an opportunity and be encouraged to participate. An atmosphere of informality should be maintained.

Hurwitz (14:28-29) mentioned that teachers should let the students have some say in how they will learn. He made the following suggestions: Let the students have a choice on: duration of the learning experience; the location of the learning experience; how they
will be grouped; the formation to be used for a learning experience; and how much or which equipment or materials to use during an activity. Teachers must have alternative situations set up but the student will pick which is best for him or her. If they are not organized in their alternatives then chaos could result. Students must get used to making the choice because many have never had the opportunity, they were always told.

## Perception of Time

Berndt and wood (3:825-28) hypothesized in 1974 that even the pre-operational child possesses a primitive capacity for comparing durations of time. Twenty male and twenty female subjects were used. Half were five years of age and half were seven years of age from a public school in Newton, Massachusetts. The results indicated that a primitive capacity for judging duration does exist in the preoperational child.

Brunf and Silverman (5:582-91) devised several methods of relating events to the present state. It may help to understand the order of events and the continuity of those events if people focus on the specific activities. The events that occur in a time span can be recorded so that evidence of what was done can be realized. Recurring events can be shown which emphases the rhythm or frequency of the cycle. By using a timing device to see what can be done in a certain period of time, a person may become more efficient in estimating the duration of an event.

> Sommer (27:24-25, 81) in his article mentioned studies by

Le Comte Du Nouy and Shashi K. Pande. Nouy explained that time passes
more rapidly as a person gets older. He calculated that a twenty year old man experiences time passing four times faster than a four year old child, while a ninety year old man experiences time passing six times as fast. Pande found that the "westerner views time as a unique opportunity, to be utilized and be filled to the utmost with engagements, events and endeavors in order to capture the richest share of life (27:25)". Sommer, in conclusion stated, "In the natural world, only man is conscious of time (27:81)".

## Summary

From the related literature compiled it was indicated that discipline or behavior can be modified if a conscious effort is made to deal with it before it becomes a problem, and takes away from classroom effectiveness. Also, there are many instructor traits which were considered positive towards an effective teaching environment and progressive outcome of student-teacher relationships. The literature on the perception of time indicated that a time sense was apparent in all of us and can be improved with practice, taking into consideration a number of individual characteristics.

## Chapter III

## PROCEDURE

This chapter includes the procedures that were employed in collecting data on managerial times within physical education activity and skill and technique courses during the second 1977 sumner session at Appalachian State University, Boone, North Carolina. For convenience of the reader, the chapter has been divided into four sections entitled: Selection of subjects; Testing device; Testing procedure; and Analysis of data.

## Selection of Subjects

The subjects were the four physical education skill and technique and activity course instructors at Appalachian State University, Boone, North Carolina, during the second 1977 summer session. The ages of the instructors ranged from 27 years of age to 39 years of age. The years of teaching experience ranged from 5 years of experience to 17 years of experience. There were two male instructors and two female instructors. The male instructors taught four activity courses and two skill and technique courses while the female instructors taught two skill and technique courses and no activity courses. One male instructor and one female instructor had terminal degrees and the other two instructors had obtained a Master's degree as their highest degree earned. The subjects were chosen because they were the only instructors scheduled to teach during this session of summer school.

## Testing Device

The data accumulated for the perceived and recorded managerial times from all the instructors was obtained by three methods. A score sheet for perceived managerial times was administered to each of the instructors to obtain the perceived managerial time on each of the eleven managerial items listed. The score sheet for perceived managerial times was presented in Figure 1, page 41. The data obtained for each item was recorded in minutes and seconds. A score sheet for recorded managerial times was employed to record the actual managerial times on each of the eleven managerial items listed. The score sheet for recorded managerial times was presented in Figure 2, page 42 The data obtained for each item was recorded in minutes and seconds and no parts of a second were used. The device for testing was developed by the writer with references from the article by Daryl Siedentop and Frank Rife presented at the meeting of National College of Physical Education for Men held in Phoenix, Arizona in 1975.

Six stop watches were used to record the actual managerial times of each of the instructors in each of the classes they taught. The watches were mounted in a $12^{\prime \prime} \times 12^{\prime \prime} \times 2^{\prime \prime}$ piece of foam rubber and the watches were embedded between the slits. The foan rubber was held in the box by red electrical tape which was also used to label the items being timed by the individual watches. The watches were arranged in the confines of the box and foam rubber so each watch was easily accessible to the timer. The timer was able to start one watch and stop another with a high degree of efficiency.

Figure 1
Score Sheet for Perceived Managerial Times

## Instructor's age and study no.

Instructor's activity:
Instructor's teaching experience.
Instructor's sex:
lime of instructor's course:
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your
knowledge
3. If there is a question where no time is used then answer the question with 0 min. and 0 sec .
How much time is spent during your class period for the following items:
4. Roll taking: min._ sec.
5. Switching from station to station or place to place: min. $\qquad$ sec.
. Getting organized to start a game or activity:
min. $\qquad$ sec.
6. Students attending to your instructions once you give the signal to do so
min. $\qquad$ ec.
7. Having to take care of inappropriate behavior or a disruption problem within your class:
min. $\qquad$
8. Setting up any equipment during class:
min. $\qquad$ _ sec. $\qquad$
9. Class announcements:
$\qquad$
$\qquad$
10. Handing out equipment:
min. $\qquad$ sec . $\qquad$
11. Handing in equipment: min. $\qquad$ sec.
12. Allowing students to take showers and change clothes: min. $\qquad$ sec.
13. Record keeping: min. _sec.

Score Sheet for Recorded Managerial Times

## Timed items:

1. Roll taking:
min. ___sec
2. Switching from station to station or place to place: min. $\qquad$ sec. $\qquad$
3. Getting organized to start a game or activity: min. $\qquad$ sec.
4. Students attending to your instructions once you give the signal to do so:
min. $\qquad$ ec.
5. Having to take care of inappropriate behavior or a disruption problem within the class:
min. sec.
6. Setting up any equipment during class: min. $\qquad$ sec.
7. Class announcements:
min. $\qquad$ sec. $\qquad$
8. Handing out equipment:
min. $\qquad$ sec.
9. Handing in equipment:
min. $\qquad$ sec. $\qquad$
10. Allowing students to take showers and change clothes: min. $\qquad$ sec.
11. Record keeping:
min. $\qquad$ sec.

Miscellaneous timed items:

1. Late starting time for class: min. __ sec. $\qquad$
2. Ending class before the scheduled time: min. __ sec.
3. Having to fix activity equipment:
$\qquad$
sec.

## Testing Procedure

The length of time used to collect all the data for the investigation was eight days specifically from July 20, 1977 to July 28, 1977. Before the actual testing sessions began for the timing and the recording of management episodes, the timer practiced by visiting a class in order to become familiar with the testing procedure.

The classes were not randomly selected because of the small number of classes. There was a total of only four activity classes and four skill and technique classes offered during the 1977 second summer session.

During the actual testing period the timer attended the class and recorded the actual management times on the watches and also asked the instructor the questions from the score sheet for perceived managerial times. Only one practice session was needed for the timer to feel competent and understand what to look for, listen to, and record.

The six stop watches were labeled as to each of the various managerial tasks that were to be recorded on each watch. There were two watches that were labeled with specific managerial task items and also labeled miscellaneous. Four of the watches were labeled with managerial task items that the author felt would accumulate time during the entire class periods. These four watches were not reset at anytime during the timing session. At the end of the timing session the accumulated reading totals of the watches were recorded on the score sheet for recorded managerial times. The miscellaneious labeled watches were used to record the items which the timer did not expect to observe
and the times which he felt would not accumulate high time readings. Once timed on the watches labeled miscellaneous, the times were recorded on an additional sheet and accumulated, then recorded on the specific item listed on the score sheet. The miscellaneous watches were then reset to be ready for more timing during the class period.

The investigation was conducted on the main gym floor in
Varsity Gymnasium, the north balcony of Varsity Gymnasium, the bowling lanes in the Plemmons Student Union, and on the track in Conrad Stadium.

The list of specific classes and the total time allotted for each class was as follows: (1) Archery activity class, 90 minutes; (2) tennis skill and technique class, 110 minutes; (3) bowling activity class, 90 minutes; (4) beginning swimming activity class, 120 minutes; (5) track and field skill and technique class, 110 minutes; (6) volleyball activity class, 90 minutes; (7) volleyball skill and technique class, 110 minutes; ( 8 ) racket sports skill and technique class, 130 minutes.

The timer arrived at least five minutes before the scheduled starting time of each class and positioned himself away from the central movement of the class but close enough to hear and understand the instructor. This was done to aid the timer in recording any verbal management time and also helped in anticipating an upcoming time item.

Each class was visited twice. A mean of the management time recorded between the two class times was used.

Each class was timed beginning at the time listed in the printed university course schedule unless previously changed by the instructor.

The scheduled class times were used as a basis in order to form conclusions and percents on the amount of time accumulated for managerial tasks to the total amount of time listed for each of the classes. If the total class time scheduled was 90 minutes then the 90 minutes was used as the basis in obtaining the percent of the class time used for management.

## Analysis of Data

The data from the managerial time score sheets were accumulated and grouped into the specific categories. The categories for the times were: (1) Total managerial time; (2) instructor managerial times in relation to sex of subjects; (3) instructor managerial times in relation to type of class; (4) instructor managerial times in relation to age and years of teaching experience; and (5) class times in relation to the amount of used and unused time. The means and grand means of all the cumulative data were used in the descriptive analysis.

Percents were formulated for all groups of accumulated data by comparing the total amount of managerial time obtained to the total amount of class time scheduled for each of the classes taught. The cumulative managerial times from each of the instructors courses was compared to the total amount of class time scheduled to find what percent of the total class time of each of the courses taught was used for classroom management.

A comparison of the percent times from the score sheets was shown within the specific categories of the cumulative data. Once all of the cumulative data on managerial tasks from each of the instructors courses taught were obtained and the percents of managerial time
to total class time were formulated, comparisons between each of the items within the categories of grouped data were obtained.

Objective observations were made on all groups of accumulated data and conclusions were formulated. It was not the purpose of the study to reveal any statistical analysis on the data collected. The primary purpose for collecting and descriptively presenting the data was to record the information and indicate if there were implications or trends involved to warrant a more explicit and controlled method of research in the future.

## Chapter IV

## RESULTS

This chapter is divided into six sections in order to present the results of all the accumulated data. These sections are: (1) Total managerial time; (2) instructor managerial times in relation to sex of subjects; (3) instructor managerial times in relation to type of class; (4) instructor managerial times in relation to age and teaching experience; (5) class times in relation to the amount of used and unused time; and (6) discussion.

## Total Managerial Times

Using the total class time scheduled for all courses taught, it was indicated that 29.4 percent of the entire class time of all of the courses was used for management. The two managerial items with the highest recorded times were: (1) Allowing students to take showers and change clothes, which accumulated 9 minutes and 7 seconds of class time or 8.5 percent of total class time; and (2) class announcements, which accumulated 7 minutes and 2 seconds of class time or 6.6 percent of total class time. The two managerial items with the lowest recorded times were: (1) Record keeping, which accumulated 0 minutes and 10 seconds or .001 percent of the total class time; and (2) setting up equipment during class, which accumulated 0 minutes and 11 seconds or .0017 percent of the total class time. The data accumulated from the score sheets of the four physical education activity and skill and
әIqe.

| SCORE SHEET ITEM | recorded cumulative mean of means MANAGERIAL TIME OF ALL COURSES |
| :---: | :---: |
| 1. Roll taking | 1. 1 minute and 48 seconds |
| 2. Switching from station to station | 2. 4 minutes and 26 seconds |
| 3. Getting organized to start a game or activity | 3. 5 minutes and 41 seconds |
| 4. Students atterding to your instructions once you give the signal to do so | 4. 1 minute and 23 seconds |
| 5. Having to take care of inappropriate behavior or a disruption problem within your class | 5. 0 minutes and 30 seconds |
| 6. Setting up any equipment during class | 6. 0 minutes and 11 seconds |
| 7. Class announcements | 7. 7 minutes and 2 seconds |
| 8. Handing out equipment | 8. 0 minutes and 21 seconds |
| 9. Handing in equipment | 9. 0 minutes and 39 seconds |
| 10. Allowing students te take showers and change clothes | 10. 9 minutes and 7 seconds |
| 11. Record keeping | 11. 0 minutes and 10 seconds |
| TOTAL | 31 minutes and 18 seconds |

technique instructors during the 1977 second summer session at Appalachian State University indicated that 31 minutes and 18 seconds were used for managerial tasks in all of the courses taught. The total managerial time of all instructors from all the courses taught is presented in Table 1, page 48.

## Instructor Managerial Times in Relation to Sex of Subjects

All managerial times presented in this section were mean and grand mean times. All individual raw score data can be found in Appendices $A, B, C, D$, and $E$, pages 69-131.

## Recorded male instructor managerial times recorded. There

 was no appreciable difference between the two male instructors in the managerial times recorded. The male instructors used a total of 26 minutes and 9 seconds for management. The obtained raw score data indicated that male instructors had higher managerial times than the female instructors on all but four of the score sheet items. The four items which the male instructors had lower recorded times were(1) Switching from station to station or place to place; (2) getting organized to start a game; (3) setting up equipment during class; and (4) allowing students to take showers and change clothes (see Appendix C, page 127). Yet the total time for managerial tasks for the men was lower than the total time for managerial tasks for the women. With the total scheduled time of class computed the indication was that 25.7 percent of the total time was used for management by the male instructors. The accumulated data from the score sheet for the two male instructors were presented in Table 2, page 50.

Total Grand Means Managerial Time of Male and Female Instructors Recorded

| MALE INSTRUCTOR STUDY NO. | GRAND MEANS TOTAL TIME RECORDED | GRAND MEANS TOTAL RECORDED TIME OF BOTH INSTRUCTORS |
| :---: | :---: | :---: |
| 2 | 25:05 |  |
| 3 | 27:13 |  |
| TOTALS | 52:18 | 26:09 |
| FEMALE INSTRUCTOR |  |  |
| 1 | 23:15 |  |
| 4 | 29:55 |  |
| TOTALS | 53:10 | 26:35 |

Recorded female instructor managerial times recorded. There was an appreciable difference between the two female instructors in managerial times recorded. Instructor number one accumulated 23 minutes and 15 seconds for managerial episodes while instructor number four accumulated 29 minutes and 55 seconds for managerial episodes, a difference of 6 minutes and 40 seconds. The female instructors used 26 minutes and 35 seconds for management in all courses taught. The obtained raw data indicated that female instructors had lower managerial times than the male instructors on all but four of the score sheet items
(see Appendix D, page 129). Yet the total time for managerial tasks for the women was higher than the total time for managerial tasks for men. Using the total scheduled class time from all of the courses taught by the female instructors, it was indicated that 22.1 percent of the total class time was used for management. The data accumulated for the female instructors were presented in Table 2 , page 50.

## Comparison of male and female instructors managerial times

 recorded. From all the cumulative raw data on the recorded managerial tasks of male and female instructors it was indicated that the females had a lower percent of class time used for management and the males had the higher percent of class time for management. Yet there was no appreciable difference between the actual raw managerial times of the male and female instructors.
## Male instructor managerial times perceived. There was an

 appreciable difference between the total managerial time recorded and total managerial time perceived by the male instructors. The accumulated data indicated that male instructors had a difference of 8 minutes and 48 seconds in underestimating their actual total managerial time of all their courses surveyed. The accumulated data also indicated that the younger male instructor had a better time sense than the older male instructor. The obtained raw score data indicated that the male instructors had difficulty in judging the actual amount of time spent on managerial tasks (see Appendix E, page 131). The accumulated data for the male instructors were presented in Table 3, page 52 .Table 3
Total Grand Means Recorded and Perceived Management Time for Male and Female Instructors

| MALE INSTRUCTOR STUDY NO. | GRAND MEANS TOTAL TIME PERCEIVED | GRAND MEANS TOTAL RECORDED TIME | GRAND MEANS TOTAL DIFFERENCE OF BOTH INSTRUCTORS |
| :---: | :---: | :---: | :---: |
| 2 | 93:39 | 99:27 | $\begin{gathered} 5: 48 \\ \text { (underestimated) } \end{gathered}$ |
| 3 | 40:40 | 58:28 | $\begin{gathered} 11: 48 \\ \text { (underestimated) } \end{gathered}$ |
| TOTAL | 67:09 | 75:57 | 8:48 ${ }^{\text {a }}$ |
| FEMALE INSTRUCTOR STUDY NO. |  |  |  |
| 1 | 50:52 | 31:35 | $\begin{gathered} 19: 17 \\ \text { (overestimated) } \end{gathered}$ |
| 4 | 15:32 | 22:47 | $\begin{gathered} 7: 12 \\ \text { (underestimated) } \end{gathered}$ |
| TOTAL | 33:12 | 27:11 | 13:15 ${ }^{\text {a }}$ |

$a_{\text {Based on }}$ obsolute values of differences

Female instructor managerial times perceived. There was an appreciable difference between the total managerial time recorded and the total managerial time perceived by the female instructors. The cumulative data indicated that female instructors had a difference of 13 minutes and 15 seconds in overestimating their actual total managerial time of all their courses surveyed. The accumulated data also indicated
that the younger female instructor had a better time sense than the older female instructor. The obtained raw score data indicated that the female instructors had more difficulty in judging the actual amount of time spent on managerial tasks (see Appendix E, page 131). The only overestimation and the greatest deviation from a zero baseline occurred in this category. The data accumulated for the female instructors were presented in Table 3, page 52.

## Comparison of male and female managerial times perceived.

From all the cumulative raw data on the perceived managerial tasks of male and female instructors it was indicated that the males had a better time sense than the females. The female instructors overestimated their actual total recorded management time while the male instructors underestimated their actual total recorded management time. The female instructors were 3 minutes and 17 seconds closer to perceiving their actual recorded managerial time than the male instructors. There was an appreciable difference of both male and female instructors within their respective groups on the perception of total management time, especially between the two female subjects.

## $\frac{\text { Instructor }}{\text { Relation } \frac{\text { Managerial }}{\text { to }} \text { Type of } \text { Class }}$ <br> Relation to Type of Class

All managerial times presented in this section were mean and grand mean times. All individual raw score data can be found in Appendices A, B, F, G, H, I, J, K, L, M, N, O, P, and Q, pages 69-163.
Specific activity course managerial times recorded. The
accumulated data from activity courses indicated that the managerial times were lower on four managerial items and higher on seven items from
the score sheet when compared to the skill and technique courses (see Appendix $F$, page 134). The activity courses had 22 minutes and 10 seconds of class time used for management. Using the total scheduled class time from all the activity courses taught by the instructors, it was found that 22.7 percent of the total activity class was spent on management. The total recorded time used on management tasks in specific activity courses ranged from 15 minutes and 18 seconds in archery to 35 minutes and 59 seconds in beginning swimming. The accumulated data for the specific activity courses were presented in Table 4, page 55.

## Specific skill and technique course managerial times recorded

The mean and grand means times was used from the two times which the classes were visited. The data obtained from the skill and technique courses indicated that the managerial times were higher on four managerial items and lower on seven items from the score sheet when compared to the activity courses (see Appendix G, page 136). The skill and technique courses had 29 minutes and 21 seconds of class time used for management. Enploying the total scheduled class time from all the skill and technique courses taught by the instructors, it was found that 25.5 percent of the total skill and technique class was spent on management. The total recorded times used on managerial tasks in specific skill and technique courses ranged from 22 minutes and 47 seconds in volleyball to 36 minutes and 58 seconds in tennis. The accumulated data for the specific skill and technique courses are presented in Table 4, page 55.

Table 4
Total Grand Means Recorded Managerial Time for Activity and Skill and Technique Courses

|  | GRAND MEANS TOTAL | PERCENT OF MANAGER- <br> IAL TIME RECORDED OR |
| :--- | :--- | :--- |
| ACTIVITY COURSE | RECORDED | TOTAL CLASS TIME |

Comparison of activity and skill and technique course mana-
gerial times. From all the cumulative raw data on the recorded managerial tasks from activity and skill and technique courses it was found that activity courses had a lesser 24 percent of management time
in class and skill and technique courses had a higher 25.5 percent of management time in class. There was an appreciable difference between the total recorded management times of activity courses and skill and technique courses. Also, there were appreciable differences between activity courses and skill and technique courses within their respective categories. The total recorded time used on managerial tasks in each one of the skill and technique courses varied considerably from one another and the total recorded time used on management tasks in each one of the activity courses varied considerably from one another.

## Specific indoor course managerial times recorded. The cunu-

 lative data indicated that the indoor courses were involved in less management within the time period than were the outdoor courses. The total managerial times ranged from 15 minutes and 18 seconds in archery to 35 minutes and 59 seconds in beginning swimming. The data also indicated that 22.6 percent of all indoor courses were used for management tasks. The accumulated raw data scores from indoor courses indicated less management was used when compared to the outdoor activities (see Appendices $H, I, J, K, L, M$, and $N$, pages 138-155). The data also indicated that 22.4 percent of all indoor courses were used for managerial tasks. The accumulated data for the managerial times from the six indoor courses are presented in Table 5, page 57.Specific outdoor course managerial times recorded. The cumulative data indicated that the outdoor courses were involved in more managenent within the time period than were the indoor courses. The total managerial times were 31 minutes and 4 seconds in track and field, and 36 minutes and 58 seconds in tennis (see Appendices $0, P$, and $Q$,

## Table 5

Total Grand Means Recorded Managerial Time for Indoor and Outdoor Courses

|  | GRAND MEANS TOTAL <br> MANAGERIAL TIME <br> RECORDED | GRAND MEANS TOTAL <br> MANAGERIAL TIME OF |
| :--- | :---: | :--- |
| INDOOR COURSE | $15: 18$ | $19: 29$ |
| Archery | $35: 59$ |  |
| Bowling | $17: 55$ |  |
| Beginning Swimming | $22: 47$ | $23: 48$ |
| Volleyball | $143: 03$ |  |
| Volleyball Skill <br> and Technique |  |  |
| Racket Sports | $26: 05$ | $63: 03$ |

pages $158-163$ ). The data also indicated that 27.7 percent of all outdoor courses were used for managerial tasks. The accumulated data for managerial tasks from the two outdoor courses were presented in Table 5, page 57.

Comparison of indoor and outdoor course managerial times. From all of the cumulative raw data on the recorded managerial tasks from
indoor and outdoor courses it was indicated that outdoor courses had a higher percent of management time. There were appreciable differences between the total recorded differences between the total recorded management times from indoor and outdoor courses. The total recorded time used on managerial tasks in each one of the indoor courses varied considerably from one another and the total recorded time used on managerial tasks in each one of the outdoor courses varied but not to the same degree of the indoor courses.

## Instructor Managerial Times in <br> Relation to Age and Teaching <br> Experience

All managerial times presented in this section are mean and grand means times. All individual raw score data can be found in Appendices A, B, R, S, T, U, V, W, X, Y, Z, and AA, pages 69-191.

Specific age managerial times recorded. The cumulative data for managerial tasks from the age of the instructors indicated that there was a slight trend that the younger the instructor the lower the amount of management time recorded and the older the instructor the higher the amount of management time recorded. The times accumulated from each instructor's years of age category ranged from 23 minutes and 15 seconds to 29 minutes and 55 seconds (see Appendices R, S, T, $U$, and $V$, pages 166-177). The percent of total time used for management ranged from 21.1 percent to 29.5 percent of the class period. The data accumulated for the specific age of instructors were presented in Table 6, page 59.

## Specific years of teaching experience managerial times recorded

Table 6
Total Grand Means Recorded Managerial Time For Ages of Instructors

|  | GRAND MEANS TOTAL | PERCENT OF MANAGERI- |
| :--- | :--- | :--- |
| AGE OF |  |  |
| INSTRUCTORS | RANAGERIAL TIMES | AL TIME RECORDED TO |
| TOTAL CLASS TIME |  |  |

experience indicated that there was a trend in that the lower the years of teaching experience the lower the amount of managerial time recorded and the higher the years of teaching experience the higher the amount of management time recorded. The times accumulated from each instructor's
years of teaching experience category ranged from 23 minutes and 15 seconds to 29 minutes and 55 seconds (see Appendices $\mathrm{W}, \mathrm{X}, \mathrm{Y}, \mathrm{Z}$, and AA, pages 180-191). The percent of class time used for management ranged from 21.1 percent to 29.5 percent of the class period. The data accumulated for the specific years of experience of the instructors were presented in Table 6, page 59

## Class Time in Relation to the <br> Amount of Used and Unused <br> T'ime

All used time and unused time data presented in this section are mean and grand means times. All individual raw score data can be found in Appendices $A, B$, and $B B$, pages 69-102, 194.

The cumulative data from the score sheet indicated that the bowling activity had the lowest percent of unused time recorded at 2 minutes and 26 seconds or 2.7 percent of the total scheduled class period, and the highest percent of class time used recorded at 87 minutes and 33 seconds or 97.2 percent of the total scheduled class period. Track and field had the highest percent of unused time recorded at 32 minutes and 21 seconds or 29.4 percent of the total scheduled class period and the lowest percent of class time used recorded at 77 minutes and 39 seconds or 70.5 percent of the total scheduled class period. The cumulative data from the raw score sheets indicated that the activity courses have the higher percentage of class time being used and have the lowest percent of class time not being used (see Appendix BB, page 194). The accumulated data for used and unused time were presented in Table 7, page 61.

Table 7
Total Grand Means Recorded Class Time Used and Unused in Relation to Total Class Time Scheduled

| COURSE NAME | GRAND MEANS TOTAL TIME SCHEDULED | GRAND MEANS TOTAL TIME UNUSED | GRAND MEANS TOTAL TIME USED |
| :---: | :---: | :---: | :---: |
| Archery Activity | 90:00 | $\begin{gathered} 14: 40 \\ (16.2 \%) \end{gathered}$ | $\begin{gathered} 75: 15 \\ (83.6 \%) \end{gathered}$ |
| Bowling Activity | 90:00 | $\begin{gathered} 2: 26 \\ (2.7 \%) \end{gathered}$ | $\begin{gathered} 87: 33 \\ (97.2 \%) \end{gathered}$ |
| Beginning Swimming Activity | 120:00 | $\begin{gathered} 4: 33 \\ (3.7 \%) \end{gathered}$ | $\begin{aligned} & 115: 27 \\ & (96.2 \%) \end{aligned}$ |
| Volleyball Activity | 90:00 | $\begin{gathered} 10: 02 \\ (11.1 \%) \end{gathered}$ | $\begin{gathered} 79: 58 \\ (88.8 \%) \end{gathered}$ |
| Tennis Skill and Technique | 110:00 | $\begin{aligned} & 10: 30 \\ & (9.5 \%) \end{aligned}$ | $\begin{gathered} 98: 30 \\ (89.5 \%) \end{gathered}$ |
| Track and Field Skill and Technique | 110:00 | $\begin{gathered} 32: 21 \\ (29.4 \%) \end{gathered}$ | $\begin{gathered} 77: 39 \\ (70.5 \%) \end{gathered}$ |
| Volleyball Skill and Technique | 110:00 | $\begin{gathered} 3: 30 \\ (3.1 \%) \end{gathered}$ | $\begin{aligned} & 106: 30 \\ & (96.8 \%) \end{aligned}$ |
| Racket Sports Skill and Technique | 130:00 | $\begin{gathered} 7: 44 \\ (5.9 \%) \end{gathered}$ | $\begin{aligned} & 122: 16 \\ & (94.0 \%) \end{aligned}$ |
| TOTALS | 850:00 | $\begin{gathered} 85: 46 \\ (10.0 \%) \end{gathered}$ | $\begin{aligned} & 763: 08 \\ & (89.7 \%) \end{aligned}$ |

## Discussion

The purpose of the study was not to concentrate on any one aspect of management within the physical education classes but to accumulate data in a number of categories in order to obtain a better understanding of what is involved within the area. At this stage it is relevant to consider a number of factors in the findings of the study.

The small number of subjects and small number of courses certainly have affected the results of the investigation. In comparing the male and female instructors it must be taken into account that the males taught six courses and the females taught only two courses. In comparing the activity courses to the skill and technique courses, the fact that the total scheduled class times were different in a number of cases reduced the accuracy of the percent findings. One activity course was 90 minutes in total length and one skill and technique course was 130 minutes long which indicated that a lower percent total could be achieved by the skill and technique course with actually a higher total management time recorded.

Using the average times between any two groups of accumulated data seems to have detracted from the true indications of the results because of the unequal amounts of total class times and the unequal number of courses taught by each instructor. Although the female instructors had a slightly higher amount of management time recorded, they also had a lower percent total of management time used in their classes. This resulted because the mean total scheduled class time for the women was 120 minutes while the mean total scheduled class
time for the men was only 101 minutes and 15 seconds, which gave the female group a larger base with which to work when computing percentages.

When the time came to visit the classes a number of factors arose which could have affected the accuracy of the recorded times. Water breaks, which the instructors considered essential in certain courses, were not timed in this study. Also, the timer was not prepared to record a water break at the time it happened during the class. The retrieving of loose balls during a performance period was not recorded because in most instances it involved one or a few students and not the majority of the class population. The same explanation is given in not recording the time used to fix a piece of activity equipment or machinery since it only affected a small portion of the total class population.

Other situations that were confronted when visiting the classes should be mentioned. In the initial meeting of the class some instructors took a little longer time period when calling role in order to learn the names and faces of their students and dropped substantially the amount of roll time used in future classes, but the average managerial times did not indicate this. Some instructors combined two management tasks making it difficult for the timer to decide which task to record. For example, one instructor gave instructions in organizing for a game situation while the class was moving to the positions on the courts. Another instructor gave his instructions in organizing for a game situation while the class was handing out equipment. In one of the outdoor courses the weather halted the class early. In this situation the instructor had no control over the amount of total class time used.

The important point is that there were a number of variables that had to be confronted when recording the managerial times. This study was an initial attempt at showing a generalized view of the amount of time spent on class management in a number of different categories.

## Chapter V

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## Summary

The primary purpose of the study was to determine the amount of time spent by selected physical education instructors at Appalachian State University, Boone, North Carolina, on managerial episodes within activity classes and skill and technique classes. A second purpose of the investigation was to compare differences between perceived managerial times and actual managerial times recorded. A third purpose of the investigation was to determine if there was an observable comparison between the age, sex and the amount of teaching experience of the instructors to the amount of recorded management time recorded. A fourth purpose of the investigation was to report any differences between specific activities and skill and technique courses and indoor and outdoor courses to the amount of recorded management time.

The subjects were all physical education skill and technique and activity course instructors at Appalachian State University during the 1977 summer school second session. Data was accumulated for the perceived and recorded managerial times of all the instructors. A score sheet for perceived managerial times was administered to the instructors and a score sheet for recorded managerial times from the visited and timed courses was used to record all the accumulated data on managerial task items. The instructors classes were visited twice
during eight days, specifically from July 20, 1977, through July 28, 1977, and the managerial times were accumulated.

The accumulated data were analyzed by grouping them into the following categories: (1) Total managerial time; (2) Instructor managerial times in relation to sex of subjects; (3) Instructor managerial. times in relation to type of class; (4) Instructor managerial times in relation to age and teaching experience; (5) Class times in relation to the amount of used and unused time. Conclusions were then formulated.

## Conclusions

Within the limitations of this investigation the following conclusions were warranted:

1. Male instructors employed a higher percent of class time for management than the female instructors.
2. More managerial time was spent in teacher preparation classes than in basic activity classes.
3. Indoor courses had less recorded management time than the outdoor courses.
4. Male instructors were more perceptive as to times spent on managerial endeavors.
5. The more teaching experience an instructor had the more management time he or she employed in the classroom.
6. More total class time was used for instructional, student performance and management purposes in activity courses than was used in teacher preparation courses.

As a result of this research, the following recommendations for further study were proposed:

1. To conduct a similar study using a substantially larger number of subjects and courses in order to statistically analyze accumulated data.
2. To conduct a study in order to find the amount of time spent on each of the score sheet items and rank them as to the item (s) which use (s) the highest amount of management time and the item ( $s$ ) which use ( $s$ ) the lowest amount of managerial time.
3. To conduct a study to determine the amount of management time used to the number of students actively involved in a class at any given time during the class.in order to indicate if there is a relationship between the amount of management time recorded and the number of students actively involved in a class at any given time.
4. To conduct a similar study over a longer period of time and to compare the initial management class times to the latter recorded times in order to determine if there is a relationship apparent, and/or if the instructor increases or lessens the amount of managerial time over a given time span.
5. To conduct a study in an attempt to determine which types of courses have the highest management time in order to be used in teacher training and the organization of specific activities.
6. To conduct a similar study using a video tape deck and record classes on tape to be reviewed in order to accurately accumulate specific data.

## APPENDIX A

SCORE SHEET FOR PERCEIVED AND RECORDED MANAGERIAL TIMES

## CORE SHEET FOR PERCEIVED MANAGERIAL TIMES

$$
\text { :.: :- tor's age and study no. } \quad 36 \quad \text { \#3 }
$$

:......: :or': activity: Archery Activity Course

$$
\text { Instructor's teaching experience: } \quad 17 \text { years }
$$

Instructor's sex:
$\qquad$ Male
Tire (f instructor's course: 1st time 12:20-1:50 ( 90 min .)
Score Shect Instructions:

1. All questions are to be answered using time measures in minutes and seconds
2. All questions must be answered and to the best of your knovledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:

$$
\text { min. } 7 \text { sec. } 30
$$

2. Switching from station to station or place to place: min. 0 sec. 20
3. Getting organized to start a game or activity: min. 2 sec. 0
4. Students attending to your instructions once you give the signal to do so:
min. $1 \quad \mathrm{sec} .0$
5. Having to take care of inappropriate behavior or a disruption problem within your class:
min. 0 sec. 0
6. Setting up any equipment during class:
min. 0 sec. 0
7. Class announcements:
min. 0 sec. 0
8. Handing out equipment:
min. 0 sec.
9. Handing in equipment:
min. 0 sec. 0
10. Allowing students to take showers and change clothes: $\min$. 0 sec. 0
11. Record keeping: min . 0 sec .

SCORE SHEET FOR RECORDED MANAGERIAL TIMES

## Zimed itci..s:

1. Roll taking: min. 6 sec. 14
2. Switching from station to station or place to place: min. _ n sec. 39
3. Getting organized to start a game or activity: min. 2 sec. 5
4. Students attending to your instructions once you give the signal to do so: min. 3 sec. 35
5. Having to take care of inappropriate behavior or a disruption problem within the class: $\min .0 \quad \mathrm{sec} . \underline{0}$
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements
min. $0 \quad \mathrm{sec} .0$
8. Handing out equipment: min. $0 \quad \mathrm{sec} .0$
9. Handing in cquipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 0 sec. 0
11. Record keeping: min. 0 sec. 0

Miscellaneous timed items:

1. Late starting time for class: min. 6 sec. 12
2. Ending class before scheduled time min. 25 sec .15
3. Having to fix activity equipraent: min. 0 sec. 0

SCORE SHEET FOR PERCEIVED MANAGERIAL TIMES
tructor's age and study no $\qquad$ \#3
iru:ur's activity: _Archery Activity Course
Instructor's teaching experience: $\qquad$ 17 years
Instructor's sex: $\qquad$ Male

2nd Time 12:20-1:50 (90 min.)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge
3. If there is a question where no time is used then answer the question with 0 min. and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking: min. 0 sec. 12
2. Switching from station to station or place to place min. 8 sec. 0
3. Getting organized to start a game or activity: min. 4 sec. 0
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 48
5. Having to take care of inappropriate behavior or a disruption problem within your class:
min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 2 sec. 0
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 3 sec .30
10. Allowing students to take showers and change clothes: min. 0 sec. 0
11. Record keeping: min. 0 sec.

SCORE SHEET FOR RECORDED MANAGERIAL TIMES

Timed itc...s:

1. Roll taking:
min. 0 sec. 15
2. Svitching from station to station or place to place: min. 6
3. Getting organized to start a game or activity:
min. 5 sec. 1
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 10
5. Having to take care of inappropriate behavior or a discuption problem within the class:
min. $0 \quad \mathrm{sec}$. 0
6. Setting up any equipment during class:
min. 0 sec. 0
7. Class announcements: min. 2 sec. 6
8. Handing out equipment:
$\min$. 0 sec. 0
9. Handing in equipment: min. $4-\mathrm{sec} . \underline{9}$
10. Allowing students to take showers and change clothes: min. 0 sec. 0
11. Record keeping: min. $0 \quad$ sec.


Miscellaneous timed items:

1. Late starting time for class: min. 0 sec. 0
2. Ending class before scheduled time: min. 0 sec. 0
3. Having to fix activity equipment: min. 0 sec. 0

SCORE SHEET FOR PERCEIVED MANGrRIAL TIMES

Instructor's age and study no. $\qquad$ \#3
Ins:iuctor's activity: Tennis Skill and Technique Courses
Instructor's teaching experience: 17 years
Instructor's sex: $\qquad$ Male
Time of instructor's course: 1st Time 10:10-12:00 (110 min.)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:
min. _ $\mathrm{sec} \cdot \underline{1}$
2. Switching from station to station or place to place: min. 5 sec. 0
3. Getting organized to start a game or activity: min. 4 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 1 sec. 0
5. Having to take care of inappropriate behavior or a disruption problem within your class:
min. 1 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 2 sec. 0
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 2 sec. 0
10. Allowing students to take showers and change clothes: min. $15 \mathrm{sec} . \underline{0}$
11. Record keeping:
min . 0 sec .

SCORE SHEET FOR RECORDED MANAGERIAL TIMES

Timed itcms:

1. Roll taking:
min. 11 sec. 16
2. Switching from station to station or place to place: min. 5 sec. 9
3. Getting organized to start a game or activity: min. 3 sec. 7
4. Students attending to your instructions once you give the signal to do so: min. 1 sec. 21
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 2 sec. 26
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 3 sec. 16
8. Handing out equipment: $\min .0$ sec. 0
9. Handing in equipment: min. $0 \quad \mathrm{sec} .52$
10. Allowing students to take showers and change clothes: min. 15 sec. 0
11. Record keeping: $\min .0$

Miscellaneous timed items:

1. Late starting time for class: $\min .0$ sec. 0
2. Ending class before scheduled time: min. 0 sec. 0
3. Having to fix activity equipment: min. 0

SCORE SHEET FOR PERCEIVED WNAGERIAL TIMES

Instructor's age and study no $\qquad$ \#3
Instructor's activity: Tennis Skill and Technique Course
Instructor's teaching experience: 17 years
Instructor's sex: $\qquad$ Male
Time of instructor's course: 2nd Time 10:10-12:00 (110 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking: min. 0 sec. 0
2. Switching from station to station or place to place: min. 4 sec. 30
3. Getting organized to start a game or activity: min. 2 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 42
5. Having to take care of inappropriate behavior or a disruption problem within your class: a disruption probl
min. 0 sec. 0
6. Setting up any equipment durin£ class: min. 0 sec. 0
7. Class announcements: min. 1
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 30
10. Allowing students to take showers and change clothes: min. 15 sec .0
11. Record keeping: min. 0 sec. 0

SCORE SHEET FOR RECORDED MANAGERIAL TIMES

Timed itcms:

1. Roll toking:
min. 0 sec. 0
2. Switching from station to station or place to place: min. 6 sec. 43
3. Getting organized to start a game or activity: min. 5 sec. 14
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 15
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 3 sec. 18
8. Handing out equipment: $\min .0$ sec. 0
9. Handing in equipment: min. 1 sec. 6
10. Allowing students to take showers and change clothes: min. 15 sec. 0
11. Record keeping: min. 0 sec.

Miscellancous timed items:

1. Late starting time for class: min. 0 sec. 0
2. Ending class before scheduled time: min. 23 sec . _ O_(rain)
3. Having to fix activity equipment: $\min .0$

SCORE SHEET FOR PERCEIVID MANAGERIAL TIMES

Instructor's age and study no. 27 \#2
Instructor's activity: Bowling Activity Course
Instructor's teaching experience: 5 years
Instructor's sex: Male
Time of instructor's course: lst Time 12:20-1:50 (90 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking: min. 2 sec .30
2. Switching from station to station or place to place: min. 5 sec. 0
3. Getting organized to start a game or activity: min. 3 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 10
5. Having to take care of inappropriate behavior or a disruption problem within your class: a disruption probl
min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 3 sec 0
8. Handing out equipment: min. 2 sec. 0
9. Handing in equipment: min. 2 sec. 0
10. Allowing students to take showers and change clothes: min. 5 sec .0
11. Record keeping: $\min .0$ sec. 0

SCORE SHEET FOR RECORDED MANAGERIAL TIMS

## Timed items:

1. Roll taking:
min. 2 sec. 18
2. Switching fron station to station or place 10 place: min. 1 sec. 28
3. Getting organized to start a game or activity: min. 6 sec. 17
4. Students attending to your instructions once you give the signal to do so: give the signal 0 sec. 20
5. Having to take care of inappropriate behavjor or a disruption problem within the class: min. 0 sec. 0
6. Setting up any equipment during class: min. 0 se ec. 0
7. Class announcements: min. 8 sec. 34
8. Handing out equipment: min. 4
9. Handing in equipment:
min. $2 \mathrm{sec} . \underline{12}$
10. Allowing students to take showers and change clothes: min. 5 sec. 0
11. Record keeping: min. 0 sec. 0

Miscellaneous timed items:

1. Late starting time for class: min. 0 sec. 56
2. Ending class before scheduled time: min. 10 sec . 0
3. Having to fix activity equipment: min. 15 sec .42

SCORE SHEET FOR FLRCEIVED MANAGERIAL TIMES

Instructor's age and study no. 27 \#2
Instructor's activity: Bowling Activity Course
Instructor's teaching experience: 5 years
Instructor's sex: $\qquad$
Time of instructor's course: 2nd Time 12:20-1:50 (90 minute)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:

$$
\min .0 \text { sec. } 30
$$

2. Switching from station to station or place to place: min. 0 sec. 15
3. Getting organized to start a game or activity: min. 1 sec. 30
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 10
5. Having to take care of inappropriate behavior or a disruption problem within your class:
min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. $1 \quad$ sec. 30
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 5 sec .0
11. Record keeping: min. 0 sec.

SCORE SHEET FOR RECORDED MAMAGERIAL ial.i.S

Timed items:

1. Roll taking:
min. 1 _sec. 0
2. Switching from station to station or plice to place: min. 0 sec. 24
3. Getting organized to start a game or activity: min. 2 sec. 8
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 4
5. Having to take care of inappropriate behavjor or a disruption problem within the class: min . 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 0 sec. 0
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 5 sec. 0
11. Record keoping:
min. 0 sec. 0
Miscellaneous timed items:
12. Late starting time for class: min. 3 sec. 57
13. Ending class before scheduled time: min. 0 sec. 0
14. Having to fix activity equipment: min. 6 sec. 19

Instructor's age and study .... 27 \#2
Instructor's activity: Beginning Swirming Activity Course
Instructor's teaching experience: 5 years
Instructor's sex: Male
Time of instructor's course: lst Time 8:00-10:00 (120 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:
min. 2 sec. 30
2. Switching from station to station or place to place: min. 3 sec. 0
3. Getting organized to start a game or activity: min. 1 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 1 sec. 45
5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 0 sec. 30
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 0 sec. 0
8. Handing out equipment: min. $\qquad$
9. Handing in equipment: min. 0
10. Allowing students to take showers and change clothes: min. 15 sec .0
11. Record keeping: $\min . \quad 2 \mathrm{sec}$.

## SCURE SHEET FOR RECORDED MANAGERIAL Times

Timed items:

1. Fill taking:
min. 2 _sec. 9
2. Sritching from station to station or place to place: min. 5 sec .19
3. Getting organized to start a game or activity: min. 11 sec .49
4. Students attending to your instructions once you give the signal to do so: min. 3 sec. 32
5. Havin! to take care of inappropriate behavior or a dis; uption problem within the class:
min. 0 sec. 0
6. Settirg up any equipment during class: min. . 0 . sec. 0
7. Class announcements
min. _ O_ sec. 0
8. Handing out equipment:
min. 0 _sec. 0
9. Handin: in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 15 sec . 0
11. Record keeping: min. 2_sec. 4

Miscellaneous timed items:

1. Late $s$ arting time for class: min. _7_sec. 0
2. Ending class before scheduled time: min. 0 sec. 0
3. Havin: to fix activity equipment min. 0 sec. 0

SCORE SUIET FOR PERCEIVED MANAGERIAL TIMES

Instructor's age and ac.'y no. $\qquad$ \#2

Instructor's activity: Beginning Swinming Activity Course
Instructor's teaching expericnce: 5 years
Instructor's sex: $\qquad$ 2nd Time 8:00-10:00 (120 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec.

How much time is spent during your class period for the following items:

1. Roll taking:
min. 0 sec. 45
2. Switching from station to station or place to place: min. 4 sec. 0
3. Getting organized to start a game or activity: min. 5 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 30
5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 1 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcenents: min. 0 sec. 0
8. Handing out equipment: min. 1 sec. 0
9. Handing in equipment min. $\qquad$ ec. 0
10. Allowing students to take showers and change clothes: min. 15 sec . 0
11. Record keeping: min. 3 sec. 0

SCORE Sheet for recorded managerial times

Timed items:

1. Roll taing:
min. 1 sec. 3
2. Switching from station to station or place to place: min. 3 sec .49
3. Getting organized to start a game or activity: min. 8 sec. 35
4. Students ittending to your instructions once you give the signal to do so: min. 0 sec. 31
5. Having to take care of inappropriate behavior or a discuption problem within the class: min. 0 sec. 20
6. Setting ur any equipment during class: min. 0 sec. 0
7. Class annc incements:
min. 0 sec. 0
8. Handing out equipment:
$\min .0$ ssc. 44
9. Handing in equipment: min. 0 sec. 45
10. Allowing students to take showers and change clothes: min. $15 \mathrm{sec} . \underline{0}$
11. Record kecping: $\min .0$ snc. 41

## Miscellaneous timed ite s:

1. Late start ng time for class: min. 2 sc. 6
2. Ending cla;s before scheduled time: min. 0 sec. 0
3. Having to fix activity equipment:
min. 0 ec. 0

## SCORE S:IEET FOR PERCEIVED MANAGERIAL TIMES

Instructor's age and study no. $\qquad$
Instructor's acti: : : : : Track and Field Skill \& Technique Course
Instructor's teaching experience: 5 years
Instructor's sex: Male
Time of instructor's course: lst Time 2:30-4:30 (110 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:
min. 0 sec. 20
2. Switching from station to station or place to place: min. 5 sec .30
3. Getting organized to start a game or activity: min. 12 sec .0
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 15
5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 0 sec. 0
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0
10. Allowing students to take showers and change clothes: min. 15 sec .
11. Record kecping: min. 0

Tined itc

1. Roll taking:
min. 0 sec. 25
2. Switching from station to station or place io place: min. 3 sec. 25
3. Getting organized to start a game or activity: min. 9 _ sec. 16
4. Students attending to your instructions once you give the signal to do so:
$\min .0$ sec. 37
5. H: ving to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 0
6. Setting up any equipment during class: min . 0 . sec. 0
7. C:ass announcements: min. 0 sec. 0
8. Ha rding out equipment: min. 0 sec. 0
9. Ha rding in equipment: min. 0
10. Allowing students to take showers and change clothes: min. 15 sec .0
11. Rccord keeping: min. 0 sec. 0

Miscellaneous $t$ med items:

1. La ee starting time for class: mi:. 7 sec .27
2. Er ling class before scheduled time: min. 20 sec. 0
3. H: ving to fix activity equipment: m n . $\underline{0} \mathrm{sec} . \underline{0}$

Instructor's age and study no. 27 \#2
Instructor's …: :iity: Track and Field Skill \& Technique Course Instructor's teaching experience: 5 years
Instructor's sex: Male
Time of instructor's course: znd Time 2:30-4:30 (110 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking: min. 0 _ sec. 0
2. Switching from station to station or place to place: min. 1 sec. 15
3. Getting organized to start a game or activity: min. 2 sec. 0
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 20
5. Having to take care of inappropriate bchavior or a disruption problem within your class: min. 1 sec. 30
6. Setting up any equipment during class: min. $2 \mathrm{sec} . \underline{30}$
7. Class announcements: min. 0 sec. 0
8. Handing out equipment: min. _ O sec. 0
9. Handing in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 15 sec .0
11. Record keeping: min. 0 sec. 0

SCORE SHEET FOR RECORDED MANAGERIAL TIMES

## Timed : $:$...s

1. Roll taking:
min. $\underline{O}^{\mathrm{sec}}$.
2. Sr:itching from station to station or place to place: min. 2 sec. 1
3. Getting organized to start a game or activity: min. 1 sec. 4
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 43
5. Having to take care of inappropriate behavior or a disruption problem within the class:
min. 2 sec. 37
6. Setting up any equipment during class: min. 2 sec. 3
7. Class announcements: min. 0 sec. 0
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. D sec.
10. Allowing students to take showers and change clothes: min. 15 sec .0
11. Record keeping:
min. 0 sec. 0

Miscellaneo is timed items:

1. Late starting time for class: min. 5 sec. 15
2. Ending class before scheduled time min. 32 sec .0
3 Having to fix activity equipment: min. 0 sec. 0

## SCORE SHEET FOR PERCEIVED MANへGERIAL TIMES

I:nstructor's age and study no. $27 \quad \# 2$
Y..:: uctcr's activ:i): Volleyball Activity Courses

Instructor's teaching experience: 5 years
Instructor's sex: Male
Time of instructor's course: lst Time 12:20-1:50 (90 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measwes in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:
min. 3 sec. 30
2. Switching from station to station or place to place: min. 6 sec. 30
3. Getting organized to start a game or activity: min. 6 sec. 0
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 15
5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 0 sec. 0
6. Setting up any equipment during class: min. $\qquad$

- Class announcements min. 1 sec. 30

8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 5 sec. 0
11. Record keeping: min. 0 sec.

SCORE SHEET FOR RECORDED MANAGERIAL TIMES
T...... items:

1. Roll taking
min. 3 sec. 20
2. Svitching from station to station or place to place: min. 4 sec. 36
3. Getting organized to start a game or activity: min. 10 sec .15
4. Students attending to your instructions once you give the signal to do so: min. 1
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 0
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements min. 3 sec. 42
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment:
min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 2 sec. 0
11. Record keeping: $\min$. 0 sec. 0

Miscellaneous timed items:

1. Late starting time for class: min. 7 sec. 17
2. Ending class before scheduled time: min. 0 sec. 0
3. Having to fix activity equipment: min. 0 sec. 0

SCORE SHEET FOR PERCEIVED MANAGERIAL TIMES

Instructor's age and study no. 27 \#2
Instr:ctor's $=:$ : $\because i t$ ): Volleyball Activity Course
Instructor's teaching experience: 5 years
Instructor's sex: Male
$\qquad$
2nd Time 12:20-1:50 (90 minutes)
Sors:

1. All questions are to be answered using time r.casures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking: min. 0 sec. 0
2. Switching from station to station or place to place: min. 3 sec. 0
3. Getting organized to start a game or activity: min. $5 \mathrm{sec} . \underline{30}$
4. Students attending to your instructions once you give the signal to do so:
min. $0 \mathrm{sec} . \underline{25}$
5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 2 sec. $\quad 0$
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announcements: min. 0 sec. 30
8. Handing out equipment: min.

$$
\min . \quad 0 \mathrm{sec} .0
$$

9. Handing in equipment: min. 0 sec . 0
10. Allowing students to take showers and change clothes: min. 5 sec . 0
11. Record keeping: min . 0 sec . 0

SCORE SHilEt FOR RECORDED MANAGERIAL TIMLS

Timed items:

1. Roll takine:
min. $0^{\text {sec. }}$ O_
2. Switching from station to station or place to place: min. 1 stc. 33
3. Getting orsanized to start a game or activity: min. 4 sec. 27
4. Students attending to your instructions once you give the signal to do so min. 0 sec. 12
5. Having to take care of inappropriate behavior or a disruption problem within the class: $\min .0$ sec. 16
6. Setting up any equipment during class: min. 0 sec. 0
7. Class announccments min. 0 sec. 10
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 0
10. Allowing students to take showers and change clothes: min. 4 sec. 0
11. Record keeping: $\min .0$ sec.

Miscellaneous timed items:

1. Late starting time for class: min. 12 sec .47
2. Ending class before scheduled time: min. 0 sec. 0
3. Having to fix activity equipment: min. 0 sec. 0

SCORE SHEET FOR PERCEIVED MANAGERIAL TIMES

Instructor's age and study no. 34 \#4

Instructor's teaching expericnce: 13 years
Instructor's sex: $\qquad$
Time of instructor's course: 2nd Time 12:20-2:10 (110 minutes)
Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec

How much time is spent during your class period for the following items:

1. Roll taking: min. $\quad 0$ sec. 0
2. Switching from station to station or place to place min. 6 sec .0
3. Getting organized to start a game or activity: min. 1 sec. 0
4. Students attending to your instructions once you give the signal to do so:
min. 0 sec. 45
. Having to take care of inappropriate behavior or a disruption problem within your class: rin. 0 sec. 10
5. Sctting up any equipment during class: rin. $\underline{0} \sec .0$
6. Class announcements: min. 2 sec. 0
7. Handin! out equipment: min. $0^{0} \sec .0$
8. Handing in equipment: min. 0 sec. 0
9. Allowing students to take showers and change clothes: min. 10 sec .0
10. Record keeping: min. 0 sec. 0

SCORE SHEET FGR RLCORdED MaNAGERIAL TimeS

Timed items:

1. Roll taking:
min. 0 sec. 0
2. Switching from station to station or place to place: min. 3 sec . 18
3. Gctting organized to start a game or activity: min. | organized |
| :---: |
| sec .16 |
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 11
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 5
6. Setting up any equipment during class: min. 0
7. Class announcements: min. 2
8. Handing out equipment: min. 0 se sec. 0
9. Handing in equipment: min. 0 sec .
10. Allowing students to take showers and change clothes: min. ng studen
10 sec . $\qquad$
11. Record keeping: min. 0 sec. 0

Miscellaneous timed items:

1. Late starting time for class: min. 0 sec. 0
2. Ending class before scheduled time: min. 0 sec.
3. Having to fix activity equipment: min. 0 sec. 0

SCORE SHEET FOR PERCEIVED MANAGERIAL TI:SES

Instructor's age and study no. 34 \#4
Instructc:' = act: $:$ : $\ddagger j:$ Volleyball Skill and Technique
Instructor's teaching cxperience: 13 years
Instructor's sex: Female $\qquad$
Time of instructor's course: lst Time 12:20-2:10 (110 minutes)
Score Sheet Instructions:

1. All questions are to be answered using tire measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec .

How much time is spent during your class period for the following items:

1. Roll taking:
min. 3 sec. 0
2. Switching from station to station or place to place: min. 1 sec. 0
3. Getting organized to start a game or activity: min. 2 sec. 0

* 4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 10

5. Having to take care of inappropriate behavior or a disruption problem within your class: min. 1 sec. 0
6. Sctting; up any equipment during class: min. 0 sec. 0
7. Class announcements:
min. 3 sec .0
8. Handins: cut equipment: min. 0 | 18 cut equi |
| :--- |
| 0 |
9. Handing in equipment:
min. 1
10. Allowing students to take showers and change clothes: min. 10 sec .0
11. Record keeping:
min. 0 sec. 0

SCORE SHEET FUR RECORDED MANAGERIAL TIMES

Timed items：
1．Roll taking：
min． 0 sec． 15
2．Switching from station to station or place to place： min． 5 sec． 28
3．Getting organizcd to start a game or activity： min． 7 sec． 13
4．Students attending to your instructions once you give the signal to do so：
min． 1 sec． 22
5．Having to take care of inappropriate behavior or a disruption problem within the class： min． 0 sec． 10
6．Setting up any equipment during class： $\min .0$ sec． 0
7．Class announcements：
min． $1 \quad$ sec． 29
8．Handing out equipment： min ．$\delta \mathrm{sec}$ ． 0
9．Handing in equipment： min． 0 sec． 33
10．Allowing students to take showers and change clothes： min． 10 sec .0
11．Record keeping： $\min .0$ sec． 0

Miscellaneous timed items：
1．Late starting time for class： min． 0 sec． 0
2．Ending class before scheduled time： min． 7 fec .0
3．Having to fix activity equipment： min． 0 sec． 0

## SCORE SHEET FOR PERCEIVED NVNGGERIAL TIMES

Instructor＇s age and study no． 39 \＃1
Ins：ニ：ニさこ：＇s activity：Racquet Sports Skill and Technique Course
Instructor＇s teaching experience： 15 years
Instructor＇s sex：Female
Time of instructor＇s course：lst Time 2：30－4：40（130 minutes）
Score Shect Instructions：
l．All questions are to be anstiered using time measures in minutes and seconds．

2．All questions must be answered and to the best of your knowledge．

3．If there is a question where no time is used then answer the question with 0 min ．and 0 sec ．

How much time is spent during your class period for the following items：

1．Roll taking：
min． 2 sec． 0
2．Switching from station to station or place to place： min． $15 \mathrm{sec} . \underline{0}$
3．Getting organized to start a game or activity： min． 20 sec .0
4．Students attending to your instructions once you give the signal to do so： min． 1 sec． 0
5．Having to take care of inappropriate behavior or a disruption problem within your class： min． 2 sec.
6．Setting up any equipment during class： min． 3 sec .0
7．Class announcements：
min． 10 sec ．
8．Handing out equipment：
min． $\qquad$ sec．
9．Handing in equipment：
min． 1 sec ．

30
10．Allowing students to take showers and change clothes： min． 10 sec ． 0
11．Record keeping： min． 0 sec． 0

## SCORE SHEET FOR RECURLED Gingerial times

Timed items:

1. Roll taking:
min. 0 sec. 50
2. Switching from station to station or place to place: min. 12 sec .35
3. Getting organized to start a game or activity: min. 7 sec. 24
4. Students attending to your instructions once you give the signal to do so
min. 0 sec. 51
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 3
6. Setting up any equipment during class: min. 1 sec. 54
7. Class announcements: min. 1 sec. 54
8. Handing out equipment: min. 0 sec. 0
9. Handing in equipment: min. 0 sec. 30
10. Allowing students to take shovers and change clothes: min. 10 sec .0
11. Rccord keeping: min. 0 sec. 0

Miscellancous timed items:

1. Late starting time for class: min. 1 sec. 23
2. Ending class before scheduled time min. 1
3. Having to fix activity equipment min. 0 sec. 0

## SCORE SHEET FOR PERCEIVED MANAGIRIAL TIMES

Instructor's ase and study no. 39 \#1
I.S:-uctc:'s i:inivity: Racquet Sports Skill and Technique Course

Instructor's teaching experience: 15 years
Instructor's sex: Female
Time of instructor's course: 2nd Time 2:30-4: 40 (130 minutes)

Score Sheet Instructions:

1. All questions are to be answered using time measures in minutes and seconds.
2. All questions must be answered and to the best of your knowledge.
3. If there is a question where no time is used then answer the question with 0 min . and 0 sec

How much time is spent during your class period for the following items:

1. Roll taking:
min. 0 sec. 0
2. Switching from station to station or place to place: min. 10 sec .0
3. Getting organized to start a game or activity min. 6 sec .0
4. Students attending to your instructions once you give the signal to do so: min. 0 sec. 15
5. Having to take care of inappropriate bchavior or a disruption problem within your class: rin. 0 sec. 0
6. Sctting up any equipment during class: rin. 0 sec. 0
7. Class announcements: rin. 3 sec .0
8. Handing out equipment: nin. 1 sec. 0
9. Handing in equipment min. $\qquad$ in equipm
sec. 0
10. Allowing students to take showers and change clothes: min. 10 sec.
11. Record keeping: min. $\qquad$ sec.
. Injury time: min. 2

## SCORE SHEET FOR RECORDEZ MANAGERIAL TIMES

Timed items:

1. Roll taking:
min. $\underline{\theta} \mathrm{sec} . \underline{0}$
2. Svitching from station to station or place to place: min. 8 sec .
3. Getting organized to start a game or activity min. 2 sec . 57
4. Students attending to your instructions once you give the signal to do so: min. 0 sec.
5. Having to take care of inappropriate behavior or a disruption problem within the class: min. 0 sec. 9
6. Setting up any equipment during class: min. 0 sec .0
7. Class announcements: min. 1 sec.
8. Handing out equipment:
min. 0 sec .30
9. Handing in equipment:
min. 0 sec. 21
10. Allowing students to take showers and change clothes: min. 10 sec.
11. Record keeping:
min. 0 sec.

Miscellaneous timed items:

1. Late starting time for class:
min. _ $2 \mathrm{sec} . \underline{5}$
2. Ending class before scheduled time: min. 12 sec .
3. Having to fix activity equipment:
min. 0 sec.
4. Injury Time: min. $\qquad$

## APPENDIX B

CUMULATIVE LIST OF MANAGEMENT TIMES, USED TIME, NON-USED CLaSS TIMES AND PERCENTS FROM THE VISITED CLASSES

SCORE SHEET RESULTS
 CLASS TIMES AND PERCENTS FROM THE VISITED CLASSES sCORE SHET f:SuITS

Class Information: Racquet Sports Skill and Technique Course Study No: l Age: 39 T. Experience: 15 yrs. Sex: Female

1. Perceived time:

68:30 33.15
2. Mean perccived time:

101:45*2= $\frac{6105}{2}=3052=50: 52$
3. Recorded time:

37:57 25:14
4. Mean recorded time:
$63: 11 \div 2=\frac{3791}{2}=1895=31: 35$
5. Time net used:

1:23 14:05
6. Mean time not used:
$15: 28+2=\frac{928}{2}=464=7: 44$
7. Time used:

128:37 115:55
8. Mean time used:
$244: 32 \div 2=\frac{14672}{2}=7336=122: 16$
9. Total class time scheduled: 130 Min.
10. Time used to fix activity equipment:

0
11. Mean time used to fix activity equipment:

0
12. Total management time perceived plus class time not used: 69:53 47:20
13. Mean total management tire perceived plus class time not used:
$117: 13 \div 2=\frac{7033}{2}=3516=58: 36$
14. Total managenent tirie recorded plus class time not used: 39:20 39:19
15. Mean total management time recorded plus class time not used:
$78: 39 \div 2=\frac{4719}{2}=2359=39: 19$
16. Percent of momenend …… ocment time to total class time: 52.6\% 25.5\%
17. Rean percent of porched magement time to total class time:
$78.1 \% \div 2=39.05 \%$
18. Percent of perceived monacement time to class time used: 53.2\% $28.6 \%$
19. Mean percent of perceived management time to class time used:
$81.8 \% \div 2=40.9 \%$
20. Percent of recorded management time to total class time: 29.1\% 19.4\%
21. Mean percent of recorded management time to total class time:
$48.5 \% \div 2=24.25 \%$
22. Percent of recorded management time to class time used: 29.5\% 21.7\%
23. Mean percent of recorded management time to class time used:
$51.2 \% \div 2=25.6 \%$
24. Percent of class time not used to total class time: . $01 \%$ 10.8\%
25. Nean percent of class tine not used to total class time: $10.81 \% \div 2=5.40 \%$
26. Fercent of time not used plus perceived management time to total class time:
57.5\% 36.4\%
27. Nean percent of time not used plus perceived management time to total class time:
$94.1 \div 2=47.05 \%$
28. Percent of time not used plus recorded management time to total class time:
$30.2 \% \quad 30.2 \%$
29. Nean percent of time not used plus recorded managerent time to total class time:
$60.4 \% \div 2=30.2 \%$
30. Percent of time to fix activity equipront to total clacs time:

0
31. Kean percent of time to fix activity ......nnt to total class time
0
32. Percent of time to fix activity equiporit o class it: used: 0
33. Mean percent of time to fix activity equip: nt to class time used:
0

Cumulative list of maiahgemini ii...S, used that, in...uold CLASS TIMES AND PERCENTS FRON T!? VISITFD CIASSFS SCORE SHELT H

Class Information: Volleyball Skill and Technique Course Study No: 2 Age: 34 T. Experience: 13 Yrs. Sex: Female

1. Perceived time:

21:10 19:55
2. Mean perccived time: $41: 05 \div 2=\frac{2465}{2}=1232=20: 32$
3. Recorded time: 26:30 19:05
4. Nean recorded time: $45: 35 \div 2=\frac{2735}{2}=1367=22: 47$
5. Time net used: 7:00 00:00
6. Mean time not used $7: 00 \div 2=\frac{420}{2}=210=3: 30$
7. Time used: 103 Min. 110 Min.
8. Mcan time used $213 \div 2=106: 30$
9. Total class time scheduled: 110 Min .
10. Time used to fix activity equipment: 0
11. Mean time used to fix activity equipment: 0
12. Total management time perceived plus class time not used: 28:10 19:55
13. Mean total management time perceived plus class time not used:
$48: 05 \div 2=\frac{2885}{2}=1442=24: 02$
14. Total managoment time recorded plus class time not used: 33:30 19:05
15. Mean total management tinie recorded plus class time not uscd:
$52: 35 \div 2=\frac{3155}{2}=1577=26: 17$
16. Percent of norerived ……… .... tire to total class time: 6.3\% 18.1\%
17. Moan percent of perceived wangenent time to total class time:
$24.4 \% \div 2=12.2 \%$
18. Percent of perceived manacomont time to class time used: 20.5\% 18.1\%
19. Hean percent of perceived management time to class time used:
$38.6 \% \div 2=19.3 \%$
20. Percent of recorded management time to total class time: 24.0\% 17.3\%
21. Mean percent of recorded management time to total class time:
$41.3 \% \div 2=20.65 \%$
22. Percent of recorded management time to class time used: 25.7\% 17.3\%
23. Mean percent of recorded manacoment time to class time used:
$43 \% \div 2=21.5 \%$
24. Percent of class time not used to total class time: $6.3 \% \quad 0 \%$
25. Nean percent of class time not used to total class time: $6.3 \% \div 2=3.15 \%$
26. Fcreent of time not used plus perceived management time to total class time: 25.6\% 18.1\%
27. Kican percent of time not used plus perceived managenent time to total class time:
$43.7 \% \div 2=21.85 \%$
28. Percent of time not used plus recorded management time to total class time:
$30.4 \% \quad 17.3 \%$
29. Nean percent of time not used plus recorded managenent time to total class time:
$47.7 \% \div 2=23.85 \%$
30. Tcreent of time to fix activity equipment to tot 71 class : ime:
0
31. :Can percent of time to fix activity equipernt • : otal class time:
0
32. 「ercent of time to fix activity equipment to cl.... time used:
0
33. Non percent of time to fix activity equipment to c'ass time used:
0

CLASS TIMES AND PERCENTS FROM TIF VTCTTFD CIASCFS SCORE SHEET RLSULZ:

Class Information: Volleyball Activity Course (lst. and 2nd Time) Study No: 2 Age: 27 T. Experience: 5 yrs. Sex: Male

1. Perceived time:

22:45 16:15
2. Mean perceived time: $39: 00 \div 2=\frac{2340}{2}=1170=19: 30$
3. Recorded time:

25:13 10:38
4. Mean recorded time: $35: 51 \div 2=\frac{2151}{2}=1075=17.55$
5. Time net used

7:17 12:47
6. Mean time not used: $20: 04 \div 2=\frac{1204}{2}=602=10: 02$
7. Time used:

82:43 77:13
8. Mean time used

159: $56 \div 2=\frac{9596}{2}=4798=79: 58$
9. Total class time scheduled: 90 Min .
10. Time used to fix activity equipment:

0
11. Mean time used to fix activity equiprent: 0
12. Total management time perceived plus class time not used: 30:02 29:02
13. Mean total management time perceived plus class time not used:
$59: 04 \div 2=\frac{3544}{2}=1772=29: 32$
4. Total management time recorded plus class time not used: 32:30 23.25
15. Nean total management time recorded plus class time not used:
$55: 55 \div 2=\frac{3355}{2}=1677=27: 57$
 $25.2 \%$ $18.0 \%$
17. $\because$ an percent of perceived nambcont time to total class time:
$43.2 \% \div 2=21.6 \%$
18. Percent of perccived management time to class time used: 27.5\% 21.0\%
19. Nean percent of perceived managercnt time to class time used:
$48.5 \% \div 2=24.25 \%$
20. Percent of recorded management time to total class time: 28.0\% $\quad 11.8 \%$
21. Mean percent of recorded management time to total class time:
$39.8 \% \div 2=19.9 \%$
22. Percent of recorded management time to class time used: $30.4 \% \quad 13.7 \%$
23. Mean percent of recorded management time to class time used:
$44.1 \div 2=22.05 \%$
24. Percent of class time not used to total class time: 8\% 14.2\%
25. Mcan percent of class time not used to total class time: $22.2 \div 2=11.1 \%$
26. Percent of time not used plus perceived management time to total class time:
33.3\% 32.2\%
27. Noan percent of time not used plus perceived management time to total class time:
$65.5 \div 2=32.75 \%$
28. Percent of time not used plus recorded management time to total class time:
36.1\% $26.0 \%$
29. Mean percent of time not used plus recorded managerent time to total class time:
$62.1 \% \div 2=31.05 \%$
30. Percent of time to fix activity equipment to total class © j :...
0
31. :A: percent of time to fix activity equipment to . . 1 cless time:
0
32. Fercent of time to fix activity equipment to class : uscd:
0
33. Nean percent of time to fix activity equipment to class time used:
0

Cumulative list of hanagement times, duli ine, Non-iuli CLASS TIMES AND PERCENTS FROM THE VISTTT! CIASSES SCORE SHEET RESULTS

Class Information: Beginning Swimming Activity Course (lst and 2nd Times) Study No: 2 Age: 27 T. Experience: 5 yrs. Sex: Male

1. Perceived time: 29:45

31:15
2. Mean perceived time: 61:00 $\div 2=30: 30$
3. Recorded time:

40:08 31:48
4. Mean recorded time:
$71: 58 \div 2=\frac{4318}{2}=2159=35.59$
5. Time net used:

7:00 2:06
6. Mean time not used: $9: 06 \div 2=\frac{546}{2}=273=4: 33$
7. Time used:

113:00 117:54
8. Mean time used:
$230: 54 \div 2=\frac{13854}{2}=6927=115: 27$
9. Total class time scheduled: 120 Min.
10. Time used to fix activity equipment: 0
11. Mean time used to fix activity equipment: 0
12. Total management time perceived plus class time not used: 36:45 33:21
13. Mean total management time perceived plus class time not used:
$70: 06 \div 2=\frac{4206}{2}=2103=35: 03$
14. Total management time recorded plus class time not used 47:08 33:54
15. Mean total management time recorded plus class time not used:
$81: 02 \div 2=\frac{4862}{2}=2431=40: 31$
16. Percent of perceived maneromont timn + . - tal class time: 24.7\% 26.0\%
17. Mean percent of perceived management une to total class time:
$50.7 \% \div 2=25.35 \%$
18. Percent of perceived management time to class time used: 26.3\% 26.5\%
19. Mean percent of perceived management time to class time used:
$52.8 \% \div 2=26.4 \%$
20. Percent of recorded management time to total class time: 33.4\% 26.5\%
21. Mean percent of recorded management time to total class time: $59.9 \% \div 2=29.95 \%$
22. Percent of recorded management time to class time used: 35.5\%
26.9\%
23. Mean percent of recorded management time to class time used:
$62.4 \% \div 2=31.2 \%$
24. Percent of class time not used to total class time: 5.8\% .01\%
25. Man peacent of class time not used to total class time: $5.81 \% \div 2=2.90 \%$
26. Fercent of time not used plus perceived management time to total class time:
$30.6 \% \quad 27.7 \%$
27. Mean percent of time not used plus perceived management time to total class time. $58.3 \% \div 2=29.15 \%$
28. Percent of time not used plus recorded management time to total class time:
$39.2 \% \quad 28.2 \%$
29. Mean percent of time not used plus recorded rianagement time to total class time: $67.4 \% \div 2=33.7 \%$
30. Percent of time to fix activity cquipront to total class time:
0
31. Mican percent of time to fix activity cquir . . to total class time: 0
52. Percent of time to fix activity equipment $:$. ass tinc used:
0
33. Mean percent of time to fix activity equipment 0 class time used:

0
 CLASS TIMES AND PERCENTS FROM THE VISITED CIASSIS SCORE SHEET RESULTS

Class J.fomation: Bowling Activity Course (lst and 2nd Time) Study No: 2 Age: 27 T. Experience: 5 yrs. Sex: Male

1. Perccived time: 22:40 8:55
2. Mean perceived time:
$31: 35 \div 2=\frac{1895}{2}=947=15: 47$
3. Recorded time:

30:12 . 8:46
4. Nican recorded time: $38: 58 \div 2=\frac{2338}{2}=1169=19: 29$
5. Time net used:

0:56 3:57
6. Mcan time not used: $4: 53 \div 2=\frac{293}{2}=146=2: 26$
7. Time used:
89:04
86:03
8. Mean time used: $175: 07 \div 2=\frac{10507}{2}=5253=87: 33$
9. Total class time scheduled: 90 Min.
10. Time used to fix activity equipment: 15:42 6:19
11. Mean time used to fix activity equipment: $22: 01 \div 2=\frac{1321}{2}=660=10: 00$
12. Total management time perceived plus class time not used: 23:36 12:52
13. Mcan total management time perceived plus class time not used:
$36: 28 \div 2=\frac{2188}{2}=1094=16: 39$
14. Total managoment time recorded plus class time not used: 31:08 12:43
15. Mean total management time recorded plus class time not used:
43:51 $\div 2=\frac{2631}{2}=1315=21: 55$
16. Percont of morceived managemont time tn $+\cdots$, class time: 25.1\% $9.9 \%$
17. Wan percent of perceived managenent time io total class time:
$35 \% \div 2=17.5 \%$
18. Percent of perceived management time to class time used: $25.4 \% \quad 10.3 \%$
19. Mean percent of perceived management time to class time used:
$35.7 \% \div 2=17.85 \%$
20. Percent of recorded management time to total class time: 33.5\% 9.7\%
21. Mean percent of recorded management time to total class time:
$43.2 \% \div 2=21.6 \%$
22. Percent of recorded management time to class time used: 33.9\% 10.1\%
23. Mean percent of recorded management time to class time used:
$44 \% \div 2=22 \%$
24. Pcrecnt of class time not used to total class time: $1 \% \quad 4.3 \%$
25. Mcan percent of class time not used to total class time: $5.3 \% \div 2=2.65$
26. Porcent of time not used plus perceived managonent time to total closs time
26.2\% $\quad 14.2 \%$
27. Nean percent of time not used plus perceived management time to total class time:
$14.4 \% \div 2=20.2 \%$
28. Percent of time not used plus recorded management time to total class time:
$34.5 \% \quad 14.1 \%$
29. Mcan percent of time not used plus recorded manage: ent time to +ntal class time:
$48.6 \div 2=24.3 \%$
30. Percent of time to fix activity equipment to total class tire:
17.4\%
7.0\%
31. Mean youcont of time to fix activity equipment to totnl class inc: $24.4 \% \div 2=12.2 \%$
32. Percont of time to fix activity equipment to class tibe used:
17.6\% 7.3\%
33. Mican percent of time to fix activity equipment to class time used:
$24.9 \% \div 2=12.45 \%$
 Class times and percents from the visited classes SCORE SHEET RESULTS

Class Infor: :ion: Track and Field Skill and Technique Course Study No: 2 Age: 27 T. Experience: 5 yrs. Sex: Male

1. Puccived time:

33:05 22:35
2. Mein perceived time:
$55: 40 \div 2=\frac{3340}{2}=1670=27.50$
3. Recorded time:

28:43 23:28
4. Mcan recorded time:
$52: 11 \div 2=\frac{3131}{2}=1565=26: 05$
5. Time nct used:

27:27 37:15
6. Mcan time not used:
$64: 42 \div 2=\frac{3882}{2}=1941=32.21$
7. Tine used:

82:33 72:45
8. Mcan time used:
$155: 18 \div 2=\frac{9318}{2}=4659=77: 39$
9. Total class time scheduled: 110 Min .
10. Time used to fix activity equipment:

0
11. Mean time used to fix activity equipment:

0
12. Total managcment time perceived plus class time not used: 60:32 59:50
13. Mean total management time perceived plus class time not used:
$120: 22 \div 2=\frac{7222}{2}=3611=60: 11$
14. Total management time recorded plus class time not used: 56:10 60:43
15. Mean total management time recorded plus class time not used:
$116: 53 \div 2=\frac{7013}{2}=3506=58: 26$
16. Percent of rerenived management tire to totn? -1.ns tire: $30 \% \quad 20.5 \%$
17. Mean percent of porceived managenent tine to total class time:
$50.5 \% \div 2=25.25 \%$
18. Percent of perceived management time to class tirc used: 40\% 31.0\%
19. Mean percent of perceived management time to class time used:
$71.0 \% \div 2=35.0 \%$
20. Percent of recorded management time to total class time: 26.1\% 21.3\%
21. Mean percent of recorded management time to total class time:
$47.4 \%+2=23.7 \%$
22. Percent of recorded management time to class time used: $34.7 \% \quad 32.2 \%$
23. Mean percent of recorded management time to class time used:
$66.9 \% \div 2=33.45 \%$
24. Percent of class time not used to total class time: $24.9 \% \quad 33.8 \%$
25. Nean percent of class time not used to total class time: $58.7 \%$ +2 $=29.35 \%$
26. Percent of tine not used plus perceived management time to total class time:
$55.0 \% \quad 54.3 \%$
27. Mean percent of time not used plus perceived management time to total class time:
$109.3 \div 2=54.65 \%$
28. Percent of tine not used plus recorded management time to total class time:
$51 \% \quad 55.1 \%$
29. Mean percent of time not used plus recorded management time to total class time: $106.1 \div 2=53.05 \%$
30. Percent of time to fix activity equipment to total class time: 0
31. Mcan percc: : of time to fix activity equipnent to total class time: 0
32. Percent of ti:e to fix activity equipment to class time used: 0
33. Mean percent of time to fix activity equipment to class time used:

0

CUNULATIVE L.1SI OF WANAGEMENT TIMES, USED TIME, NON-USED CLASS TIMES AND PERCENTS FROM THE VISITED CLASSES SCORE SHEET RESULTS

Class Information: Tennis Skill and Technique Course (lst and 2nd Time) Study No: 3 Age: 36 T. Experience: 17 yrs. Sex: Male

1. Perccived time:
$30.00 \quad 22: 12$
2. Mean perccived time:
$52: 12 \div 2=26: 06$
3. Recorded time:

42:27 31:30
4. Mean recoried time: $73: 57 \div 2=\frac{4437}{2}=2218=36: 58$
5. Time net used: 0:00 23:00
6. Mean time not used: 23:00ㄴㄴ=11:30
7. Time used:

$$
110: 00 \quad 87: 00
$$

8. Mean time used: 197:00~2=98:30
9. Total class time scheduled: 110:00
10. Time used to fix activity equipment:

0
11. Mean time used to fix activity equipment:

0
12. Total management time perceived plus class time not used: 30:20 45:12
13. Mean total management time perceived plus class time not used:
$75: 32 \div 2=\frac{4532}{2}=2266=37: 42$
14. Total managenent time rccorded plus class time not used: 42:27 54:30
15. Ken total management time recorded plus class time not uced:
$96: 57 \div 2=\frac{5817}{2}=2908=48: 28$
". Pe..ent of perceived monarement time to total class ti.... $27.2 \% \quad 20.1 \%$

1. . Nean percent of perceived management time to total class time:
$47.3 \% \div 2=23.65 \%$
2. Percent of perceived management time to class time used: $27.2 \% \quad 25.5 \%$
3. Nean percent of perceived management time to class time used:
$52.7 \% \div 2=26.35 \%$
4. Percent of recorded management time to total class time: 38.5\% 28.6\%
5. Mean percent of recorded management time to total class time:
$67.1 \% \div 2=33.55 \%$
6. Percent of recorded management time to class time used: $38.5 \% \quad 36.2 \%$
7. Mean percent of recorded management time to class time used:
$74.7 \% \div 2=37.35 \%$
8. Percent of class time not used to total class time: 0\% 20.9\%
9. Nean percent of class time not used to total class time: $20.9 \% \div 2=10.45 \%$
10. Fercent of time not used plus perceived management time to total class time:
27.2\%
41.0\%
11. Mean percent of time not used plus perceived managenent time to total class time: $68.2 \% \div 2=34.1 \%$
12. Percent of time not used plus recorded management time to total class time:
38.5\% 49.5\%
13. Nean percent of time not used plus recorded management time to total clacs time:
$88.0 \% \div 2=44 \%$
14. Percent of tine to fix activity equipment to total class time:

0
31. Mcan percent of time to fix activity equipment to total class time:

0
32. Fercent of time to fix activity equipment to class time used 0
33. Mean percent of time to fix activity equipment to class time used:
0

Clmulative list of ?aingement times, used time, non-used CLASS TIMES AND PERCENTS FROM THE VISITED CLASSES SCUZ. L :HEET RESULTS

Class Information: Archery Activity Course (lst and 2nd Time) Study No: 3 Age: 36 T. Experience: 17 yrs. Sex: Male

1. Perceived time

10:50 18:30
2. Mean perceived time: $29: 20 \div 2=\frac{1760}{2}=880=14: 40$
3. Recorded time:

12:33 18:04
4. Mean recorded time:
$30: 37 \div 2=\frac{1837}{2}=918=15: 18$
5. Time net used:

29:33 0:00
6. Mean time not used:
$29: 33 \div 2=\frac{1773}{2}$
7. Time used:

60:33 90:00
8. Mean time used:
$150: 33 \div 2=\frac{9033}{2}=4516=75: 16$
9. Total class time scheduled:

90 min .
10. Time used to fix activity equipment: 0
11. Mean time used to fix activity equipment:

0
12. Total management time perceived plus class time not used: 40:16 18:30
13. Mean total management time perceived plus class time not used:
$58: 46 \div 2=\frac{3526}{2}=1763=29: 23$
14. Total managoment time recorded plus class time not used: 42:00 17:04
15. Hean total management time recorded plus class time not used:
$59: 04 \div 2=\frac{3544}{2}=1772=29: 32$
16. Percent of perceived moneremert a... to total class time: 12\% 20.5\%
17. Wean percont of porceived managh int time to total class time:
$32.5 \% \div 2=16.25 \%$
18. Percent of perceived management tirie to class time used: $17.8 \% \quad 20.5 \%$
19. Nean percent of perceived management time to class time used:
$38.3 \div 2=19.15 \%$
20. Percent of recorded management time to total class time: 13.9\% 20.0\%
21. Mean percent of recorded management time to total class time:
$33.9 \% \div 2=16.95 \%$
22. Percent of recorded management time to class time used: $20.7 \% \quad 20.0 \%$
23. Mean percent of recorded management time to class time used: $40.7 \% \div 2=20.35 \%$
24. Percont of class time not used to total class time: 32.5\%
$0 \%$
25. Noan percent of class time not used to total class time: $32.5 \div 2=16.25$
26. Forcent of time not used plus perceived management time to total class time:
44.7\%
20.5\%
27. Nan percent of time not used plus perceived management time to total class time: $65.2 \% \div 2=32.6 \%$
28. Percent of time not used plus recorded management time to total class time:
46.6\% 20.0\%
29. Mean percent of time not used plus recorded management time to total class time
$66.6 \% \div 2=33.3 \%$
30. Percent of time to fix activity equipnent to total class time:
0
31. Mean percent of tir: to fix activity equipment to total class time:
0
32. Porccnt of time to fix activity equipment to class time used:

0
33. Mean percent of time to fix activity equipment to class time used
0

MALE SCORE SHEET RESULTS

| SCORE SHEET ITEM | $\begin{gathered} \text { INSTRUCTC } \\ \neq 2 \end{gathered}$ | $\begin{gathered} \text { BER AN } \\ \# 3 \end{gathered}$ | TOTAL | MEAN |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 1:17 | 4:26 | 5:43 | 2:51 |
| 2 | 2:49 | 4:43 | 7:36 | 3:48 |
| 3 | 6:44 | 3:51 | 10:35 | 5:17 |
| 4 | 1:20 | 2:16 | 3:36 | 1:48 |
| 5 | 0:24 | 0:46 | 1:10 | 0:35 |
| 6 | 0:7 | 0:00 | 0:07 | 0:03 |
| 7 | 1:33 | 2:10 | 3:43 | 1:51 |
| 8 | 0:39 | 0:00 | 0:39 | 0:19 |
| 9 | 0:22 | 1:31 | 1:53 | 0:56 |
| 10 | 9:30 | 7:30 | 17:00 | 8:30 |
| 11 | 0:20 | 0:00 | 0:20 | 0:10 |
| TO'TAL | 25:05 | 27:13 | 52:18 | 26:09 |

FEMALE SCORE SHEET RESULTS

| ITEM | $\begin{gathered} \text { INSTRUCTC } \\ \# 1 \end{gathered}$ | $\begin{aligned} & \text { Y NO AND TIME } \\ & \# 4 \end{aligned}$ | TOTAL | MEAN |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 0:25 | 0:07 | 0:32 | 0:16 |
| 2 | 10:28 | 4:23 | 14:51 | 7:35 |
| 3 | 5:10 | 5:44 | 10:54 | 5:27 |
| 4 | 0:30 | 0:46 | 1:16 | 0:38 |
| 5 | 0:06 | 0:07 | 0:13 | 0:06 |
| 6 | 0:57 | 0:00 | 0:57 | 0:28 |
| 7 | 1:39 | 1:52 | 3:31 | 1:45 |
| 8 | 0:15 | 0:00 | 0:15 | 0:07 |
| 9 | 0:25 | 0:16 | 0:41 | 0:20 |
| 10 | 10:00 | 10:00 | 20:00 | 10:00 |
| 11 | 0:00 | 0:00 | 0:00 | 0:00 |
| TOTAL | 29:55 | 23:15 | 53:10 | 26:35 |

## APPENDIX E

PERCEIVED TIME AND` RECORDED TIME COMPARISONS

PERCEIVED TIME AND RECORDED TIME COMPARISONS

Category: Perceived Time and Recorded Time Comparisons

1. Sum of total mean management time perceived from all courses taught listed by age of instructors:
2. 27:93:39
3. $34: 15: 32$
4. $36: 40: 40$
5. $39: 50: 52$
6. Sum of total mean management time recorded from all courses taught listed by age of instructors:
7. $27: 99: 27$
8. $34: 22: 47$
9. $36: 52: 28$
10. $39: 31: 35$
11. Mean difference of total mean perceived and recorded management time from all courses taught by age of instructors:
12. 27:99:27-93:39=5:48 (underestimated)
13. $34: 22: 47-15: 32=7: 12$ (underestimated)
14. $36: 52: 28-40: 40=11: 48$ (underestimated)
15. 39:31:35-50:52=19:17 (overestimated)
16. Sum of total mean management time perceived from all courses taught listed by years of experience:
17. 5:93:39
18. $13: 15: 32$
19. 15:50:52
20. $17: 40: 40$
21. Sum of total mean management time recorded from all courses taught listed by years of experience:
22. $5: 99: 27$
23. $13: 22: 47$
24. $15: 31: 35$
25. $17: 52: 28$
26. Mean difference of total mean perceived and recorded management time from all courses taught by teaching experience:
27. 5:99:27-93:39=5:48 (underestimated)
28. 13:22:47-15:32=7:12 (underestimated)
29. 15:31:35-50:52=19:17 (overestimated)
30. 17:52:28-40:40=11:48 (underestimated)
31. Sum of total mean management time perceived from al courses taught listed by the sex of instructors:
32. FEMALES: $66: 24$
33. MALES: 134:19
34. Sum of total mean management time recorded from all courses taught listed by the sex of instructors:
35. FEMALES: $54: 22$
36. MALES: 151:55
37. Mean difference of sum of total mean management time perceived and recorded from all courses taught listed by the sex of instructors:
38. FEMALES: $54: 22 \div 66: 24=12: 02$ (overestimated)
39. MALES: 151:55-134:19=17:36 (underestimated)

APPENDIX F
ACTIVITY COURSES SCORE SHEET RESULTS
activity courses score sheet results

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ITEM | ARCHERY | ACTIVITY AND TIME |  |  |
| BOWLING | BEGINNING SWIMMING | VOLLEYBALL |  |  |
| 1 | $3: 14$ | $1: 39$ | $1: 36$ | $1: 40$ |
| 2 | $3: 31$ | $0: 56$ | $4: 34$ | $3: 04$ |
| 3 | $3: 33$ | $4: 12$ | $10: 12$ | $7: 21$ |
| 4 | $1: 52$ | $0: 12$ | $2: 01$ | $0: 46$ |
| 5 | $0: 00$ | $0: 00$ | $0: 10$ | $0: 08$ |
| 6 | $0: 00$ | $0: 00$ | $0: 00$ | $0: 00$ |
| 7 | $1: 03$ | $4: 17$ | $0: 00$ | $1: 51$ |
| 8 | $0: 00$ | $2: 15$ | $0: 22$ | $0: 00$ |
| 9 | $2: 04$ | $1: 06$ | $0: 22$ | $0: 00$ |
| 10 | $0: 00$ | $5: 00$ | $15: 00$ | $3: 00$ |
| 11 | $0: 00$ | $0: 00$ | $1: 22$ | $0: 00$ |
| TOTAL | $15: 17$ | $19: 37$ | $35: 39$ | $17: 50$ |

appendix G
Skill and technique score sheet results

SKILL AND TECHNIQUE SCORE SHEET RESULTS

| ITEM | SKILL AND TECHNIQUE AND TIME |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | TENNIS | TRACK AND FIELD | VOLLEYBALL | RACKET SPORTS |
| 1 | 5:35 | 0:12 | 0:07 | 0:25 |
| 2 | 5:56 | 2:43 | 4:23 | 10:28 |
| 3 | 4:10 | 10:10 | 5:44 | 5:10 |
| 4 | 0:48 | 0:40 | 0:46 | 0:30 |
| 5 | 1:13 | 1:18 | 0:07 | 0:06 |
| 6 | 0:00 | 1:01 | 0:00 | 0:57 |
| 7 | 3:17 | 0:00 | 1:52 | 1:39 |
| 8 | 0:00 | 0:00 | 0:00 | 0:15 |
| 9 | 0:59 | 0:00 | 0:16 | 0:25 |
| 10 | 15:00 | 15:00 | 10:00 | 10:00 |
| 11 | 0:00 | 0:00 | 0:00 | 0:00 |
| TOTAL | 36:58 | 31:04 | 23:15 | 29:55 |

APPENDIX H
INDOOR COURSE SCORE SHEET RESULTS
indoor course score sheet results

| ITEM | ARCHERY | BOWLING | $\begin{aligned} & \text { INDOOR } \\ & \text { BEGINNING } \\ & \text { SWIMMING } \end{aligned}$ | COURSE AND T volleyball | IME <br> VOLLEYBALL <br> (S \& T)* | RACKET SPORTS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3:14 | 1:39 | 1:36 | 1:40 | 0:07 | 0:25 |
| 2 | 3:31 | 0:56 | 4:34 | 3:04 | 4:23 | 10:28 |
| 3 | 3:33 | 4:12 | 10:12 | 7:21 | 5:44 | 5:10 |
| 4 | 1:52 | 0:12 | 2:01 | 0:46 | 0:46 | 0:30 |
| 5 | 0:00 | 0:00 | 0:10 | 0:08 | 0:07 | 0:06 |
| 6 | 0:00 | 0:00 | 0:00 | 0:00 | 0:00 | 0:57 |
| 7 | 1:03 | 4:17 | 0:00 | 1:51 | 1:52 | 1:39 |
| 8 | 0:00 | 2:15 | 0:22 | 0:00 | 0:00 | 0:15 |
| 9 | 2:04 | 1:06 | 0:22 | 0:00 | 0:16 | 0:25 |
| 10 | 0:00 | 5:00 | 15:00 | 3:00 | 10:00 | 10:00 |
| 11 | 0:00 | 0:00 | 1:22 | 0:00 | 0:00 | 0:00 |
| TOTAL | 15:17 | 19:37 | 35:39 | 17:50 | 23:15 | 29:55 |

*Skill and Technique

APPENDIX I INDȮOR COURSES ARCHERY ACTIVITY COURSE

INDOOR COURSES: ARCHERY ACTIVITY COURSE

Category: Indoor Courses: Archery Activity Course

1. Total scheduled class time:

90 min. 90 min.
2. Total class time used:

60:33 90 min.
3. Mean total scheduled class time:
$180 \mathrm{~min} . \div 2=90 \mathrm{~min}$.
4. Mean total class time used:
$150: 33 \div 2=\frac{9033}{2}=4516=75: 16$
5. Total management time recorded:

12:30 18:04
6. Mean total management time recorded: $30: 37 \div 2=\frac{1837}{2}=918=15: 18$
7. Percent of mean total management time recorded to total class time:
15:18:90 min. $\frac{918}{5400}=17.0 \%$
8. Percent of mean total management time recorded to total class time used:
$15: 18 \div 75: 16=\frac{918}{4516}=20.3 \%$
9. Total class time not used:
10. Mean total class time not used:

$$
29: 33 \div 2=\frac{1773}{2}=886=14: 46
$$

11. Percent of mean total class time not used to total class time:
$14: 46 \div 90 \mathrm{~min} .=\frac{886}{5400}=16.4 \%$

## APPENDIX J

INDOOR COURSES BOWLING ACTIVITY COURSE

INDOOR COURSES: BOWLING ACTIVITY COURSE

Category: Indoor Courses: Bowling Activity Course

1. Total scheduled class time:

90 min . 90 min .
2. Total class time used:

89:04 86:03
3. Mean total scheduled class time:
$180 \div 2=90 \mathrm{~min}$
4. Mean total class time used:
$175: 07 \div 2=\frac{10507}{2}=5253=87.33$
5. Total managenent time recorded:

30:12 8:46
6. Mean total management time recorded:
$38: 58 \div 2=\frac{2338}{2}=1169=19: 29$
7. Percent of mean total management time recorded to total class time:
$19: 29 \div 90 \mathrm{~min} .=\frac{1169}{5400}=21.6 \%$
8. Percent of mean total management time recorded to total class time used:
$19: 29 \div 87: 33=\frac{1169}{5253}=22.2 \%$
9. Total class time not used:

0:56 3:57
10. Mean total class time not used:
$4: 53 \div 2=\frac{293}{2}=146=2: 26$
11. Percent of mean total class time not used to total class time:
$2: 26 \div 90 \mathrm{~min} .=\frac{146}{5400}=2.7 \%$

## APPENDIX K

INDOOR COURSES VOLLEYBALL ACTIVITY COURSE

INDOOR COURSES: VOLLEYBALL ACTIVITY COURSE

Category: Indoor Courses: Volleyball Activity Course

1. Total scheduled class time:

90 min. 90 min.
2. Total class time used

82:43 77:13
3. Mean total scheduled class time:
$180 \div 2=90 \mathrm{~min}$.
4. Mean total class time used:
$159: 56 \div 2=\frac{9596}{2}=4798=79: 58$
5. Total management time recorded:

25:13 10:38
6. Mean total management time recorded: $35: 51 \div 2=\frac{2151}{2}=1075=17: 55$
7. Percent of mean total management time recorded to total class time:
17:55\%90 min. $=\frac{1075}{5400}=19.9 \%$
8. Percent of mean total management time recorded to total class time used:
$17: 55 \div 79: 58=\frac{1075}{4798}=22.4 \%$
9. Total class time not used:

$$
7: 17 \quad 12: 47
$$

10. Mean total class time not used:
$20: 04 \div 2=\frac{1204}{2}=602=10: 02$
11. Percent of mean total class time not used to total class time:
$10: 02 \div 90 \mathrm{~min} .=\frac{602}{5400}=11.1 \%$

INDOOR COURSES: BEGINNING SWIMMING ACTIVITY COURSE

## Category: Indoor Courses: Beginning Swimming Activity Course

1. Total scheduled class time:

120 min .120 min .
2. Total class time used:

113:00 117:54
3. Mean total scheduled class time:
$240 \mathrm{~min} . \div 2=120 \mathrm{~min}$
4. Mean total class time used: $230: 54 \div 2=\frac{13854}{2}=6927=115: 27$
5. Total management time recorded:

40:08 31:48
6. Mean total management time recorded:
$71: 58 \div 2=\frac{4318}{2}=2159=35: 59$
7. Percent of mean total management time recorded to total class time:
$35: 59 \div 120 \mathrm{~min},=\frac{2159}{7200}=29.9 \%$
8. Percent of mean total management time recorded to total class time used:
$35: 59 \div 115: 27=\frac{2159}{6927}=31.1 \%$
9. Total class time not used:

7:00 2:06
10. Mean total class time not used:
$9: 06 \div 2=\frac{546}{2}=273=4: 33$
11. Percent of mean total class time not used to total class time:
$4: 33 \div 120 \mathrm{~min} .=\frac{273}{7200}=3.7 \%$
10. Mean total class time not used:
$7: 00 \div 2=3: 30$
INDOOR COURSES: VOLLEYBALL SKILL AND TECHNIQUE COURSE

Category: Indoor Courses: Volleyball Skill and Technique Course

1. Total scheduled class time:

110 min. 110 min .
2. Total class time used:

103 min. 110 min .
3. Mean total scheduled class time:
$220 \div 2=110 \mathrm{~min}$.
4. Mean total class time used:
$213 \div 2=106: 30$
5. Total management time recorded:

26:30 19:05
6. Mean total management time recorded: $45: 35 \div 2=\frac{2735}{2}-1367=22: 47$
7. Percent of mean total management time recorded to total class time:
$22: 47 \div 110 \mathrm{~min} .=\frac{1367}{6600}=20.7 \%$
8. Percent of mean total management time recorded to total class time used:
$22: 47 \div 106: 30=\frac{1367}{6390}=21.3 \%$
9. Total class time not used:

7:00 0:00
11. Percent of mean total class time not used to total class time:
$3: 30 \div 110 \mathrm{~min} .=\frac{210}{6600}=3.1 \%$

APPENDIX N
INDOOR COURSES RACKET SPORT SKILL AND TECHNIQUE

INDOOR COURSES: RACKET SPORT SKILL AND TECHNIQUE

Category: Indoor Courses: Racket Sport Skill and Technique

1. Total scheduled class time:
$130 \mathrm{~min} . \quad 130 \mathrm{~min}$.
2. Total class time used:

128:37 115:55
3. Mean total scheduled class time:
$260 \div 2=130 \mathrm{~min}$.
4. Mean total class time used: $244: 32 \div 2=\frac{14672}{2}=7336=122: 16$
5. Total management time recorded:

37:57 25:14
6. Mean total management time recorded: $63: 11 \div 2=\frac{3791}{2}=1895=31: 35$
7. Percent of mean total management time recorded to total class time:
$31: 35 \div 130 \mathrm{~min} .=\frac{1895}{7800}=24.2 \%$
8. Percent of mean total management time recorded to total class time used:
$31: 35 \div 122: 16=\frac{1895}{7336}=25.8 \%$
9. Total class time not used:

1:23 14:05
10. Mean total class time not used:
$15: 28 \div 2=\frac{928}{2}=464=7: 44$
11. Percent of mean total class time not used to total class time:
$7: 44 \div 130 \mathrm{~min} .=\frac{464}{7800}=5.9 \%$

APPENDIX 0
OUTDOOR COURSE SCORE SHEET RESULTS

OUTDOOR COURSE SCORE SHEET RESULTS

|  | OUTDOOR COURSE AND TIME <br> TRACK AND FIELD |  |
| :---: | :---: | :---: |
| ITEM | TENNIS | $0: 35$ |
| 1 | $5: 56$ | $2: 12$ |
| 2 | $4: 10$ | $10: 10$ |
| 3 | $0: 48$ | $0: 40$ |
| 4 | $1: 13$ | $1: 18$ |
| 5 | $0: 00$ | $1: 01$ |
| 6 | $3: 17$ | $0: 00$ |
| 7 | $0: 00$ | $0: 00$ |
| 8 | $0: 59$ | $0: 00$ |
| 9 | $15: 00$ | $15: 00$ |
| 10 | $0: 00$ | $0: 00$ |
| 11 | $36: 58$ | $31: 04$ |
| TOTAL |  |  |

OUTDOOR COURSES: TRACK AND FIELD SKILL
AND TECHNIQUE COURSE

Category: Outdoor Courses: Track and Field Skill and Technique Course

1. Total scheduled class time:

110 min .110 min
2. Total class time used

82:33 72:45
3. Mean total scheduled class time:
$220 \div 2=110 \mathrm{~min}$
4. Mean total class time used:
$155: 18 \div 2=\frac{9318}{2}=4659=77: 39$
5. Total management time recorded:

28:43 23:28
6. Mean total management time recorded:
$52: 11 \div 2-\frac{3131}{2}=1565=26: 05$
7. Percent of mean total management time recorded to total class time:
$26: 05 \div 110 \mathrm{~min} .=\frac{1565}{6600}=23.7 \%$
8. Percent of mean total management time recorded to total class time used:
$26: 05 \div 77: 39=\frac{1565}{4659}=33.5 \%$
9. Total class time net used:

$$
27: 27 \quad 37: 15
$$

10. Mean total class time not used:
$64: 42 \div 2=\frac{3882}{2}=1941=32: 21$
11. Percent of mean total class time not used to total class time:
$32: 21 \div 110 \mathrm{~min} .=\frac{1941}{6600}=29.4 \%$

## OUTDOOR COURSES: TENNIS SKILL AND TECHNIQUE COURSE

APPENDIX Q
OUTDOOR COURSES TENNIS SKILL AND TECHNIQUE COURSE

## Category: Outdoor Courses: Tennis Skill and Technique Course

1. Total scheduled class time:

110 min .110 min.
2. Total class time used:

110 min .87 min .
3. Mean total scheduled class time:
$220 \mathrm{~min} . \div 2=110 \mathrm{~min}$.
4. Mean total class time used: $197: 00 \div 2=98: 30$
5. Total management time recorded:

42:27 31:30
6. Mean total management time recorded $73: 57 \div 2=\frac{4437}{2}=2218=36: 58$
7. Percent of mean total management time recorded to total class time:
$36: 58 \div 110 \mathrm{~min} .=\frac{2218}{6600}=33.6 \%$
8. Percent of mean total management time recorded to total class time used:
$36: 58 \div 98: 30=\frac{2218}{5910}=37.5 \%$
9. Total class time not used 0:00 23:00
10. Mean total class time not used: $23: 00 \div 2=11: 30$
11. Percent of mean total class time not used to total class time:
$11: 30 \div 110 \mathrm{~min} .=\frac{690}{6600}=10.4 \%$

APPENDIX R
age score sheet results

AGE SCORE SHEET RESULTS
$\left.\begin{array}{c|c|c|c|c}\hline \text { ITEM } & 27 & \begin{array}{c}\text { INSTRUCTOR AGE AND TIME } \\ \hline\end{array} & 36 & 34\end{array}\right] 39$

APPENDIX S
AGE - 27 (4 CLASSES)

## AGE - 27 (4 CLASSES)

## Category: Age - 27 (4 Classes)

1. Total management time perceived from all courses taught: 31:39, 61:00, 39:00, 55:40
2. Total management time recorded from all courses taught: 38:58, 71:56, 35:51, 52:11
3. Mean total management time perceived from all courses taught:
$31: 39 \div 2=\frac{1899}{2}=949=15: 49 \quad 39: 00 \div 2=\frac{2340}{2}=1170=19: 30$
$61: 00 \div 2=\frac{3660}{2}=1830=30: 30 \quad 55: 40 \div 2=\frac{3340}{2}=1670=27: 50$
4. Mean total management time recorded from all courses taught:
$\begin{array}{ll}38: 58 \div 2=\frac{2338}{2}=1169=19: 29 & 35: 51 \div 2=\frac{2151}{2}=1075=17: 55 \\ 71: 56 \div 2=\frac{4316}{2}=2158=35: 58 & 32: 11 \div 2=\frac{3131}{2}=1565=26: 05\end{array}$
5. Sum of mean total management time perceived from all courses taught:

93:39
6. Sum of mean total management time recorded from all courses taught:

99:27
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$93: 39 \div 410 \mathrm{~min} .=\frac{5619}{24600}=22.8^{\circ}$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$99: 27 \div 410 \mathrm{~min} .=\frac{5967}{24600}=24.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$93: 39 \div 360: 45=\frac{5619}{21645}=25.9 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$99: 27 \div 360: 45=\frac{5967}{21645}=27.5 \%$

## AGE - 34 (1 CLASS)

Category: Age - 34 (1 Class)

1. Total management time perceived from all courses taught: 31:05
2. Total management time recorded from all courses taught: 45:35
3. Mean total management time perceived from all courses taught:
$31: 05 \div 2=\frac{1865}{2}=932=15: 32$
4. Mean total management time recorded from all courses taught:
$45: 35 \div 2=\frac{2735}{2}=1367=22: 47$
5. Sum of mean total management time perceived from all courses taught:
15:32
6. Sum of mean total management time recorded from all courses taught:
22:47
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$15: 32 \div 110 \mathrm{Min} .=\frac{932}{6600}=14.1 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$22: 47 \div 110 \mathrm{Min} .=\frac{1367}{6600}=20.7 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$15: 32 \div 106: 30=\frac{932}{6390}=14.5 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$22: 47 \div 106: 30=\frac{1367}{6390}=21.3 \%$

APPENDIX U AGE - 36 (2 CLASSES)

## AGE - 36 (2 CLASSES)

Category: Age - 36 (2 Classes)

1. Total management time perceived from all courses taught:

29:20 52:12
2. Total management time recorded from all courses taught: 31:03 73:57
3. Mean total management time perceived from all courses taught:
$29: 20 \div 2=\frac{1760}{2}=880=14: 40$
$52: 12 \div 2=\frac{3100}{2}=1560=26: 00$
4. Mean total management time recorded from all courses taught:
$31: 03 \div 2=\frac{1863}{2}=931=15: 30$
$73: 57 \div 2=\frac{4437}{2}=2218=36: 58$
5. Sum of mean total management time perceived from all courses taught:

40:40
6. Sum of mean total management time recorded from all courses taught:

52:28
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$40: 40 \div 200 \mathrm{~min} .=\frac{2440}{12000}=20.3 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$52: 28 \div 200 \mathrm{~min} .=\frac{3148}{12-00}=26.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$40: 40 \div 173: 40=\frac{2440}{10420}=23.4 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$52: 28 \div 173: 40=\frac{3148}{10420}=30.2 \%$

## AGE - 39 (1 CLASS)

Category: Age - 39 (1 Class)

1. Total management time perceived from all courses taught: 101:45
2. Total management time recorded from all courses taught: 63:11
3. Mean total management time perceived from all courses taught:
$101: 45 \div 2=\frac{6105}{2}=3052=50: 52$
4. Mean total management time recorded from all courses taught:
$63: 11 \div 2=\frac{3791}{2}=1895=31: 35$
5. Sum of mean total management time perceived from all courses taught:

50:52
6. Sum of mean total management time recorded from all courses taught:

31:35
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$50: 52 \div 130 \mathrm{Min} .=\frac{3052}{7800}=39.1 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$31: 35 \div 130 \mathrm{Min} .=\frac{1895}{7800}=24.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$50: 52 \div 122: 16=\frac{3052}{7336}=41.6 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$31: 35 \div 122: 16=\frac{1895}{7336}=25.8 \%$

APPENDIX W
TEACHING EXPERIENCE SCORE SHEET RESULTS

TEACHING EXPERIENCE SCORE SHEET RESULTS

| ITEM | INSTRUCTOR TEACHING EXPERIENCE AND TIME |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 5 YEARS Male | 13 YEARS Female | 15 YEARS Female | $\begin{aligned} & 17 \text { YEARS } \\ & \text { Male } \end{aligned}$ |
| 1 | 1:17 | 0:07 | 0:25 | 4:35 |
| 2 | 2:49 | 4:23 | 10:28 | 4:44 |
| 3 | 6:44 | 5:44 | 5:10 | 3:52 |
| 4 | 1:20 | 0:46 | 0:30 | 4:33 |
| 5 | 0:24 | 0:07 | 0:06 | 0:37 |
| 6 | 0:07 | 0:00 | 0:57 | 0:00 |
| 7 | 1:33 | 1:52 | 1:39 | 2:10 |
| 8 | 0:39 | 0:00 | 0:15 | 0:00 |
| 9 | 0:22 | 0:16 | 0:25 | 1:31 |
| 10 | 9:30 | 10:00 | 10:00 | 7:30 |
| 11 | 0:21 | 0:00 | 0:00 | 0:00 |
| TOTAL | 25:06 | 23:15 | 29:55 | 29:32 |

APPENDIX X
TEACHING EXPERIENCE: 5 YEARS (4 CLASSES)

TEACHING EXPERIENCE: 5 YEARS (4 CLASSES)

Category: Teaching Experience: 5 Years (4 Classes)

1. Total management time perceived from all courses taught: 31:39, 61:00, 39:00, 55:40
2. Total management time recorded from all courses taught: 38:58, 71:56, 35:51, 52:11
3. Mean total management time perceived from all courses taught:
$31: 39 \div 2=\frac{1899}{2}=949=15: 49$
$39: 00 \div 2=\frac{2340}{2}=1170=19: 30$
$61: 00-2=\frac{3660}{2}=1830=30: 30$
$55: 40 \div 2=\frac{3340}{2}=1670=27: 50$
4. Mean total management time recorded from all courses taught:
$38: 58 \div 2=\frac{2338}{2}=1169=19: 29 \quad 35: 51 \div 2=\frac{2151}{2}=1075=17: 55$
$71: 56 \div 2=\frac{4316}{2}-2158=35: 58$
$52: 11 \div 2=\frac{3131}{2}=1565=26: 05$
5. Sum of mean total management time perceived from all courses taught:

93:39
6. Sum of mean total management time recorded from all courses taught:

99:27
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$93: 39 \div 410 \mathrm{~min} .=\frac{5619}{24600}=22.8 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$99: 27: 410 \mathrm{~min} .=\frac{5967}{24600}=24.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$93: 39 \div 360: 45=\frac{5619}{21645}=25.9 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$99: 27 \div 360: 45=\frac{5967}{21645}=27.5 \%$

## TEACHING EXPERIENCE - 13 YEARS (1 CLASS

## Category: Teaching Experience - 13 Years (1 Class)

1. Total management time perceived from all courses taught: 31:05
2. Total management time recorded from all courses taught: $45: 35$
3. Mean total management time perceived from all courses taught:
$31: 05 \div 2=\frac{1865}{2}=932=15: 32$
4. Mean total management time recorded from all courses taught:
$45: 35 \div 2=\frac{2735}{2}=.1367=22: 47$
5. Sum of mean total management time perceived from all courses taught:

15:32
6. Sum of mean total management time recorded from all courses taught:

22:47
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$15: 32 \div 110 \mathrm{~min} .=\frac{932}{6600}=14.1 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$22: 47 \div 110 \mathrm{~min} .=\frac{1367}{6600}=20.7 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$15: 32+106: 30=\frac{932}{6390}=14.5 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$22: 47 \div 106: 30=\frac{1367}{6390}=21.3 \%$

APPENDIX Z
TEACHING EXPERIENCE - 15 YEARS (1 CLASS)

TEACHING EXPERIENCE - 15 YEARS (1 CLASS)

Category: Teaching Experience - 15 Years (1 Class)

1. Total management time perceived from all courses taught: 101:45
2. Total management time recorded from all courses taught: 63:11
3. Mean total management time perceived from all courses taught:
$101: 45 \div 2=\frac{6105}{2}=3052=50: 52$
4. Mean total management time recorded from all courses taught:
$63: 11 \div 2=\frac{3791}{2}=1895=31: 35$
5. Sum of mean total management time perceived from all courses taught:

50:52
6. Sum of mean total management time recorded from all courses taught

31:35
7. Percent of sum of mean total management time perceived from all courses taught to total class time
$50: 52 \div 130 \mathrm{~min} .=\frac{3052}{7800}=39.1 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time
$31: 35 \div 130 \mathrm{~min} .=\frac{1895}{7800}=24.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:

$$
50: 52 \div 122: 16=\frac{3052}{7336}=41.6 \%
$$

10. Percent of sum of mean total management time recorded from all courses taught to class time used
$31: 35 \div 122: 16=\frac{1895}{7336}=25.8 \%$

## APPENDIX AA

TEACHING EXPERIENCE - 17 YEARS (2 CLASSES)

TEACHING EXPERIENCE - 17 YEARS (2 CLASSES)

## Category: Teaching Experience - 17 Years (2 Classes)

1. Total management time perceived from all courses taught:

29:20 52:12
2. Total management time recorded from all courses taught:

31:03 73:57
3. Mean total management time perceived from all courses taught:
$29: 20 \div 2=\frac{1760}{2}=880=14: 40$
$52: 12 \div 2=\frac{3120}{2}=1560=26: 00$
4. Mean total management time recorded from all courses taught:
$31: 03 \div 2=\frac{1863}{2}=931=15: 30$
$73: 57 \div 2=\frac{4437}{2}=2218=36: 58$
5. Sum of mean total management time perceived from all courses taught:

40:40
6. Sum of mean total management time recorded from all courses taught:

52:28
7. Percent of sum of mean total management time perceived from all courses taught to total class time:
$40: 40 \div 200 \mathrm{~min} .=\frac{2440}{12000}=20.3 \%$
8. Percent of sum of mean total management time recorded from all courses taught to total class time:
$52: 28 \div 200 \mathrm{~min} .=\frac{3148}{12000}=26.2 \%$
9. Percent of sum of mean total management time perceived from all courses taught to class time used:
$40: 40 \div 173: 40=\frac{2440}{10420}=23.4 \%$
10. Percent of sum of mean total management time recorded from all courses taught to class time used:
$52: 28+173: 40=\frac{3148}{10420}=30.2 \%$

APPENDIX BB
USED TIME AND UNUSED TIME COMPARISONS
6. Mean total class time unused in skill and technique courses:

1. $3: 30$
2. 7:44
3. $32: 21$
4. 11:30
5. Mean sum of total class time scheduled in activity courses: 390 min. $\div 4=\frac{23400}{4}=5850=97: 30$
6. Mean sum of total class time scheduled in skill and technique courses:
$460 \mathrm{~min} . \div 4=\frac{27600}{4}=6900=115 \mathrm{~min}$.
7. Sum of mean total class time used in activity courses: $358: 14 \div 4=\frac{21494}{4}=5373=89: 33$
8. Sum of mean total class time used in skill and technique courses:
$404: 55 \div 4=\frac{24295}{4}=6073=101: 13$
9. Sum of mean of total class time unused in activity courses:

31:47
12. Sum of mean total class time unused in skill and technique courses:

55:05
13. Percent of sum of mean total class time used to scheduled time in activity courses:
$358: 14 \div 390 \mathrm{~min} .=\frac{21494}{23400}=91.8 \%$
14. Percent of sum of mean total class time used to scheduled time in skill and technique courses:
$404: 55 \div 460 \mathrm{~min} .=\frac{24295}{27600}=88 \%$
15. Percent of sum of mean of total class time unused to scheduled time in activity courses:
$31: 47 \div 390 \mathrm{~min} .=\frac{1907}{23400}=8.1 \%$
16. Percent of sum of mean of total class time unused to scheduled time in skill and technique courses:
$55: 05 \div 460 \mathrm{~min} .=\frac{3305}{27600}=11.9 \%$

## BIBLIOGRAPHY

1. Barr, Arvil S. Measurement of teacher characteristics and prediction of teaching efficiency. Review of Educational Research 22:169-174, February, 1952.
2. Bash, James H. Effective teaching in the desegregated school. Fastbacks 32, Phi Delta Kappa Educational Foundation, c. 1973.
3. Berndt, Thomas J. and David Wood. The development of time concept through conflict based on a primitive duration capacity. Child Development 45:825-828, September, 1974.
4. Bowsefield, W. A. Student ratings of qualities considered desirable in college professors. School and Society 51:253-256, February 1940.
5. Brunf, James V. and Helene J. Silverman. Developing intuitive ideas about time. Arithmetic Teacher 23:582-591, December, 1976.
6. Coffman, William E. Determining students' concept of effective teaching from their rating of instructors. Journal of Educational Psychology 45:277-286, 1954.
7. Gibson, John E. Science explores the secrets of time. Today's Health 38:50-51, August, 1960.
8. Haggard, William W. Some freshmen describe the desirable college teacher. School and Society 58:238-240, September, 1943.
9. Hamachek, Don. Characteristics of good teachers and implications for teacher education. Phi Delta Kappan 50:341-344, February, 1969.
10. Heilman, J. D. and W. D. Armentrout. The rating of college teachers on ten traits by their students. Journal of Educational Psychology 27:197-216, 1936.
11. Hoffman, R. W. Students portray the excellent teacher. Improving College and University Teaching 21-24, Winter, 1963.
12. Huber, Joseph. Effect of a token economy program on appropriate behavior and motor task performance of educable mentally retarded children in adapted physical education. Doctoral Dissertation, Ohio State University, 1973 (microcarded).
13. Hurlock, Elizabeth B. Developing a time sense. Today's Health 33: 60, October, 1955.
14. Hurwitz, Dick. Give students a choice. Journal of Physical Education and Recreation 48:28-29, May, 1977.
15. Irwin, Leslie W. and James H. Humphrey. Principles and techniques of supervision in physical education. Wm. C. Brown Co. Publishers, of supervision in physi
16. Jensen, Alfred C. Determining critical requirements for teachers. Journal of Experimental Education 20:79-85, September, 1951.
17. Kennedy, Wallace A. and Herman C. Willcutt. Praise and blame incentives. Psychological Bulletin 62:323-331, July-December, 1964.
18. Kozman, Hilda C., Rosalind Cassidy and Chester 0. Jackson. Methods in physical education. Wm. C. Brown Co. Publishers, Dubuque, Iowa, c. 1967.
19. Lippencott, Gertrude. Mechanics and materials of the demonstration Journal of Health, Physical Education and Recreation 32:29-30, 63 January, 1961.
20. McComan, J. D. Profiles of teachers. Improving College and University Teaching 13:135-136, Summer, 1965.
21. Mannan, Golam and Ellen M. Traicoff. Evaluation of an ideal university teacher. Improving College and University Teachiing 24: 98-101, Spring, 1976.
22. Quick, A. F. and A. D. Wolfe. The ideal professor. Improving College and University Teaching 13:133-134, Summer, $1 \overline{965 .}$
23. Rife, Frank. Modification of student teacher behavior in physical education. Doctoral Dissertation, Ohio State University, 1973 (microcarded)
24. Sartor, Linda. How good a teacher am I? NEA Journa1 45:448, 1956.
25. Shannon, John R. Elements of excellence in teaching. Educational Administration and Supervision 27:168-176, March, 1941.
26. Siedentop, Daryl and Frank Rife. Behavioral management skills for physical education teachers. Paper presented at the meeting of National College of Physical Education for Men, Phoenix, 1975.
27. Sommer, Robert. A time for every purpose. Natural History 80: 24-25+, August, 1971
28. Stoops, Emery and Joyce King-Stoops. Discipline or disaster. Fastbacks 8, Phi Delta Kappa Educational Foundation, c. 1972.
29. Turner, Edward T. Desirable characteristics of a college physical education skills instructor as viewed by selected physical education faculty, graduate and undergraduate students at the University of Maryland. Research paper, 1967.
30. Turner, Edward T. Tested tips to effective teaching. Paper presented for physical education teacher preparation classes, Appalachian State University, Boone, North Carolina, 1976.
31. Turner, Edward T. Discipline. Paper presented for physical education teacher preparation classes, Appalachian State University, Boone, North Carolina, Spring, 1977.
32. Van Denburg, Joseph K. An objective rating scale for teachers of biology in high schools. School and Society 46:698-704, 1937.
33. Wickstrom, Ralph L. The lost art of teaching physical activities. Journal of Health, Physical Education and Recreation 32:26, November, 1961.
34. Young, Richard. Effects of various reinforcement contingencies on a second grade physical education class. Doctoral Dissertation, Ohio State University, 1973 (microcarded).
