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Series of Color Film Loops To Illustrate Selected Women's
Lacrosse Techniques Recommended For Beginners. (1976)
Directed by: Dr. Kate R. Barrett. Pp. 149.

The purpose of this study was to construct and
validate a series of color film loops to illustrate selected
women's lacrosse techniques for beginners. The content to
be included in the film loop series was based on a careful
search of the lacrosse literature and the responses to a
questionnaire by well known experts in the field.

The film loop series consisted of ten techniques:
THE GRIP-CRADLE, PIVOTING, CATCHING, THE OVERARM PASS,
THE UNDERARM PASS, PICKING-UP: BALL STATIONARY - BALL
ROLLING AWAY FROM PLAYER, PICKING-UP: BALL ROLLING TOWARD
PLAYER, DODGING, BODY CHECKING, and CROSSE CHECKING. Each
film loop consisted of the title, followed by execution of
the technique three times at 24 frames per second and two
times at 70 frames per second for each angle viewed. Two
members of the 1973 United States Women's Lacrosse Team
served as performers of the techniques included in the film
loop series.

Content validity was determined through a careful
analysis of the lacrosse literature as well as recommenda-
tions of experts in the field as to those techniques and
points of emphasis applicable to the teaching of lacrosse
to beginners. To investigate further the content validity
of the series a three judge jury examined the completed film
loops. The evaluators were to determine whether the

recommended points of emphasis were present in the execution of the techniques. The judges recorded their observations on a specially constructed evaluation sheet. A subjective comparison was made between the literature and the expert's opinion as revealed by the responses to the questionnaire and the findings of the three judge jury.

The evaluators' responses indicated that an over-whelming majority of the points of emphasis were present in the film loop series. The responses concerning the general appearance and organization of the film loop series were positive. On the basis of these responses the film loop series constructed to illustrate selected women's lacrosse techniques was accepted as valid.

THE CONSTRUCTION AND VALIDATION OF A SERIES OF

COLOR FILM LOOPS TO ILLUSTRATE SELECTED

WOMEN'S LACROSSE TECHNIQUES
RECOMMENDED FOR BEGINNERS

by

Nancy B. Wasserman

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Approved by

Kate R. Barrett
Thesis Advisor

APPROVAL PAGE

This thesis has been approved by the following

committee of the Faculty of the Graduate School at The

University of North Carolina at Greensboro.

Thesis
Advisor _Kate C. Barrett_

Oral Examination
Committee Members _Marie Riley_

Gail M. Hennis

March 22, 1976
Date of Examination

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Nothing is as easy
as it looks.
Everything takes longer
than you think.
If anything can go
wrong - it will.

Murphy's Law (Origin Obscure)

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CHAPTER I

INTRODUCTION

Women's lacrosse in the United States is not new.
Historically, its growth can be described as slow, but
steady. The game was introduced in the late 1920's at Mt.
Pocono Hockey Camp and at Wellesley College by Joyce Riley
and Joyce Cran Barry (Hooper, 1956). After several years of
demonstration, lacrosse began to catch on, and in 1931 Mrs.
Cran Barry was instrumental in forming the United States
Women's Lacrosse Association (Delano, 1970; Hooper, 1956).
At this time, and for the next two decades, the only local
associations, consisting of two or more clubs of adult play-
ers, that existed were in Baltimore, Boston, New York, Phila-
delphia, and Westchester. The fifties and sixties saw
lacrosse expanding around these nucleus associations.

The increased awareness and interest in women's
sports in the seventies has enhanced the growth of women's
lacrosse. A recent survey indicated that over 10,000 people
play lacrosse and that the United States Women's Lacrosse As-
sociation ". . . holds claim to more than 800 members"
(Doran, 1976:24). Lacrosse is now played in hundreds of
schools and colleges as well as in 13 local and five dis-
trict associations composed of adult players. The heaviest

concentration of women's lacrosse is in the northeastern part of the United States. However, the number of associations has increased as the sport extended its boundaries into the midwest and south.

The United States Women's Lacrosse Association has provided direction for the growth of its sport. It is within the stated objectives of this organization to: (1) effect the spread of lacrosse throughout the country by providing coaches, loan kits of equipment, technical material, and films, (2) improve the standard of play, and (3) provide competition at all levels (Delano, 1970).

The association provides for competition by sponsoring coaching weekends, club round robins, and a national tournament between district associations to determine a national champion and select an all-American team. Additional competitive opportunities are provided by an increased frequency of touring teams to and from other countries.

Efforts to improve the standard of play include the squad program and coaching seminars. For eight years the squad program has provided ". . . advanced-level coaching for 30 to 40 of the nation's top competitors" (Doran, 1976: 25). The United States Women's Lacrosse Association believes more coaches are needed and has, therefore, initiated a program of coaching seminars. These are designed to provide a network of coaches to disseminate information and techniques to teachers and coaches throughout the country.

The expansion of women's lacrosse and the concomitant desire by the United States Women's Lacrosse Association to train more coaches has led to a growing need for the development of materials for instructional use. It is generally accepted that the use of visual aids, specifically motion pictures, provide a powerful medium in the instructional environment (Skubic, 1944; Kemp, 1963; Dale, 1969). The use of motion picture demonstrations is widely practiced in physical education (Gray, 1969). Motion pictures enable the student to observe technique performance by experts (Skubic, 1944; Dale, 1969).

In 1967, after several years of research, the United States Women's Lacrosse Association sponsored the production of the film, "Let's Play Lacrosse." This film consists of two parts. Part one depicts skills relevant to the performance of the game. Part two presents 11 minutes of game sequences between the 1967 Great Britain and Ireland Touring Team and a team of top United States players. The film provides a good introduction to lacrosse, particularly the game sequences which show cutting, marking, quick passing, intercepting, and shooting.

A second film, "Lacrosse, Lacrosse" was made available in 1974. The film was conceived purely as an enjoyable experience and makes no pretense of providing technical instruction. "Lacrosse, Lacrosse" is a ". . . unique expression of the beauty of the game in motion and words with a delightful musical background" (Bixler, 1974-1976:107).

A motion picture is essentially a demonstration. The problem associated with demonstrations is usually the amount of time between the explanation and the actual practice by the students of the concepts taught. May and Lumsdaine (1958:172) referred to this factor as "delayed imitation." The sooner the practice follows the instruction, the greater the benefit to learning. The problem of "delayed imitation" must also be overcome in the area of instructional films. The viewer sees many skills on a film and usually must wait until the film is through before he can perform. This would be the case with "Let's Play Lacrosse." Delayed imitation can best be overcome through the use of film loops. The film loop's distinguishing quality is that it continuously repeats ". . . one short movement sequence at a time" (Stevenson, 1957:65). The student is able to practice the technique immediately following the film loop.

The only lacrosse film loops available are English and were made by the All England Women's Lacrosse Association. They are 16 mm., black and white, and were created in 1961. Margaret Boyd, a well known teacher whose enthusiasm and knowledge have done a great deal to stimulate interest and raise the standard of lacrosse in England and the United States, was instrumental in the creation of the film loops. Neither the literature included with the film loops nor an inspection of them indicates for what level of learner the

series is intended. The series consists of the grip, cradle, pick-up, underarm and overarm throw, low and high catch, dodging, body checking, goalkeeping, and overarm and under-arm shot. It was felt by the investigator that the film loop series needed to be updated, filmed in color using American demonstrators, and constructed specifically for beginning level players.

Demonstrations that students observe should be as close to what the instructor wants them to imitate as is feasible. They should also be motivating and geared to the level of use for whom they are intended. It became evident to the investigator that there was a need for an appropriate visual aid, which would present demonstrations which were consistent with the literature and experts in the field of lacrosse, specifically designed for beginners. It was in response to this need that this study was conceived.

STATEMENT OF PROBLEM

The purpose of this study was to construct and vali-date a series of color film loops to illustrate selected women's lacrosse techniques for beginners.

DEFINITION OF TERMS

For the purpose of this study the following terms were defined:

1. Beginner: a person with little or no previous lacrosse experience.

2.   Film loop: a section of motion picture film with the ends spliced together so as to form a continuous loop depicting a single concept or movement sequence.

3.   Technique: the method of performance of a skill.

4.   Women's lacrosse: a non-contact field sport played by two teams of 12 players who, by passing and catching attempt to send a small hard rubber ball into a goal.

ASSUMPTION

Underlying this study was one basic assumption: the people using the film loop series will be familiar, to some extent, with the game of lacrosse.

SCOPE OF THE STUDY

This study was limited by the following factors:

1.   Two performers were used to demonstrate the lacrosse techniques.

2.   The techniques to be included in the film loop series were limited to those techniques mentioned in the lacrosse literature and recommended by experts in the field as necessary for beginning players of the game.

3.   The film loop series consists of ten film loops each depicting one technique.

4.   Goalkeeping and shooting sequences were not included in the film loop series as these were considered to be extensions of other basic techniques already depicted.

CHAPTER II

REVIEW OF LITERATURE

This chapter is divided into three parts. The
first part presents a review of those capabilities of mo-
tion pictures which render them valuable to education and
the second deals with effective methods of their presenta-
tion. A discussion of the film loop, its characteristics
and uses in physical education, concludes this review. This
chapter does not include a review of the literature perti-
nent to lacrosse techniques. Specific descriptions from the
literature concerning the performance of these techniques
are considered to be inherent to the procedures involved in
determining the content and validity of the film loop series
and are referred to in Chapter III.

THE CAPABILITIES OF MOTION PICTURES WHICH MAKE THEM VALUABLE TO EDUCATION

Motion pictures are widely used in education today.
There is reason to believe that the popularity of this medium
is commensurate with its potential. In reviewing the litera-
ture it became apparent that there are certain capabilities
indigenous to motion pictures which contribute to their ef-
fectiveness in education. They are: (1) motion pictures
can motivate, (2) motion pictures can speed up or slow down

time, (3) motion pictures can promote an understanding of abstract relationships, and (4) motion pictures can teach.

Motion Pictures Can Motivate

The first capability of motion pictures to be considered, and possibly the one directly responsible for their wide use in education, is that of motivation. Motion pictures, because of their freshness and variety, tend to heighten motivation (Dale, 1969). According to Smith and van Ormer (1949:2), "Within certain limits the more intense the motivation, the greater will be the learning." It is hard to attribute this increase in motivation to any one factor for as Singer (1968:173) has written, ". . . it is extremely difficult to isolate specific motivational variables." What remains is that several studies relating to learning and motion pictures indicated an increase in student interest and ascribed this to the use of visual aids (Brown and Messersmith, 1948; Jones, 1947; Priebe and Burton, 1939; Wyness, 1963).

Motion Pictures Can Speed Up
Or Slow Down Time

In addition to enhancing motivation, the capacity of motion pictures to compress or extend time causes them to be valuable to instruction. A motion picture is a film record of an actual event. Because of this, it is incorrect to state that they can actually alter the time it took for the

original incident to take place. Parsons (1970) indicated
that this is merely an illusion caused by a variation of the
camera speed in relation to the projection rate. According
to Kemp (1963), action that normally takes place too rapidly
for ease of study can be recorded by use of slow motion tech-
nique. He continues to say that this would be accomplished
by setting the camera speed to exceed the projection rate
(Kemp, 1963). If a movie is made at 50 frames per second
and projected at 18 ". . . all of the action appears to be
taking place at a much slower rate, chiefly because it has
been split up into a greater number of individual pictures"
(Kodak, 1966:96). The implications of this to the study of
movement are important. According to Lawther (1968:101),
"The live slow-motion demonstration actually incorporates
different movement patterns from those used in acts which
must be performed rapidly to be functional in normal per-
formance." It is here that slow-motion pictures will
". . . reveal the precise form when the act itself cannot
be performed in slow motion as a demonstration device"
(Lawther, 1968:101). Palmer (1936) indicated that through
slow-motion pictures it is possible to follow body positions,
execution of movement, planes of movement, relationships
between different body parts and specific plays. Thus the
slow-motion picture may be used to show fast moving pro-
cesses that are too rapid for the viewer to see at normal
speed.

By using a time-lapse technique, action can be recorded that normally takes place too slowly for ease of study (Kemp, 1963). Kemp (1963:204) has written that this can be accomplished "By setting camera speeds slower than the projection rate and then projecting the film at normal speed. . . ." In this way what was observed could be condensed and accelerated (Dale, 1969). An example of this would be to photograph a flower opening its petals (Kemp, 1963). To record this event, which takes hours to occur, only a few frames of film are exposed to the scene at a time, and at a predetermined rate (Kemp, 1963). In this way an event which took place over a long period of time could be shown in a few minutes.

Motion Pictures Can Promote An Understanding Of Abstract Relationships

Another property of motion pictures which render them useful to education is their ability to clarify abstractions and thus aid understanding. Kemp (1963:11) has written that, "The audiovisual field rests on the assumption that people learn primarily from what they perceive and that carefully designed visual experiences can be common experiences and thus influence behavior." Cratty (1964: 75) stated that the process of perception, ". . . involves organizing, feeling change, and selecting from among the complexity of events to which humans are continually exposed, so that order may be attached to experience." It is in

terms of past experiences that man tends to organize incoming stimuli (Kemp, 1963). Cratty (1964) suggested that the process of organization added to the meaningfulness of events, objects or situations. According to Dale (1969:273), "The most effective learning takes place when the learner can perceive some organization in the material he is supposed to learn." A motion picture often helps to improve order and continuity of thought to the material for the student (Dale, 1969). Dale (1969:121) further suggested that because such an order has been imposed on the material a "Film version may be easier to understand than a more direct experience. . . ." Thus it is suggested that the motion picture can be effective in presenting complex material, classifying relationships, or in explaining what cannot be easily or satisfactorily put into words.

Motion Pictures Can Teach

For many years films have been considered as aids to learning. It cannot be said that this is without good reason, for functionally that had been their role within the educational setting. The motion picture had been considered a frill, something to use on a rainy day (Parsons, 1970), or to be used ". . . after the lecture and textbook are studied" (Kemp, 1963:4). There is strong evidence in the literature that this view of audio visual media is quite narrow. Kemp (1963:7) suggests: "Media are not supplementary to or in

support of instruction, but are the instructional input it-self."

According to Drury (1959), the extensive use of visual aids by the armed forces during and following World War II has helped to spur the use of visual media in schools and industry. Interest in motion pictures also stimulated an extensive film research program at Pennsylvania State University (1949) in cooperation with the United States Office of Naval Research. This program incorporated studies of every facet of motion picture production and use.

Perhaps the most significant finding to education as a result of these studies was that motion pictures could teach (Hoban and van Ormer, 1950). In a study done under the auspices of this program, Harby (1952) indicated that, in teaching athletic skills, motion picture demonstrations were about equally as effective as live demonstrations. To further investigate the above conclusion, Harby undertook another study with Murnin and Hayes (1952). Using tumbling skills as tasks, two teaching methods were compared. An experimental film-taught group was supervised by an instructor who was inexperienced and could not perform the skills. The control group was taught by an experienced instructor without the benefit of motion picture demonstrations. Certain controls were imposed upon the experimental group so that the teacher maintained a relatively passive role. Upon evaluation, the investigators concluded that, "Learning for

the film-taught groups did occur to a significant extent and can be largely attributed to film demonstrations" (Murnin, Hayes and Harby, 1952:7).

The implications of the above are far-reaching. In education today, the teacher is expected to display what Trow (1963:140) called, ". . . a preposterous array of competancies." The many roles he is asked to fill grow as ". . . rapid developments in human knowledge . . . have thrown added burdens on the school curriculum . . ." (Trow, 1963:2). If films can substitute for the instructor in certain demonstrations and lectures, it would be possible to teach certain topics when an expert in that area is not available (Hoban and van Ormer, 1950). According to Hoban and van Ormer (1950:9-2), motion pictures are ". . . equivalent to at least an average teacher . . . insofar as the instructor's function is communicating the facts or demonstrating the procedures presented in the film."

Media never hopes to replace the "live teacher" but it can help broaden his role as an educator (Kemp, 1963) and increase the experiences available to his students (Hoban and van Ormer, 1950). According to Dale (1969:144), motion pictures are able to ". . . convey the information, the specific experiences, the details that are so essential for the development of workable concepts." It could be stated, therefore, that films might be used in the school to provide background information. It has been previously discussed in this

chapter that the meaningfulness of a new perceptual experience is enhanced by a broad background of experiences from which the learner can associate and draw relationships (Kemp, 1963; Cratty, 1964). May and Lumsdaine (1958:1969) have written that, "Viewing a motion picture is like the vicarious experience of the spectator, yet it is more like a first hand experience than a verbal description." It should be evident, therefore, that motion pictures are providing more than mere aids to the learning experience. As De Kieffer (1965) stated, motion pictures, when presented effectively, can be utilized as a means of teaching some types of performance skills and conveying certain kinds of factual data. It is those conditions under which motion pictures should be presented to be most effective which are the next concern of this review.

EFFECTIVE PRESENTATION OF MOTION PICTURES

The most significant capability of motion pictures presented in part one of this chapter was that they could carry some instructional responsibility. However, as with any device, there are certain conditions under which they can most effectively accomplish their objectives. In reviewing the effective presentation methods of motion pictures two questions will be examined:

1. When should motion pictures be introduced in the learning process to be most effective?

2. How should motion pictures be presented to the learning process to be most effective?

When Motion Pictures Should Be Introduced In The Learning Process

There is conflicting evidence in the literature reviewed as to whether learners would benefit most from early or late exposure to motion picture demonstrations. Studies done in this area are equally divided. A study supporting early presentation of motion pictures was done by Nelson (1958). Although this study was not primarily designed to determine the effects of presentation of media at selected stages of the learning experience, Nelson (1958) found that the less skilled members of the film-taught group showed a greater early gain in learning than the more highly skilled members of the same experimental group. Other studies with conclusions similar to this were done by Priebe and Burton (1939), Watkins (1963), and Gray (1965).

A study by Watt (1954) presented evidence to contradict the above mentioned studies. This study was conducted with three groups of college women who viewed several visual aids under the same conditions but at different times in the instructional unit. Group I viewed three forms of visual aids during the first three classes. Group II viewed the same visual materials but only during the latter part of the instructional period. Group III acted as a control and viewed none of the materials. Watt (1954) concluded that

a later presentation of visual aids was more advantageous than an early viewing.

Lockhart (1944:185) in writing on this question stated that, ". . . the general conclusions from other fields of learning indicate that it [the motion picture] is of most value during the early stages of learning decreasing in value as skill increases." Although this statement was written in 1944, it is supported in the current literature pertaining to learning of physical skills. In his reference to the gross framework idea, Lawther (1968) supported the idea that presentation of motion pictures would be most beneficial in the beginning stages of learning. He stated that the beginner's attention should be directed to a general idea, goal, purpose, or objective of the observed movement rather than on the specific aspects of the movement itself (Lawther, 1968). In this way the learner responds to the ". . . general-impression memory of the gross outline of the skill" (Lawther, 1968:52). He further stated that this gross-framework idea may be imparted to the beginning learner by using motion pictures (1968). Lawther (1968:101) cautioned, however, that although use of motion picture demonstrations could be of value in the teaching of motor skills, ". . . time which might better be utilized in physical practice is sometimes wasted in showing moving pictures." This is somewhat supported by a study by Lockhart (1944) and may provide insight

into the conflicting evidence surrounding this question. Lockhart (1944) indicated that the rate of improvement in a group taught by incorporating the use of motion pictures was more consistent than that of a non-film-taught group. She concluded that the film was of particular value in the later stages of learning after some practice had taken place.

The findings from the literature are inconclusive as to the effectiveness of early or late presentation of motion pictures to the learning experience. It is therefore recommended that more research be effected to investigate this variable.

How Motion Pictures Should Be Introduced
In the Learning Experience

To further consider the conditions under which motion pictures can most effectively accomplish their objectives, the question of how they should be introduced into the learning experience will be examined. This question is first discussed as it relates to spacing of viewing within practice sessions and then in relation to guided as opposed to free viewing of motion pictures.

Spacing of viewing motion pictures within practice sessions. A study by Harby (1952) investigated the question of showing several movie demonstrations followed by a long practice session as opposed to alternating each demonstration with a practice of the skill shown. The tasks to be learned were eight tumbling skills. Films were prepared for each

skill. The results of the study indicated that alternating demonstrations with practice was slightly superior to grouping several demonstrations followed by a single practice period.

Experts in the area of motor learning and human performance support the conclusions referred to above in the study by Harby (1952). Both Lawther (1968) and Singer (1968) state that for most beginners in the earlier stages of learning, frequent, short, spaced practice sessions are more profitable than extended practice periods. In the Harby (1952) study, the short rest periods while viewing the film may have contributed to the difference in learning. This question was investigated by Karsner (1953) in a study designed to determine the effect of exposure to motion pictures under varying practice conditions. Students were shown films: (1) after each skill had been demonstrated by the instructor, (2) after all skills had been demonstrated by the instructor, and (3) without any previous demonstration by the instructor. The results of this study indicated no significant differences between the groups.

Guided as opposed to free viewing of motion pictures. A motion picture, as mentioned earlier, is not intended to replace the teacher, for a good teacher is needed to relate to individual needs and differences. The guidance of a teacher could be the feedback referred to by Lawther (1968: 53) when he wrote that, "Smooth and polished performance

must await specific, motivated practice with performance being gradually adjusted from feedback of results." Regulated viewing as opposed to free viewing was investigated in the second part of the previously mentioned study by Harby (1952). The results of this study indicated that regulated viewing of movie demonstrations was superior than free choice viewing and that coaching during practice sessions was superior to no coaching.

The effect of unguided viewing of motion pictures can be illustrated in a study by Gray (1965). The purpose of the study was to determine the effect of daylight projection of motion picture film loops on playing performance in badminton. The investigator constructed his own film for the study. During the first five weeks of the study, the experimental class was shown the film loops several times during each period of class instruction. Students needing additional help were directed to the film loop viewing area for additional viewing. During the last five weeks of instruction viewing of the films was unscheduled but available. Gray (1965) reported that the movie group showed significant gains during the first five weeks but tapered off during the latter part of the study. This might well defend the importance of the teacher as a guide to the learner's viewing of instructional films as well as to provide meaningful feedback necessary for the polishing of student's performance.

THE FILM LOOP AND ITS PARTICULAR ADVANTAGES
IN THE FIELD OF PHYSICAL EDUCATION

This review has presented a discussion of the capabilities of motion pictures as well as those techniques of presentation which enhance their effectiveness in the learning situation. One type of motion picture, the film loop, because of its characteristics, is particularly advantageous to physical education.

According to Friedrich (1953:56), a film loop is a section of motion picture film with the ends ". . . spliced together so as to form one continuous loop between 5 and 20 feet long." The distinguishing quality of the film loop is that it gives the viewer ". . . an immediate and continuous repetition of one short movement sequence at a time" (Stevenson, 1957:65). Immediately following the segment of film the student is able to practice the skill being demonstrated. This decreases a factor identified by May and Lumsdaine (1958:172) as "delayed imitation." Delayed imitation refers to the time between the demonstration of a skill to be learned and its practice (May and Lumsdaine, 1958). These authors stated that most demonstration films are limited by this factor as they incorporate many skills and suggested a need for shortening the time between demonstration and practice (May and Lumsdaine, 1958). As stated above the use of film loops could be advantageous in accomplishing this.

This advantage can further be seen when the film loops are viewed with special Technicolor cartridges and projected in conjunction with a daylight rear projection screen (Friedrich, 1953). When used in this way, the film loops can be viewed anywhere: in a gymnasium, pool, or on a field (Stevenson, 1957). The learner can thus imitate the skill while it is being projected, provided that doing so does not distract from the observation of the movements being demonstrated (Smith and van Ormer, 1949). According to Gray (1965:4), this would present an opportunity to facilitate learning through "immediate imitation."

Another advantage the film loop presents to physical education is through the use of continuous repetition (Stevenson, 1957). This allows the student to view a flawless demonstration an unlimited number of times. Kemp (1963:13) has written that, "Repetition functions to reinforce and extend learning and to make the learned information more enduring." Smith and van Ormer (1949:6) expanded this in their statement that, "Retention is favored if in the initial learning, the material is practiced or repeated in presentation beyond the point of its being barely learned." Repetition also allows for a varied and unhurried commentary by the teacher (Stevenson, 1957). A study by Alphine (1968) utilized this repetitive factor in constructing a film loop series for training officials in foil fencing.

Film loops can be used to encourage active participation in the learning experience. A film loop viewing station could be set up at which students might work independently and at their own speed (Friedrich, 1953). According to Friedrich (1953), students could help teach each other. As seen in the study by Gray (1965), some students might be directed to the station for remedial or advanced work. Independent use of film loops in this way leaves the teacher free to spend more time giving individualized instruction (Hoban and van Ormer, 1950). According to Parsons (1970), it also enables the instructor to work more effectively with groups of differing abilities.

Film loops are inexpensive and can be produced fairly easily by an amateur (Stevenson, 1957). This feature enables the school to build a library of film loops. An example of this was suggested by Londeree (1967). He stated that film loops could be made of the most frequently used offensive and defensive plays by the opponents of a particular team. During the days preceding the game, the team could study these plays and learn to defend against them (Londeree, 1967).

Several authors have stated that a film loop enables a perfect, expert demonstration to be available whenever needed (Friedrich, 1953; Stevenson, 1957; Dale, 1969; Parsons, 1971). Friedrich (1953:56) stressed this point by writing that this ". . . eliminates the necessity of the

teacher having to demonstrate especially if, as is often the case, the teacher is inadequate in this ability." This could be of value in remote schools (Hoban and van Ormer, 1950), where there are teacher shortages (Murnin, Hayes and Harby, 1952), or if the teacher in a school would like to introduce a new activity into his program but does not have the skill to provide a technically correct demonstration (Parsons, 1970; Lawther, 1968). Parsons (1970) wrote that the film loop would meet the needs of these instructors by providing a flawless visual example.

The implications for the use of film loops in physical education are many. Perhaps Murnin, Hayes and Harby (1952:8) have best summed up this idea when they wrote that:

> It seems likely that by supplying expert film demonstrations which can be repeated in the actual training-working area under full daylight conditions, projection of film loops can provide standardized instruction in integration with actual practice.

SUMMARY

Chapter II has consisted of a review of the literature relevant to motion pictures. In the first two parts the capabilities of motion pictures and techniques of their presentation which serve to enhance their effectiveness in education were discussed. A discussion of the film loop, its characteristics and its applications in physical education concluded this review. In light of the literature reviewed, the following generalizations can be made:

1.   Motion pictures can motivate.

2.   Motion pictures can speed up or slow down time.

3.   Motion pictures can promote an understanding of abstract relationships.

4.   Motion pictures can teach.

5.   The findings from the literature are inconclusive as to the effectiveness of early or late presentation of motion pictures to the learning experience.

6.   There is sufficient evidence to indicate that alternating a short film demonstration with practice periods was superior to grouping several demonstrations followed by a single practice session.

7.   Regulated viewing of movie demonstrations is superior to free choice unguided viewing.

8.   Film loops present an immediate and continuous repetition of one short movement sequence at a time.

9.   Film loops encourage active participation in the learning experience.

10.   Film loops enable a perfect expert demonstration to be available whenever needed.

CHAPTER III

PROCEDURES

The purpose of this study was to construct a series
of color film loops to illustrate selected women's lacrosse
techniques for beginners. A review of the literature perti-
nent to motion picture capabilities, effective methods of
their presentation, and film loop characteristics was pre-
sented in Chapter II. The purpose of Chapter III is to
describe the procedures used to construct and validate the
film loops.

CONSTRUCTION OF FILM LOOPS

The construction of the film loop series was divided
into two parts. Part one consisted of those steps taken to
determine the content to be included in the film loops,
whereas the second part was concerned with those technical
considerations necessary to the filming and packaging of
the series.

Determination Of Film Loop Content

A search of the literature pertaining to lacrosse
was made for those techniques considered essential to play-
ing the game. Particular emphasis was given to the descrip-
tion of how to perform each technique. A frequency chart

was made listing each technique, its points of emphasis and its source. These charts can be found in Appendix A.

A questionnaire was constructed by the investigator to elicit expert opinion concerning those techniques and key points of emphasis to be presented to beginning lacrosse players. The questionnaire was sent out to nine American and seven English coaches, all of whom at one time had been associated with the Merestead Hockey and Lacrosse Camps. Questionnaires were returned by four American and four English coaches. The questions included in the questionnaire and a list of the respondents can be found in Appendix B. For these responses frequency charts were made which were similar to the above mentioned charts constructed for the search of the lacrosse literature. These charts can be found in Appendix C. The specific content to be included in the film loop was based upon agreement of the two frequency charts representing the search of the lacrosse literature and recommendations by experts as to those techniques and points of emphasis considered to be most important for the playing of lacrosse for beginners. The techniques included in the film loop series were:

1. The grip-cradle.

2. Pivoting.

3. Catching.

4. The overarm pass.

5. The underarm pass.

6. Picking up: ball stationary - ball rolling away from player.

7. Picking up: ball rolling toward player.

8. Dodging.

9. Body checking.

10. Crosse checking.

Technical Considerations

The technical considerations necessary for the filming and packaging of the film loop series included: (1) selection of subjects, (2) costume worn by subjects, (3) selection of area and layout, (4) selection of equipment, (5) filming technique, (6) editing, splicing and cartridging the film, and (7) packaging the film loop series.

Selection of subjects. The subjects for this film loop series consisted of two members of the 1973 United States Women's Lacrosse Team. Each subject had been a member of the team for at least two years. Selection of subjects was based upon their ability to meet the criteria of the experts and the literature as well as their consistent performance of technique.

Costume worn by the subjects. The costume worn by each subject was determined by her role. The subject wore a red kilt if she was alone in the film or if the technique she demonstrated was being emphasized when she appeared with

another performer. In this case the subject accompanying
the player to be observed wore a blue kilt. All performers
wore white cotton knit blouses with collars and short
sleeves, golf socks, and black rubber cleated shoes.

Selection of filming site and layout. The following
criteria served as guidelines in the selection of the film-
ing site:

1. The field should be large, flat, and should not
have any areas without grass.

2. The background for filming should be as unob-
trusive as possible. A solid wall of trees is preferred.

3. The sun should not set toward the background
for filming.

4. The filming site should be one of geographical
proximity to the subjects being filmed.

Based upon the above criteria, the following film-
ing site and layout was chosen:

1. The area selected for filming was the lower
north hockey field at Goucher College in Towson, Maryland.
This field is not used in the summer and therefore was un-
lined.

2. The filming layout was based upon the angles to
be used in the performance of the techniques. These angles
were decided upon by experimental filming and are supported
by literary reference.

3. The camera was situated on the south side of the field. The viewfinder of the camera faced north, where a solid wall of trees was located. Marks were placed on the field using cleansing powder to indicate starting and ending points of reference for the performers in the execution of the techniques. An additional mark was used to facilitate a constant placement of the ball for the stationary pick up.

Selection of equipment. A Beaulieu 4008ZM super eight movie camera with a 1.9 Angenieux zoom lens with a focal length of 8-64mm powered by a nickel-cadmium battery was used to film this series. The camera was mounted on a Linhof tripod equipped with a Sunset pan head. For this study Kodachrome II Type A movie film with an ASA of 25 was used. The equipment was the property of the investigator.

Filming technique. Based upon extensive trial filming the final working outline for the construction of each film loop was established. These outlines can be found in Appendix D. Each film loop consists of the title, followed by execution of the technique three times at 24 frames per second and two times at 70 frames per second for each angle viewed. The above was an adaptation of the technique used in filming a study by Peabody (1966). All sequences were filmed four times at each of the two above mentioned speeds. This way the best sequences could be used in the final film loop and the others discarded.

Filming was accomplished in one day to insure consistent lighting. Due to technical problems two views, the grip and an overarm pass sequence, had to be refilmed at another time. Experimental filming indicated that the best time to film was between 10:00 a.m. and 2:00 p.m. Before filming each technique an effort was made to communicate the recommendations for performance as established by the literature and responses to the questionnaire. This was accomplished by reading a list of points of emphasis for each technique to the performers. The demonstrators attempted to incorporate these recommendations into their execution of the techniques.

The titles were filmed on a separate date. To accomplish this, two-inch white vinyl letters with self-adhesive backing were placed on a piece of lincoln green felt that had been stretched over a drawing board. In addition to the lettering a small model lacrosse stick was pinned to the felt below the title for aesthetic purposes.

During the filming technical information was recorded on a log sheet. This included: film loop number, title, date, filming location, camera, film type, camera placement, lens opening, subject to camera distance, and filming speed. A sample log sheet can be found in Appendix E. All filming was done by the investigator.

Editing, splicing, and cartridging the film. The film was sent to Kodak for developing. Upon receiving the developed film, the investigator spliced it all onto one large movie reel and viewed it several times using a Bell and Howell Autoload projector equipped with normal, slow motion, and single frame viewing speeds. During these screenings each performance within a sequence was evaluated for quality of execution. It was at this time that the decision was made concerning which of these would be included in the final film loops.

The film was placed on a Zeiss Ikon editor and marked for cutting. Each length of cut film was arranged on a peg board attached to a wall in the order in which it was to be spliced. A Bolex cement splicing system was used to join the lengths of film for each film loop.

The spliced film was sent to Kodak for copying. The sequences to be included in each film loop were then placed on individual reels and mailed to the Technicolor Company where it was cleaned, lubricated, and loaded into "magi-cartridges." The original film was not cartridged but remains intact for future copies.

Packaging the film. Each film loop was placed in an orange plastic container. A laminated card with guide-lines for viewing selected by the author of this study from the points of emphasis referred to in the lacrosse literature and the responses by experts to a questionnaire

mentioned earlier in this chapter was included in each box.
These guidelines for viewing can be found in Appendix F.
The film loop series was put in a large plastic box. The
title of the film loop series and a picture of the two
performers were affixed to the cover of this container.

VALIDATION OF FILM LOOPS

Validity of the film loop series was ascertained
through estimating content validity. Content validity is
the representativeness or sampling adequacy of the content.
The following steps were used to estimate content validity:

1. Search of the literature pertaining to lacrosse
for those techniques and points of emphasis considered es-
sential for beginning players of the game.

2. Recommendations of experts in the teaching of
lacrosse as to those techniques and points of emphasis to
be presented to beginning lacrosse players.

3. Examination of the completed film loops by a
three judge jury. The judges were chosen for their ex-
perience and reputation in teaching, coaching, and selecting
lacrosse players at all levels of play in several areas of
the country. A list of these judges and their individual
qualifications can be found in Appendix G.

As no suitable evaluation form existed for film
loops, the investigator constructed her own. Each film loop

had its own evaluation sheet which consisted of two parts.
Part one consisted of a list of those key points of emphasis
considered to be essential for the efficient execution of the
technique performed in the film loop. All points of emphasis
were compiled from references in the lacrosse literature and
from responses by experts to a questionnaire previously
mentioned in this chapter. Next to each point of emphasis
were three columns headed: YES, NO, and INCONSISTENT. Part
one required the judge to check YES, if the point of empha-
sis was consistently present in each execution of the tech-
nique; NO, if the point of emphasis was not at all present
in each execution of the technique; and INCONSISTENT, if the
point of emphasis was not always present in each execution
of the technique.

Part two of each evaluation sheet consisted of a
series of questions concerning the general appearance and
organization of the film loop. The judge was asked to write
YES or NO after each question. Space was provided on each
evaluation sheet for comments.

After viewing the entire film loop series the
judges were asked to answer the following questions:

1. Can the film loop series be effectively used
as it is or are there some film loops which are totally
unacceptable? Please indicate which ones.

2. What is your total impression of the film loop
series?

A copy of the film loop evaluation sheets can be found in Appendix H.

It was decided that each judge would view the film loops separately due to the evaluation procedures. The investigator was present at the viewing to act in case of technical difficulties. In each case, judging took place in a partially darkened room. The judge was given time to examine the appropriate film loop evaluation sheet before she viewed each film loop. The film loop was projected against a Da-Lite "Silver-Lite" daylight screen using a Technicolor 810 film loop projector. The judge was permitted to view each film loop as many times as she desired and was encouraged to stop the projector by using the freeze frame button at any time. She was instructed to complete the evaluation form for one film loop before going on to the next. An extra projector and bulb were available as well as a second complete set of film loops in case a cartridge jammed or a film broke.

SUMMARY

Chapter III presented the procedures necessary for constructing and validating a color film loop series to illustrate selected women's lacrosse techniques for beginners. The following procedures were described for constructing the film loops; selection of subjects, costume worn by subjects, selection of area and layout, selection of equipment, filming

technique, editing, splicing, cartridging the film, and packaging the film loop series. The procedures described for validation of the film loop series included: selection of judges, construction of a film loop evaluation packet, judging techniques, and methods used for estimating content validity.

CHAPTER IV

EVALUATION OF FILM LOOPS

The procedures used to construct and validate a
series of color film loops to illustrate selected beginning
women's lacrosse techniques were described in Chapter III.
Chapter IV deals with the presentation and analysis of the
evaluative process used in validating the film loop series.

Content validity is the representativeness or sampl-
ing adequacy of the content. Content validity was estimated
through a careful analysis of the lacrosse literature as well
as through responses to a questionnaire by experts for those
techniques and points of emphasis considered pertinent to
beginning players. Since the specific content of the film
loop series was based on a compilation of the recommendations
of the lacrosse literature and the experts in the field, con-
tent validity was accepted.

To investigate further the content validity of the
series, a three-judge jury examined the completed film loops.
The evaluators recorded their responses on the specially
designed film loop evaluation sheets discussed in Chapter III.
In assessing the representativeness or sampling adequacy of
the content the following question will be examined: are
the points of emphasis, as indicated by the literature and
the experts responses to the questionnaire, present in the

film loop series? In answering the question the recorded responses by the judges on each film loop evaluation sheet will be presented and analyzed.

THE GRIP-CRADLE

The evaluators were fairly consistent in their appraisal of the film loop of THE GRIP-CRADLE. For the grip, all three judges placed checks under the YES column for all points of emphasis except Judge A who recorded a NO next to "Thumb meets first finger around crosse, other fingers around stick spread slightly up crosse." She thought that the camera angle did not enable the viewer to actually see the thumb meeting the first finger around the crosse but stated that this was ". . . so unimportant a point to me that this check mark doesn't really represent a negative feeling."

Check marks were recorded in the YES column in all but three instances for the Cradle. Judge B checked YES next to all points of emphasis whereas Judges A and C both wavered at "Open pocket of crosse faces away from player at end of each swing." Judge A thought this was not present in each execution of the technique and checked NO next to this point of emphasis. She stated, ". . . [the] subject demonstrates the way I coach it." In her comment on the film loop Judge A added, "In an effort to be 'book perfect' [the] subject appears stiff. Beginners tend to be stiff - but I prefer a

stiffer, more 'technically sound' beginner who will undoubtably 'loosen up' to a beginner who is not careful enough and who develops careless techniques."

Judge C felt the above point of emphasis was inconsistent and wrote that the player appeared stiff in the upper body movements and particularly noted a lack of flexibility in the right shoulder and in the waist. She thought the inconsistency reflected in opening and closing the pocket of the crosse was due to an unfinished cradle to the right and an incomplete wrap of the forearm around the waist by the bottom hand on the swing to the right. Judge C registered a check mark in the NO column next to this point of emphasis.

Responses to part two of the evaluation sheet were favorable. Judge C thought the quality of color was excellent. Judge B felt there was too much contrast but stated, "very much so" when asked if ". . . the camera angles used aid in clear detection and analysis of movement." At this statement Judge C responded that she would like to have seen a view of cradling from behind in order to see the relationship between the bottom elbow and the side of the body during the swing to the right.

All three evaluators reflected positive thoughts concerning the film loop. Judge B thought that the length of the film loop and the number of repetitions ". . . gives most adequate time for teacher dialog to accompany the viewing." Judge C thought the introduction of the top hand grip was

"very clear and simple." Judge A commented that the film loop was "good - well done" although she felt the subject a bit stilted. She added, "This skill is the most important of all lacrosse skills and this point was well emphasized by the loop." All three evaluators thought that this film loop served the purpose for which it was intended.

PIVOTING

All three evaluators agreed that the film loop PIVOTING successfully depicted all points of emphasis. They also found the technical aspects of this film loop most satisfactory. Judge A stated that she would like to have seen the demonstrator sometimes pivot to the right as she was moving away from the camera, and sometimes pivot to the left as she was moving toward the camera. She commented that, in the film loop, every time the subject moved away from the camera she pivoted left, and every time she moved toward the camera, the subject pivoted to the right. It should be mentioned here that this was done so that the demonstrator would pivot off of a different foot. The implementation of Judge A's suggestion, although feasible, would have been difficult to coordinate smoothly and, at times, would have given the impression that the demonstrator was running around in circles.

In her comment on this film loop, Judge B mentioned that the action matched the written description of the

technique very well and that there was "Good execution of the pivot to either side." Judge C observed a "slight movement of the player's back foot" but added that this was not significant. Judge A especially liked the ". . . absence of unnecessary 'back bending' as per old fashioned method of teaching the pivot." The evaluators indicated that the film loop served the purpose for which it was intended.

CATCHING

In their evaluation of the film loop CATCHING, all three judges indicated that all points of emphasis were present in each execution of the technique. The film loop was rated satisfactory in regard to the technical points covered in part two of the evaluation sheet. Judge C and Judge A commented on the camera angles used. Judge C thought they were "very good" and Judge A thought the view of the subject catching coming toward the camera was "especially good" an "excellent view!"

In their comments, all three evaluators indicated that the catch on the right was stronger than the catch on the left but that this did not detract from the success of the film loop. Judge B mentioned that these catches were "O.K. for beginners." Judge C stated that all the catches had a good fluid easy motion and although the catches on the right were technically better ". . . both look relaxed." Judge A would like to have seen catches requiring more

variety in the extension of arms to reach the ball for the catches on the left. She also added: "Beginners need to be shown that arms may be extended, flexed and the hands may even be slipped for the ball just beyond the reach of full extension." All three evaluators felt the film loop served the purpose for which it was intended.

THE OVERARM PASS

The evaluators thought that the points of emphasis for THE OVERARM PASS were, for the most part, evident in the film loop. Judge B thought that the grip change was not distinctly evident, however, Judge A wrote: "The change of grip [was] shown well." Judge A also commented that the finish of the crosse in the direction of the pass was excellent. She thought that this would give beginners a good chance to see the follow through. Judge C mentioned that the demonstrator did not bring the elbow of the throwing arm back enough prior to the lift of the butt end of the crosse. Judge A, however, reacted positively to this point when she commented that the film loop shows ". . . a natural fluid motion - without overdoing the takeback to the right." She even went as far as to say that, "Perhaps we have tended to overemphasize the preparation to the right!"

Judges B and C felt that the focus for this film loop was not as sharp as in the previous film loops. Judge C mentioned that one darker section on the overarm pass

sequence detracted slightly from the film loop. This section was filmed at a different time than the others; therefore the lighting conditions were not the same. All three judges thought the other technical aspects of the film loop were satisfactory and that the film loop served the purpose for which it was intended.

Judge B commented that the film loop presented an "Excellent showing of continual running while executing the pass." She mentioned that this would help to overcome the beginners' "skip step" while throwing. Judge C would like to have seen some passes to the right and to the left as well as a back view of the subject demonstrating this technique.

THE UNDERARM PASS

Two evaluators reacted most favorably to the UNDERARM PASS film loop. Judge A and Judge C both indicated that all points of emphasis were evident in each performance of the technique. Judge B, however, mentioned that the execution on the film loop was not in exact accord with the written points of emphasis. She clarified this feeling in her comment that she would like to have seen a ". . . more definite left side cradle" prior to the drop of the head of the crosse toward the ground.

All three judges answered YES to the questions regarding the general appearance and organization of the

film loop.   Each evaluator indicated that the film loop
served the purpose for which it was intended.   Judge C
suggested that some emphasis be placed on the follow through.
Judge A commented that although the front view could have
shown the pass forward or to the left, ". . . the view shown
was just right for beginners.   She added that this was "a
good loop.   Simple and good."

<div align="center">PICKING-UP: BALL STATIONARY - BALL
ROLLING AWAY FROM PLAYER</div>

The evaluators were fairly consistent in their ap-
praisal of the film loop PICKING-UP: BALL STATIONARY - BALL
ROLLING AWAY FROM PLAYER.   For the execution of the points
of emphasis for the sequence PICKING-UP: BALL STATIONARY,
not one evaluator placed a check in any column other than
YES.   Judge C mentioned that the bending referred to in
". . . knees, hips, and whole of body bent so all of crosse
can be brought as close to ground as possible" is ". . . not
as obvious at speed as it has to be when picking up is done
at a slower pace (as beginners would)."

For the sequence PICKING-UP: BALL ROLLING TOWARD
PLAYER, Judge A placed a mark in the NO column next to the
points of emphasis "Player must be moving faster than ball"
and "increase speed as ball enters crosse."   She commented,
"If indeed the player must move faster than a ball moving
away in order to pick it up - then I did not feel the sub-
ject's acceleration."   It should be noted here that in

filming a demonstration moving perpendicular to the line of view of the camera, in order to maintain the subject in the center of the field of view, the camera pans or moves with the performer. By doing this the illusion of speed is somewhat neutralized. Both Judge B and Judge C had placed all of their check marks in the YES column for this section of the film loop.

All three judges had favorable reactions to the questions regarding the appearance and organization of the film loop in part two of the evaluation sheet. In their comments the evaluators re-emphasized their affirmation. Judge B stated: "The points of emphasis were well executed." Judge C concurred when she added that the points of emphasis were strong and that this was a "good presentation." The judges thought that the film loop served the purpose for which it was intended.

PICKING-UP: BALL ROLLING TOWARD PLAYER

All three judges reacted positively to the film loop PICKING-UP: BALL ROLLING TOWARD PLAYER. Each judge felt that each point of emphasis was consistently present in every execution of the technique. This film loop also received perfect responses to the technical questions on the evaluation sheet. Each evaluator indicated that the film loop served the purpose for which it was intended. Perhaps the feeling of all three evaluators could be summed

up in the comment by Judge B when she said, "Because of the skill itself and [the] beauty of the performance of this skill, this sequence is excellent."

DODGING

The evaluators agreed that the points of emphasis were consistently present in each execution of the technique of DODGING. Again positive responses were made by each judge regarding the appearance and organization of the film loop. Judge B commented that the three angles; side, three-quarter, and front were excellent for this skill. She added that this helped to show effectively ". . . how to delay the attack." Judge C mentioned that the angles and organization of camera sequences were very good. Judge A liked the very clear emphasis on a fake by the performer. The judges thought that the film loop served the purpose for which it was intended.

BODY CHECKING

In their evaluation of the film loop, BODY CHECKING, the judges were fairly consistent. Judge A did not think the defense began to move backward with the opponent before the opponent approached and placed a check in the NO column. Judge C placed a check in the INCONSISTENT column next to the point of emphasis, "Arms not stiff but slightly bent." She felt that the arms were bent but looked stiff. These were the only variations from positive comments for part

one of this film loop. All three judges reacted favorably toward the appearance and organization of the film loop. Judge B noticed occasional scratches on this sequence. Judge C thought the quality of color was particularly good.

Only one evaluator added a general comment to the film loop evaluation sheet. Judge B stated that this was an "excellent sequence." She particularly liked the fact that the ". . . execution of the body checker responding to the attack movement was very good." The three evaluators responded that the film loop served the purpose for which it was intended.

CROSSE CHECKING

The three evaluators agreed that in the film loop CROSSE CHECKING all points of emphasis were consistently present in each execution of the technique. Judge C particularly appreciated the emphasis placed on a proper grip of the top hand at the top of the crosse and the small sharp tapping movements used to dislodge the ball. Judge B's only objection was to the ". . . waggling of the stick by the defender before actually crosse checking." Judges A and C both commented that they liked the fact that, following the crosse check, the film loop showed the player picking up the ball and continuing on. Judge A stated that this was ". . . one of the best points!" She also added that she liked seeing the opponent tackling back. Judge C commented

that this was extremely good for it showed that ". . . we are playing the game - not just going through the exercises!"

All three evaluators answered YES to all questions regarding the appearance and organization of the film loop and indicated that the film loop served the purpose for which it was intended. In her general comment Judge A indicated that she would like to see a presentation of checking a stick that is close to the ground just following a pick up ". . . as beginners are so often faced with this situation."

ACCEPTABILITY

After viewing the entire series each evaluator was asked to respond to the question: can the film loop series be effectively used as it is or are there some film loops which are totally unacceptable? Judge B responded that the film loop series was ". . . acceptable as is for a teaching aid." She mentioned that she would like to see it used in connection with teacher dialogue. At this point it should be re-emphasized that the film loop series is not intended to replace the teacher, but is merely an addition to a lacrosse unit to be used in conjunction with an instructor. It is feasible, and it is hoped, that students will use this series independently following initial exposure in a class atmosphere accompanied by a teacher.

Judge C answered the above question by stating that the film loop series ". . . certainly can be used as is. None are totally unacceptable." She re-emphasized her earlier comments concerning the lack of flexibility of upper body movement in the cradling sequences and added that if any refilming was done, she would recommend that this be improved. Judge C also mentioned that if the cradling is redone the investigator should consider refilming the overarm pass. Again, this would be because of a lack of flexibility by the demonstrator particularly in the right shoulder. Because Judge C was the only evaluator who indicated this, and based upon the fact that all three evaluators, including Judge C indicated that these film loops served the purpose for which they were intended, the investigator decided not to refilm these two sequences.

Judge A commented that all the film loops were acceptable. She stated that perhaps she would modify some points to her own teaching methods. Judge A added, "Wish I had a set!"

TOTAL IMPRESSION

The evaluators were asked to give their total impression of the film loop series. Judge B mentioned that the demonstrators were "excellent technicians." She added that the series of angles were very good and the length of the views were ". . . excellent for the learner." Judge B

thought, "The series of skills was well planned and that the loops will indeed be helpful for beginners and teachers of beginners." Judge B stated that she would like to see film loops on goal shooting and goal tending added to the series.

Judge C thought that the film loop series was a "most worthwhile project." She added that the presentation was excellent and particularly mentioned the packaging. She especially liked the information included with each film loop. Judge C stated that the points of emphasis were concisely worded and that the exact teaching points were given. She mentioned that the filming was good and that the color, shade, and other technical aspects were very pleasing. Judge C indicated that the "general movement on all loops [was] good."

Judge A commented positively on the packaging and the titles. She thought that the film loop series was excellently done. Judge A added that this series was the best lacrosse visual aid for teaching beginning stickwork that she had ever seen.

SUMMARY

The purpose of this chapter was to present and analyze the evaluative process used in validating a film loop series illustrating selected women's lacrosse techniques for beginners. Content validity of the series was accepted following careful examination of both the lacrosse literature

and the responses to a questionnaire by experts in the field of lacrosse.

To investigate further the content validity of the series a three-judge jury viewed the film loops. These evaluators recorded their responses in a specially constructed evaluation packet. Each evaluation sheet consisted of a list of the points of emphasis for each technique recommended by the lacrosse literature and the above mentioned experts. It was hoped that the judges responses would show the presence of the points of emphasis in the film loop series. A section requiring the judges to respond to questions concerning the general appearance and organization of the film loop was also included on each evaluation sheet.

The judges' responses indicated that an overwhelming majority of the points of emphasis were present in the film loop series. There were five cases where the three judges responded that all points of emphasis were observed in the demonstration. These were: PIVOTING, CATCHING, PICKING-UP: BALL ROLLING TOWARD PLAYER, DODGING, and CROSSE CHECKING. For the remaining film loops each judge indicated that either all or a high percentage of the points of emphasis were present.

The responses concerning the general appearance and organization of the film loop series were positive. The evaluators stated that the focus, color, and distribution of light and shade were, for the most part, good. The

organization, continuity of presentation, and angles used to detect and analyze movement also received favorable responses from the evaluators. Based upon the evidence in this chapter, it was accepted that the film loop series, constructed to illustrate selected women's lacrosse techniques for beginners, was valid.

CHAPTER V

FOR FURTHER STUDY

SUMMARY

The purpose of this study was to construct and validate a series of color film loops to illustrate selected women's lacrosse techniques for beginners. The content to be included in the film loop series was based on a careful search of the lacrosse literature and the responses of well known experts in the field to a questionnaire. Particular emphasis was given to the specific description of how to perform each technique. The techniques chosen were considered essential by the two above mentioned sources. The following techniques were included in the film loop series:

1. The grip-cradle.

2. Pivoting.

3. Catching.

4. The overarm pass.

5. The underarm pass.

6. Picking-up: Ball stationary — Ball rolling away from player.

7. Picking-up: Ball rolling toward player.

8. Dodging.

9. Body checking.

CHAPTER V

SUMMARY, CONCLUSIONS, AND SUGGESTIONS
FOR FURTHER STUDY

SUMMARY

The purpose of this study was to construct and validate a series of color film loops to illustrate selected women's lacrosse techniques for beginners. The content to be included in the film loop series was based on a careful search of the lacrosse literature and the responses of well known experts in the field to a questionnaire. Particular emphasis was given to the specific description of how to perform each technique. The techniques chosen were considered essential by the two above mentioned sources. The following techniques were included in the film loop series:

1. The grip-cradle.

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3. Catching.

4. The overarm pass.

5. The underarm pass.

6. Picking-up: Ball stationary - Ball rolling away from player.

7. Picking-up: Ball rolling toward player.

8. Dodging.

9. Body checking.

    10. Crosse checking.

       Two members of the 1973 United States Women's Lacrosse Team served as performers of the techniques included in the film loop series. Each film loop consisted of the title, followed by execution of the technique three times at 24 frames per second and two times at 70 frames per second for each angle viewed. The performers attempted to incorporate the recommendations for performance by the lacrosse literature and experts responses to the questionnaire into their demonstration.

       Copies of the original film were loaded into Technicolor "magi-cartridges." Each cartridged film loop was placed into a separate container which included points of emphasis to consider while viewing the technique. The film loop series, consisting of 10 cartridges, was packaged in a plastic box upon which the title of the series and a picture of the two demonstrators were affixed.

       Content validity was determined through a careful analysis of the lacrosse literature as well as recommendations of experts in the field as to those techniques and points of emphasis applicable to the teaching of lacrosse to beginners.

       A three judge jury examined the completed film loops. The evaluators were to determine whether the recommended points of emphasis were present in the execution of the techniques. The judges recorded their observations on

a specially constructed evaluation sheet which included two parts. Part one consisted of a compilation of the points of emphasis referred to in the lacrosse literature and the responses by experts to the above mentioned questionnaire. Part two consisted of several questions concerning the general appearance and organization of the film loop. After viewing the entire film loop series the judges were asked to respond to questions concerning the acceptability and their total impression of the film loops. The responses of the three judge jury to the evaluation packet supported the existence of the points of emphasis in the film loop series as recommended by the literature and responses to questionnaires by experts in the field.

CONCLUSIONS

Within the limitations of this study it can be concluded that the film loop series is accepted as being a valid visual aid for use in teaching beginning women's lacrosse techniques. This conclusion is supported by the following evidence:

1. The points of emphasis recommended by the lacrosse literature and the responses to the questionnaire by experts in the field were found to be overwhelmingly present in each film loop in the series.

2. The general appearance of the film loops was evaluated as being acceptable for the film loop series.

3. The organization, continuity of presentation, and angles used to detect and analyze movement were judged as favorable for use in the film loop series.

4. The evaluators indicated that the film loops served the purpose for which they were intended.

SUGGESTIONS FOR FURTHER STUDY

The purpose of this study was to construct a series of color film loops to illustrate selected women's lacrosse techniques for beginners. Two major suggestions for further study are implied: (1) further development of the film loop series, and (2) potential use of the film loop series as a means of providing feedback to students by helping them to increase their perception of their performance.

Further Development Of the Film Loop Series

The film loop series is not meant to be a stagnant and completed work. It is hoped that it will continue to grow in both depth and breadth. Further development of the film loop series might include intermediate and advanced concepts including:

1. Goalkeeping techniques.

2. Methods of goal shooting.

3. Variations of techniques already included in the series such as passing to the right and left, high catches, low catches, and up checking.

4. Illustration of each technique in game situations.

5. Cutting concepts.

6. Defense interchange.

7. A game sequence from draw to goal.

8. Rule violations.

9. Officiating techniques.

Potential Use Of the Film Loop Series

The film loop series has still another use in addition to those described in the review of related literature. If used in conjunction with a videotape machine the film loop series can provide a means of feedback to the student. The student could videotape her performance and have it played back simultaneously with the film loop. If the same angles of filming were used, the student could, by using this multi-media approach, observe how her performance compares with the expert demonstration.

The investigator of this study hopes that through the use of this film loop series an expert demonstration of beginning lacrosse technique will be available to novice students at all times. It is also hoped that through creative use of this series, alone or in conjunction with other technological media, in the day to day teaching process, the learning of physical skills will be enhanced.

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APPENDIX A

**Techniques Emphasized and Points of Emphasis
for Beginners Found in
Selected Literature**

Table 1

Techniques Emphasized in Literature
Suggested for Beginners

TECHNIQUES	SOURCE*								
	A	B	C	D	E	F	G	H	I
The Grip	*	*	*	*	*	*	*	*	*
Cradling	*	*	*	*	*	*	*	*	*
Catching: both sides	*	*	*	*	*	*	*	*	*
The Overarm pass	*	*	*	*	*	*	*	*	*
The Underarm pass	*	*	*	*			*		*
Picking-up:									
ball stationary	*	*	*	*		*	*	*	*
ball rolling away from player	*	*	*		*		*	*	*
ball rolling toward player	*	*	*	*	*			*	*
Dodging	*	*	*	*	*			*	*
Pivoting	*	*	*	*	*			*	
Cutting: getting free	*		*	*					
Marking: positioning	*		*	*					
Body checking	*	*	*	*	*	*	*	*	*
Crosse checking	*	*	*	*	*		*	*	
Shooting: overarm and bounce shot	*	*	*	*	*			*	*

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 2

Points of Emphasis in Literature Appropriate
for Beginners - The Grip

THE GRIP	SOURCE*								
	A	B	C	D	E	F	G	H	I
TOTAL ACTION									
Constantly emphasized . . .	*							*	*
Periodically checked. . . .	*								
TOP HAND									
Natural throwing hand at collar of crosse.	*	*	*	*		*	*		
Match "V" formed by thumb and first finger to "V" formed by guard and wood on crosse. . . .	*	*	*	*	*	*	*		
Thumb and first finger hold firmly.	*				*				
Thumb meets first finger around crosse	*	*				*			
Fingers gently around crosse spread slightly up the crosse		*	*					*	
Forearm relaxed so it drops along shaft of crosse . .	*	*				*			*
Grip high on collar of crosse.							*	*	
Grip firm		*	*		*		*		*
BOTTOM HAND									
Grip naturally butt end of crosse	*	*		*			*		*
"V" of thumb and first finger under "V" of top hand.							*		
hand.	*	*	*		*	*	*	*	
Grip firm and strong. . . .	*								
Palm contacts stick		*	*						
Grip never changes.									
Remains at waist level. . .	*	*	*				*	*	*

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 3

Points of Emphasis in Literature Appropriate
for beginners - The Cradle

CRADLING	SOURCE*								
	A	B	C	D	E	F	G	H	I
TOTAL ACTION									
Basis for every movement. .	*	*					*		
Vertical.	*		*	*		*	*	*	*
Hands over one another working together.	*	*				*	*	*	*
At end of each swing open pocket of crosse faces away from player. . . .	*	*		*		*	*		*
Rhythmical movement fitted to movement of feet . . .	*	*	*	*		*		*	
Crosse close to head. . . .		*		*					
Correct grip emphasized . .	*	*							
Shoulders turn slightly with each swing	*	*	*		*				
Bottom arm provides power .	*		*						
Bottom hand is not permitted to fall below waist .	*	*			*	*	*	*	*
Ball is kept high in crosse.					*		*		
SWING TO RIGHT									
Top arm									
Forearm relaxed and close to outside shaft of crosse.	*	*	*						*
Forearm pronated.	*	*				*			
Slight flexion of wrist .	*	*	*	*		*	*		*
Bottom arm									
Forearm parallel to ground.	*			*	*				
Wrist flexion toward body at end of movement. . .	*	*	*	*		*	*		*
Wrapped close to waist. .	*	*		*					

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 3 (continued)

CRADLING	SOURCE*								
	A	B	C	D	E	F	G	H	I
SWING TO LEFT									
Top arm									
Wrist flexion	*	*	*	*		*	*		*
Bottom arm									
Forearm parallel to ground.	*						*		*
Wrist extends as arm swings outward from body.	*	*	*	*		*			*
Elbow close to body, relaxed	*	*	*				*		*
Bottom hand rises above level of elbow.					*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 4

Points of Emphasis in Literature Appropriate
for Beginners - Catching: Both Sides

CATCHING: BOTH SIDES	SOURCE*								
	A	B	C	D	E	F	G	H	I
Catch is a cradle			*					*	*
Top hand grip remains the same.	*	*		*			*		
Top wrist turns to present widest part of crosse towards ball.	*	*	*	*			*	*	*
Head of stick points slightly towards ball . . .	*	*		*	*	*	*		
"Ask for ball" point crosse into space to which you are moving.	*	*		*					
Cradle begins when weight of ball felt in crosse. . .		*	*	*		*	*		
Crosse is "wrapped around" ball.	*	*			*	*	*	*	*
Relaxed, gentle motion. . . .							*		
Face of stick lined up behind path of ball	*	*	*				*		*
Wrap crosse around ball at same height as the point of contact.						*			
Catch ball high in crosse . .	*				*	*			

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 5

Points of Emphasis in Literature Appropriate
for Beginners - The Overarm Pass

THE OVERARM PASS	SOURCE*								
	A	B	C	D	E	F	G	H	I
Body turned sideways to intended line of flight of ball	*								
Grip changes: top hand slipped around handle . . .	*	*	*	*	*				
Finish cradle to throwing side.	*		*			*	*		*
Left shoulder forward, right shoulder back	*	*	*	*		*	*		*
Shaft of crosse along forearm							*		
Bottom hand and butt of crosse lifted upwards . . .	*	*	*			*	*		
Bottom hand pulls downward and backward.	*	*	*		*		*	*	*
Top arm stretched upward and over.	*	*	*				*	*	
Direction of pass determined by facing handle, shaft and face of crosse in direction of pass . . .	*	*	*		*			*	
Bottom arm provides power and direction	*	*					*		
Top arm: guides and controls.	*	*					*		
Pass continuous movement following cradle.	*						*		*
Levering action	*	*			*	*	*		
Top arm natural throwing motion.	*		*						

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 5 (continued)

	SOURCE*								
THE OVERARM PASS	A	B	C	D	E	F	G	H	I
Finish so top of crosse is in direction of pass . .					*	*	*		*
Flicking action of right wrist on follow through . .	*	*			*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 6

Points of Emphasis in Literature Appropriate
for Beginners - The Underarm Pass

THE UNDERARM PASS	SOURCE*								
	A	B	C	D	E	F	G	H	I
Used when a straight forward pass is needed and opponent is closely marking on right side.	*	*		*					
Upper part of body turned to left	*	*	*						*
Crosse cradled to left, head dropped towards ground in semi-circular motion. . .	*	*	*	*					*
Crosse protected by body. . .		*							
Crosse parallel to body . . .	*	*							*
Head of crosse swung forward without any pause	*		*						*
Continuity of movement. . . .		*	*						
Height of pass controlled by amount of lift of crosse at end of movement. . . .	*	*	*						
Wood turns slightly towards ground.	*		*						

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 7

Points of Emphasis in Literature Appropriate for Beginners - Picking-up: Ball Stationary

PICKING-UP: BALL STATIONARY	SOURCE*								
	A	B	C	D	E	F	G	H	I
Correct grip emphasized . . .	*	*		*					
Technique done on move. . . .	*	*					*	*	*
Stop cradling as approach ball.	*								
Right foot close to side of ball pointing forward . . .	*	*	*			*	*	*	*
Right shoulder leads.		*	*						
Knees, hips, and whole of body are bent	*	*	*	*		*	*		*
Hips twisted to left.	*								
All of crosse as close to ground as possible.	*	*	*			*	*	*	
Push with bottom hand	*						*	*	*
Crosse pushed straight forward under ball.	*		*		*				
Head over ball.	*	*	*						
Bend to get under ball before getting to ball. . .	*		*						
Shaft of crosse along side of body		*				*			
Cradle begins when weight of ball felt in crosse	*	*				*	*	*	
Cradle crosse to side of lower hand.		*	*						
Cradle crosse to vertical position as soon as possible.	*	*	*			*	*	*	*

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 8

Points of Emphasis in Literature Appropriate for Beginners - Picking-up: Ball Rolling Away From Player

PICKING-UP: BALL ROLLING AWAY FROM PLAYER	SOURCE*								
	A	B	C	D	E	F	G	H	I
Movements same as for stationary pick up	*	*	*				*	*	*
Speed of player must increase	*	*					*	*	
Movements more strong and sharp	*	*					*		
Player must be moving faster than ball			*		*			*	
Crosse must move well under the ball	*								
Push with lower hand is stronger			*						
Increase speed at moment ball enters crosse	*		*						
Both hands down on ground					*				
Turn crosse at a slight angle to path of ball					*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 9

Points of Emphasis in Literature Appropriate
for Beginners - Picking-up: Ball Rolling
Toward Player

PICKING-UP: BALL ROLLING TOWARD PLAYER	SOURCE*								
	A	B	C	D	E	F	G	H	I
Body and crosse behind line of ball	*								
Move toward ball	*								
Open part of crosse behind line of ball	*			*					
Right foot beside ball		*	*						*
Head over ball		*							
Crosse should be practically vertical as ball enters	*	*		*	*			*	*
Wood across top of crosse touching ground	*							*	
Hips twisted to left	*								
Right shoulder leads		*							
Crosse "gives" backward	*	*	*	*	*			*	*
Cradle immediately follows "give"	*	*		*					
Crosse brought to vertical cradling position immediately	*								
Feet continue to move	*	*	*	*					
Feet come right up to ball	*							*	
Pick up ball on side of bottom hand		*		*					

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 10

Points of Emphasis in Literature Appropriate
for Beginners - Dodging

DODGING	SOURCE*								
	A	B	C	D	E	F	G	H	I
A cradle.	*								
Increase speed as approach opponent.	*		*						
Quick footwork.	*		*						
Balance	*								
Camouflage intentions by using a swerving run. . . .	*	*							
Ability to do in a narrow space	*								
A twisting of upper body cradling to just one side .	*	*	*						*
Body between crosse and opponent.		*							
Crosse kept close to player .		*	*						
Begin dodge close to opponent.		*							
Maintain fastest speed once by opponent	*	*							
Do not turn back on opponent.		*							
Keep top hand close to head .							*		

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson
(1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958)
G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 11

Points of Emphasis in Literature Appropriate
for Beginners - Pivoting

PIVOTING (TURN TO RIGHT)	SOURCE*								
	A	B	C	D	E	F	G	H	I
A big cradle.	*	*	*					*	
Left foot forward	*	*	*						
Crosse on left.	*	*							
Player pivots on both feet. .	*	*	*						
Push off of ball of front foot.	*		*					*	
Stick swings with twist of body to left.	*	*	*	*				*	
Top hand should brush close to head		*			*				
Crosse remains vertical . . .	*								
Turn towards "open" side or away from forward foot. . .	*								
Complete cradle	*								
Strong pull of bottom arm . .	*								
Movement is big and relaxed .	*								
Crosse kept close to body . .	*							*	
Do not stop cradling.					*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 12

Points of Emphasis in Literature Appropriate
for Beginners - Cutting: Getting Free

CUTTING: GETTING FREE	SOURCE*								
	A	B	C	D	E	F	G	H	I
Movement into a space by a player.	*								
Freeing self from opponent in order to receive pass. .	*								
Movement sharp and clear. . .	*								
Indicate with stick where ball is wanted.	*	*	*						
Ability to change directions quickly to camouflage intentions from opponent.	*								
Cut in direction of goal. . .	*								
Crosse should lead cutter in the space into which she is moving	*	*	*						
Feint in one direction, cut into space left by feint. .	*	*	*						
Never turn back on teammate with ball	*								
Wait until player has control of ball before cutting.	*	*							
Re-cut if not used.	*								

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson
(1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958)
G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 13

Points of Emphasis in Literature Appropriate
for Beginners - Marking: Positioning

MARKING: POSITIONING	SOURCE*								
	A	B	C	D	E	F	G	H	I
Man to man.	*	*	*						
Place self beside opponent and close	*	*	*	*					
Position to see both ball and opponent.	*								
Closer to defending goal than opponent	*		*	*					
One foot slightly in front and one foot slightly behind opponent		*	*						
Balanced.	*								
Crosse in same direction as opponents	*	*	*						
Objective is to intercept ball.	*	*	*	*					
Force opponent away from center spaces		*							
Crosse up and ready	*								

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson
(1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958)
G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 14

Points of Emphasis in Literature Appropriate
for Beginners - Body Checking

BODY CHECKING	A	B	C	D	E	F	G	H	I
Defender places self between opponent and goal	*	*	*	*			*	*	
Weight forward on balls of feet.	*						*		*
Face opponent	*	*	*				*	*	
Follow movements of attacker's body and crosse with body and crosse. . .	*	*	*				*		
Crosse held at an angle towards opponent.	*	*							
Arms not stiff.	*	*							*
Weight evenly distributed . .	*						*	*	*
Go backward moving with opponent.	*	*		*			*	*	*
Keep hips and trunk flexible.									*
No body contact		*					*	*	
Small steps				*					
Force opponent to pass. . . .	*		*						
Force opponent off direct path to goal.	*	*	*				*	*	
Fast footwork	*	*	*	*					
If attacker succeeds in beating defender, defender must turn and run	*						*		
Begin before opponent reaches you				*	*		*	*	
Run sideways and forward, not backward.					*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 15

Points of Emphasis in Literature Appropriate
for Beginners - Crosse Checking

CROSSE CHECKING	SOURCE*								
	A	B	C	D	E	F	G	H	I
Objective to dislodge ball. .	*	*	*				*		
Extension of body checking. .	*	*							
Crosse and body in control. .	*	*	*	*			*	*	
Top hand maintains proper grip.	*	*	*				*		
Series of small tapping movements	*	*	*	*	*		*	*	
Downwards and sideways. . . .	*	*	*				*	*	
Checking movement firm. . . .	*								
Use wood or backbone of crosse for contact.		*					*		
Grip does not slip down from collar of crosse . . .	*		*						
Both hands remain on crosse .	*	*	*						
After ball is dislodged from opponents crosse, pick up or catch.	*	*	*	*					
Try to hit ball rather than crosse.					*				
Try to go against rhythm of opponents cradle.					*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson
(1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958)
G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

Table 16

Points of Emphasis in Literature Appropriate
for Beginners - Shooting:
Overarm and Bounce Shot

SHOOTING: OVERARM AND BOUNCE SHOT	SOURCE*								
	A	B	C	D	E	F	G	H	I
Recommended for beginners . .	*		*						
Same motion as for overarm pass.	*	*	*						*
Crosse lifted high, top arm nearly straight			*				*		
Strong pull of bottom arm upward.		*	*				*		
More follow through in downward direction with crosse and body at end of movement	*	*	*					*	*
Head of stick pointing to where ball is to be placed.	*	*	*						
Ball should hit ground just inside crease and bounce into corner of goal . . .		*			*				

*A: Boyd (1959;1969) B: Delano (1970) C: Reeson (1964) D: Lewis (1970) E: Bixler (1972) F: Conklin (1958) G: Phillips (1969) H: Mackey (1950) I: Stenning (1952)

APPENDIX B

Questions Included in Questionnaire and
Respondents to Questionnaire

Questions Included in Questionnaire

1. What skills would you present to a beginning lacrosse class and in teaching these techniques, what key points would you emphasize?

2. In what way would your content and presentation of this material differ if you were teaching intermediate or advanced classes?

3. In what ways have your methods of teaching lacrosse changed in the last several years?

4. What has influenced these changes?

5. Any other ideas or suggestions you may have would be quite welcome!

RESPONDENTS TO QUESTIONNAIRE

Mrs. Frances Baker

Miss Virginia Crook

Miss Sue Farr

Mrs. Barbara Longstreth

Miss Ann Morton

Mrs. Alison Hersey Risch

Mrs. Mary Fetter Semanik

Miss Nathalie Smith

APPENDIX C

**Techniques Emphasized and Points of Emphasis
for Beginners in Questionnaires**

Table 17

Techniques Emphasized in Questionnaires
Suggested for Beginners

TECHNIQUE	RESPONDENT							
	1	2	3	4	5	6	7	8
The grip.	*	*	*	*	*	*	*	*
Cradling.	*	*	*	*	*	*	*	*
Catching: both sides.	*	*	*	*	*	*	*	*
The overarm pass.	*	*	*	*	*	*	*	*
The underarm pass			*		*	*	*	
Picking-up:								
ball stationary	*	*	*	*	*	*	*	*
ball rolling away from								
player.					*	*		
ball rolling toward player.	*		*		*	*		
Dodging	*	*	*	*	*	*	*	*
Pivoting.	*			*	*	*	*	*
Cutting: getting free	*		*		*			*
Marking: positioning.	*		*				*	*
Body checking	*		*	*		*	*	*
Crosse checking				*	*	*	*	*
Shooting: overarm and bounce								
shot.				*	*			

Table 18

Points of Emphasis in Questionnaires
Suggested for Beginners - The Grip

THE GRIP	RESPONDENT							
	1	2	3	4	5	6	7	8
TOTAL ACTION								
Grip constantly emphasized.		*	*	*				
Grip periodically checked .		*						
TOP HAND								
Emphasized.						*		
Natural throwing hand at								
collar of crosse.	*				*			
Match "V" formed by thumb								
and first finger to "V"								
formed by guard and								
wood on crosse. . . .	*				*		*	*
Thumb and first finger								
hold firmly							*	
Fingers gently around								
stick spread slightly up								
the stick	*						*	
Forearm relaxed so it drops								
along shaft of crosse . .					*		*	
Grip high on collar of								
crosse.								*
BOTTOM HAND								
Grip naturally butt end								
of crosse					*			*
"V" of thumb and first								
finger under "V" of								
top hand.	*							
Fist grip	*						*	
Palm contacts stick			*				*	
Never changes			*					
Remains at waist level. . .	*	*						*

Table 19

Points of Emphasis in Questionnaires
Suggested for Beginners - Cradling

CRADLING	RESPONDENT							
	1	2	3	4	5	6	7	8
TOTAL ACTION								
Basis for every movement. .			*					
Vertical.	*	*	*	*			*	
Hands over one another working together.				*			*	*
At end of each swing open pocket of stick faces away from player. . . .	*						*	
Rhythmical movement fitted to movement of feet . . .	*	*				*		*
Crosse close to head. . . .						*	*	
Correct grip emphasized . .	*	*		*			*	
Cradle high							*	
Shoulders turn slightly with each swing		*			*		*	
Bottom arm provides power .	*					*		
Bottom hand is not permitted to fall below waist	*	*	*	*		*		
Emphasis on naturalness of cradle.				*	*			
Full or complete cradle . .		*				*		
SWING TO RIGHT								
<u>Top arm</u>								
Forearm relaxed and close to outside shaft of stick.		*			*		*	
Forearm pronated.	*							
Slight flexion of wrist .	*			*	*		*	*
<u>Bottom arm</u>								
Wrist flexion toward body at end of movement.	*			*	*		*	*
Wrapped close to waist. .					*			

Table 19 (continued)

CRADLING	RESPONDENT							
	1	2	3	4	5	6	7	8
SWING TO LEFT								
Top arm								
Wrist flexion	*				*		*	*
Bottom arm								
Wrist extends as arm swings outward from body.	*			*	*		*	*
Elbow close to body, relaxed				*	*			
Bottom hand rises above level of elbow.					*			

Table 20

Points of Emphasis in Questionnaires
Suggested for Beginners -
Catching: Both Sides

CATCHING: BOTH SIDES	RESPONDENT							
	1	2	3	4	5	6	7	8
Catch is a cradle	*	*	*	*				*
Top hand grip remains the same.	*			*				
Top wrist turns to present widest part of crosse towards ball.					*		*	
Head of stick points slightly towards ball.	*						*	*
"Ask for ball" point crosse into space to which you are moving.							*	
Cradle begins when weight of ball felt in crosse				*	*		*	
Crosse is "wrapped around" ball.	*				*	*	*	
Relaxed gentle motion		*						*
Face of stick lined up behind path of ball	*				*		*	*
Wrap stick around ball at same height as the point of contact.	*							

Table 21

Points of Emphasis in Questionnaires Suggested for Beginners - The Overarm Pass

THE OVERARM PASS	RESPONDENT							
	1	2	3	4	5	6	7	8
Body turned sideways to intended line of flight of ball		*		*	*			
Grip changes: top hand slipped around handle . . .	*	*	*		*		*	
Finish cradle to throwing side.	*				*			*
Left shoulder forward, right shoulder back		*		*	*	*	*	*
Elbow of throwing arm is back.	*	*		*			*	
Shaft of crosse along forearm	*							
Crosse held at ear level. . .	*						*	
Bottom hand and butt of crosse lifted upwards . . .	*	*		*	*	*	*	*
Bottom hand pulls downward and backward.	*	*			*	*	*	*
Top arm stretched upward and over.	*	*	*	*				*
Direction of pass determined by facing handle, shaft and face of crosse in direction of pass . . .	*				*		*	*
Top arm emphasized.				*				
Bottom arm emphasized			*					
Bottom arm provides power and direction	*							*
Pass continuous movement following cradle.				*				
Levering action			*		*		*	
Top arm natural throwing motion.	*			*				
Finish so top of crosse is in direction of throw . . .	*				*	*	*	*
Flicking action of right wrist on follow through . .						*		

Table 22

Points of Emphasis in Questionnaires Suggested for Beginners - The Underarm Pass

THE UNDERARM PASS	RESPONDENT							
	1	2	3	4	5	6	7	8
Upper part of body turned to left					*		*	
Crosse cradled to left, head dropped towards ground in semi-circular motion. . .					*		*	
Crosse parallel to body . . .					*		*	
Head of crosse swung forward without any pause					*		*	
Continuity of movement. . . .							*	
Height of pass controlled by amount of lift of crosse at end of movement.					*			

Table 23

Points of Emphasis in Questionnaires Suggested
for Beginners - Picking-up: Ball Stationary

PICKING-UP: BALL STATIONARY	RESPONDENT							
	1	2	3	4	5	6	7	8
Correct grip emphasized . . .		*						
Technique done on move. . . .	*	*		*		*		
Take small steps.		*						
Stop cradling as approach ball.						*		
Right foot close to side of ball pointing forward . . .	*	*	*		*	*	*	*
Knees, hips, and whole of body are bent		*	*	*	*	*	*	
Hips twisted to left.							*	
All of crosse as close to ground as possible.			*	*	*			*
Push with bottom hand						*		
Crosse pushed straight forward under ball.				*			*	
Head over ball.	*					*	*	
Bend to get under ball before getting to ball. . .					*			
Shaft of crosse along side of body	*			*				
Cradle begins when weight of ball felt in crosse				*		*	*	*
Cradle crosse to vertical position as soon as possible.	*			*			*	*
Keep whole movement close to body			*					

Table 24

Points of Emphasis in Questionnaires Suggested
for Beginners - Picking-up: Ball Rolling
Away From Player

PICKING-UP: BALL ROLLING AWAY FROM PLAYER	RESPONDENT							
	1	2	3	4	5	6	7	8
Movements same as for stationary pick up.					*	*		
Speed of player must increase.						*		
Player must be moving faster than ball.						*		
Player should be over ball before attempting to pick it up.						*		

Table 25

Points of Emphasis in Questionnaires Suggested
for Beginners - Picking-up: Ball Rolling
Toward Player

PICKING-UP: BALL ROLLING TOWARD PLAYER	RESPONDENT							
	1	2	3	4	5	6	7	8
Body and crosse behind line of ball						*		
Open part of crosse behind line of ball.	*					*		
Crosse should be practically vertical as ball enters . .			*			*		
Wood across top of crosse touching ground	*					*		
Crosse "gives" backward . . .	*		*			*		
Cradle immediately follows "give".	*							
Crosse brought to vertical cradling position immediately	*							
Feet continue to move			*					

Table 26

Points of Emphasis in Questionnaires Suggested
for Beginners - Dodging

DODGING	RESPONDENT							
	1	2	3	4	5	6	7	8
A cradle.	*			*	*	*		*
Travel in as straight a line as possible							*	
Quick footwork.				*				
Ability to do in a narrow space				*				
A twisting of upper body cradling to just one side .	*			*	*	*	*	
Body between crosse and opponent.	*				*		*	
Crosse kept close to player .	*						*	
Begin dodge close to opponent.				*				
Cradle high								*

Table 27

Points of Emphasis in Questionnaires Suggested
for Beginners - Pivoting

PIVOTING (TURN TO RIGHT)	RESPONDENT							
	1	2	3	4	5	6	7	8
A big cradle.					*	*	*	
Left foot forward				*				
Player pivots on both feet. .								*
Push off of ball of front foot.				*				
Bend knee of front foot . . .	*							
Turn head immediately in new direction	*						*	
Transfer weight to new foot.	*			*			*	
Turn towards "open" side or away from forward foot. . .	*			*			*	
Complete cradle						*		*
Keep crosse close to body . .							*	

Table 28

Points of Emphasis in Questionnaires Suggested for Beginners - Cutting: Getting Free

CUTTING: GETTING FREE	RESPONDENT							
	1	2	3	4	5	6	7	8
Initial cut following draw creating spaces					*			
Movement into a space by a player.			*		*			*
Creating a space for others to cut into					*			*
Cut at angle towards ball carrier								*
Movement sharp and clear. . .	*							
Indicate with crosse where ball is wanted.	*		*					
Crosse should lead cutter in space into which she is moving.	*		*					

Table 29

Points of Emphasis in Questionnaires Suggested
for Beginners - Marking: Positioning

MARKING: POSITIONING	RESPONDENT							
	1	2	3	4	5	6	7	8
Place self beside and close to opponent	*						*	*
Position to see both ball and opponent.							*	*
Closer to defending goal than opponent	*						*	
One foot slightly in front and one foot slightly behind opponent							*	
Trying to intercept ball. . .	*						*	

Table 30

Points of Emphasis in Questionnaires Suggested
for Beginners - Body Checking

BODY CHECKING	RESPONDENT							
	1	2	3	4	5	6	7	8
Defender places self between opponent and goal	*			*			*	*
Weight forward on balls of feet.				*			*	
Face opponent				*			*	*
Follow movements of attacker's body and crosse with body and crosse.				*			*	*
Crosse held at an angle towards opponent.							*	
Go backward moving with opponent.			*	*				*
Keep hips and trunk flexible.	*			*				*
No body contact						*	*	
Small steps								
Force opponent off direct path to goal.	*							*
Fast footwork	*						*	

Table 31

Points of Emphasis in Questionnaires Suggested
for Beginners - Crosse Checking

CROSSE CHECKING	RESPONDENT							
	1	2	3	4	5	6	7	8
Objective is to dislodge ball.								*
Extension of body checking.								*
Crosse and body in control						*	*	
Top hand maintains proper grip.							*	
Series of small tapping movements downwards and sideways.							*	*
Grip does not slip down from collar of crosse . . .							*	
After ball is dislodged from opponents crosse, pick up or catch.								*

Table 32

Points of Emphasis in Questionnaires Suggested
for Beginners - Shooting:
Overarm and Bounce Shot

SHOOTING: OVERARM AND BOUNCE SHOT	RESPONDENT							
	1	2	3	4	5	6	7	8
Recommended for beginners				*	*			
Same motion as for overarm pass.					*			
More follow through in downward direction with crosse and body at end of movement					*			

WORKING OUTLINE FOR FILMING

LOOP #: 1   TITLE: The Grip-Cradle

SKILL	CAMERA	SPEED	EMPHASIS
Grip	full front	24fps*	Player standing with crosse in bottom hand - head of crosse on ground.
			Crosse lifted to eye level.
			Player places top hand "V" on top of crosse.
			Player turns to left so ... is to camera.
	zoom in over RIGHT shoulder (level of scapula to include all of crosse head)		Subject takes hand off crosse, makes "V" (relaxed) and replaces top hand on crosse.
	zoom out		
	full side performer's LEFT	24fps	Subject turns so left side to camera showing vertical position of crosse and position of bottom hand.
	full front	24fps	Subject turns to face camera.
			Slow cradle to right-hold.
			Slow cradle to left-hold.
		*frames/ sec	*all of above done without stopping camera - smooth.

APPENDIX D

Working Outline For Filming

WORKING OUTLINE FOR FILMING
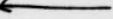
LOOP #: 1   TITLE: The Grip-Cradle

SKILL	CAMERA	SPEED	EMPHASIS
Grip	full front	24fps*	Player standing with crosse in bottom hand - head of crosse on ground.
			Crosse lifted to eye level.
			Player places top hand "V" on top of crosse.
			Player turns to left so back is to camera.
	zoom in to over RIGHT shoulder (level of scapula to include all of crosse head)	24fps	Subject takes hand off crosse, makes "V" (relaxed) and replaces top hand on crosse.
	zoom out		
	full side performer's LEFT	24fps	Subject turns so left side to camera showing vertical position of crosse and position of bottom hand.
	full front	24fps	Subject turns to face camera.
			Slow cradle to right-hold.
			Slow cradle to left-hold.
		*frames/ sec	*all of above done without stopping camera - smooth.

WORKING OUTLINE FOR FILMING

LOOP #: 1   TITLE: The Grip-Cradle

SKILL	CAMERA	SPEED	EMPHASIS
Cradle	full front ↓	24fps*	Performer running toward camera - zoom with player (3x)
		70fps	Same as above (2x)
	full side ← →	24fps	Performer running to left cradling.
			Performer running to right cradling.
		70fps	Same as above.
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 2   TITLE: Catching

SKILL	CAMERA	SPEED	EMPHASIS
Catch on RIGHT	full side performer's LEFT ←	24fps*	Performer holding crosse out to right. Camera zoom in and out.
			Performer running to left catches ball and cradles (3x)
		70fps	Same as above (2x)
	full front ↓	24fps	Performer running toward camera, catches ball thrown from right side and cradles (3x) (camera zoom with player)
		70fps	Same as above (2x)
Catch on LEFT	full side performer's RIGHT →	24fps	Performer holding crosse out to left. Camera zoom in and out.
			Performer running to right catches ball and cradles (3x)
		70fps	Same as above (2x)
	full front ↓	24fps	Performer running toward camera, catches ball thrown from left side and cradles (3x) (camera zoom with player)
		70fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 3   TITLE: The Overarm Pass
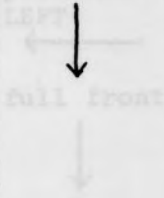
SKILL	CAMERA	SPEED	EMPHASIS
Overarm Pass	full 3/4 front	24fps*	Performer running, cradles and throws (3x)
	↙	70 fps	Same as above (2x)
	full side performer's RIGHT	24fps	Performer running to left, cradles and throws ahead of her - follow through (3x)
	→	70 fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 4   TITLE: The Underarm Pass

SKILL	CAMERA	SPEED	EMPHASIS
Underarm Pass	full front performer's LEFT ↓	24fps*	Performer runs toward camera cradling - passes to camera's left (3x)
		70fps	Same as above (2x)

*frames/sec

WORKING OUTLINE FOR FILMING

LOOP #: 5   TITLE: Picking-up

SKILL	CAMERA	SPEED	EMPHASIS
Picking-up: ball stationary	full side performer's LEFT ←	24fps*	Performer running to left, picks up stationary ball (3x)
		70fps	Same as above (2x)
	full front ↓	24fps	Performer running toward camera, picks up ball and cradles forward (3x)
		70fps	Same as above (2x)
Picking-up: ball rolling away from player	full side performer's LEFT ←	24fps	Performer running to left after ball, picks up ball, cradles (3x)
		70fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 6   TITLE: Picking-up
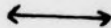
SKILL	CAMERA	SPEED	EMPHASIS
Picking-up: ball rolling toward player	full side performer's LEFT ←	24fps*	Performer running to left, picks up ball and cradles (3x)
		70fps	Same as above (2x)
	full front ↓	24fps	Performer running toward camera, picks up ball and cradles (3x)
		70fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 7   TITLE: Pivoting

SKILL	CAMERA	SPEED	EMPHASIS
Pivoting	full front ↕	24 fps*	Performer runs toward camera, pivots and then runs away from camera - end facing camera (3x)
		70 fps	Same as above (2x)
	full side ↔	24 fps	Performer runs to right and pivots, runs to left and pivots (player always pivots toward camera) (3x)
		70 fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 8   TITLE: Dodging

SKILL	CAMERA	SPEED	EMPHASIS
Dodging	full side performer's LEFT ←	24fps*	Performer running to left, dodges opponent and accelerates to run past her. Opponent turns and chases. Dodge is performed alternately on camera and non-camera side (3x)
		70fps	Same as above (2x)
	full 3/4 side ↙	24fps	Performer runs toward camera. Dodge is performed toward camera. Performer runs past opponent who turns and chases (3x)
		70fps	Same as above (2x)
	full front ↓	24fps	Performer runs toward camera. Dodge is performed toward camera. Performer runs past opponent who turns and chases (3x)
		70fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 9   TITLE: Body Checking

SKILL	CAMERA	SPEED	EMPHASIS
Body Checking	full side performer's RIGHT ←	24 fps*	Attack player running to right and cradling, defense player mirrors crosse of attack player and moves with her. (show defense moving before attack gets close) (3x)
		70 fps	Same as above (2x)
	full front ↓	24 fps	Attack player running toward camera and cradling to sides while defense mirrors crosse of attack player and moves with her (3x)
		70 fps	Same as above (2x)
		*frames/ sec	

WORKING OUTLINE FOR FILMING

LOOP #: 10   TITLE: Crosse Checking

SKILL	CAMERA	SPEED	EMPHASIS
Crosse Checking	full side performer's LEFT ⟶	24fps*	Defense running backward with attack, hits ball out of stick (small taps), picks up ball and cradles off toward camera left. Attack turns and chases (3x)
		70fps	Same as above (2x)
		*frames/ sec	

APPENDIX E

Log Sheet for Filming

<u>LOG SHEET FOR FILMING</u>

LOOP #: 9

FILM: Kodachrome II Type A

DATE: September 15, 1973

TITLE: BODY CHECKING

CAMERA: Beaulieu 4008ZM

LOCATION: Goucher College

CAMERA PLACEMENT	LENS OPENING	DISTANCE	SPEED
Full side performer's RIGHT	2.8	67 feet	24
	1.9		70
Full front	2.8	73 feet	24
	1.9		70

APPENDIX F

Guidelines for Viewing

GUIDELINES FOR VIEWING*

THE GRIP

Top hand

1. Natural throwing hand should be at collar of crosse.

2. "V" formed by thumb and first finger should match the "V" formed by the guard and the wood of the crosse.

3. Thumb meets first finger around crosse, other fingers around crosse spread slightly up the crosse.

4. Forearm should relax so it drops along shaft of crosse.

Bottom hand

1. Grip naturally butt end of crosse.

2. Bottom hand should remain at or above waist level.

CRADLING

1. Crosse should be vertical during movement.

2. Both hands work together, one over the other.

3. The cradle is a rhythmical movement fitted to the movement of the feet.

4. Open pocket of crosse faces away from player at the end of each swing.

5. Emphasize correct grip.

*Written for when the right hand is placed at the top of the lacrosse stick.

CRADLING (continued)

6. Keep crosse close to head.

7. Bottom hand should not be permitted to fall below waist.

8. Cradle high.

9. Emphasize a fullness and completeness of cradle.

CATCHING

1. The catch is a cradle.

2. Top hand grip remains the same.

3. Wrist turns to present the widest part of the crosse toward the ball.

4. Crosse points into the space into which the performer is moving - "ask for the ball."

5. Open pocket of crosse lined up behind path of ball.

6. Cradle begins when the weight of the ball is felt in the crosse.

7. Crosse is "wrapped around" the ball with a relaxed, gentle motion.

THE OVERARM PASS

1. The pass is a continuous movement following the swing to the right of the cradling motion.

2. Whole crosse goes to the right side of the body with the right shoulder back, left shoulder forward.

THE OVERARM PASS (continued)

3. Grip changes: top hand is slipped around the handle of the crosse as the crosse is taken to the right.

4. Elbow of throwing arm is back prior to lift of butt end of crosse.

5. Bottom hand and butt of crosse are lifted upward and pulled downward and backward as upper arm stretches up and over.

6. Top of crosse finishes in direction of throw.

THE UNDERARM PASS

1. Upper part of body turned left as head of crosse is cradled to left side.

2. Crosse cradled to the left, the head of the crosse is dropped down toward the ground in a semi-circular motion and swung forward without any pause.

3. The movement is continuous throughout the preparation and throwing phase.

PICKING-UP

Ball stationary

1. Emphasis on correct grip.

2. The cradling action is stopped as the ball is approached.

3. Shaft of crosse along side of body to allow player to come close to the ball.

4. Right foot close to side of ball pointing forward.

PICKING-UP (continued)

5. Knees, hips, and whole of body bent so all of crosse can be brought as close to the ground as possible.

6. Head over ball as body is bent and head of crosse goes under the ball.

7. Crosse is pushed under ball in straight forward motion.

8. Cradle begins when weight of ball felt in crosse.

9. Flicking the ball into the air in an attempt to catch it should be avoided.

10. Crosse brought to vertical cradling position as soon as possible followed by continuation of movement forward.

Ball rolling away from player

1. Movements are the same as for the stationary pick up.

2. Speed of player must be faster than the ball.

3. Player must be over the ball before attempting to pick up the ball.

4. Player should increase speed as ball enters crosse.

PICKING-UP

Ball rolling toward player

1. Move toward ball and get open part of stick behind line of ball.

2. Head over ball as body bends over approaching ball.

3.   Right foot close to side of ball pointing
forward.

4.   Crosse "gives" backward as ball enters there-
fore the crosse is practically vertical with wood across
top of crosse touching the ground as the ball enters.

5.   Cradle immediately follows, crosse is brought
to vertical cradling position immediately.

PIVOTING

1.   The pivot is a big cradle.

2.   Big cradle toward forward foot prior to turn.

3.   Crosse swings over to other side with twist of
body when player turns toward back foot.

4.   Top hand brushes close to head as crosse swings
over.

5.   Performer turns away from forward foot - toward
"open" side.

6.   Performer pivots on both feet.

7.   Crosse remains vertical throughout the movement.

8.   The movement should be smooth and relaxed.

DODGING

1.   Begin dodge close to opponent to camouflage
intent.

2.   Twist upper body while cradling to side away
from opponent.

DODGING (continued)

3. Body is between crosse and opponent.

4. Crosse is kept close to performer throughout movement.

BODY CHECKING

1. Defender places herself between opponent and the goal.

2. Defense begins to move backward with opponent before opponent approaches.

3. Top hand grip as for cradling.

4. Crosse is held at an angle toward opponent.

5. Arms not stiff but slightly bent.

6. Defender goes backward moving with opponent following each movement of opponent's body and crosse with her body and crosse.

7. Small steps and fast footwork.

8. No body contact.

CROSSE CHECKING

1. Crosse checking is an extension of body checking.

2. Both hands on crosse which is held up toward opponent in position to reach her crosse.

3. Crosse checking is a series of small sharp controlled tapping movements downward and sideways.

4. As soon as ball dislodged, player picks up or catches ball and continues on.

APPENDIX G

Qualifications of Judges

QUALIFICATIONS OF JUDGES

Miss Ann O. Coakley

Miss Coakley received a Bachelor of Science degree
from Boston University Sargent College and a Master of
Education from the University of North Carolina at Greens-
boro. She has played United States level lacrosse and holds
a National umpires rating in lacrosse. Miss Coakley has
been teaching for 23 years. She has taught on the college
level, at hockey and lacrosse camps, coached association
and United States Touring Teams, and has given lacrosse
clinics and demonstrations at professional conventions. At
the present time Miss Coakley primarily teaches college level
beginners and intermediates.

Mrs. Kathy Heinze

Mrs. Heinze is a graduate of Dartford College of
Physical Education which is affiliated with London Univer-
sity. She has represented England as a player and she holds
a National umpires rating in lacrosse from the United States.
Mrs. Heinze has been teaching for 12 years and has done most
of her teaching in this country. She has taught and coached
at all levels; elementary through adult including hockey and
lacrosse camps, college, association, sectional, and United
States Touring Teams. At the present time Mrs. Heinze

confines her coaching to adults who are 18 and over and has been the United States Squad coach for 1973, 1974, and 1975.

Mrs. Suzanne McKinny

Mrs. McKinny received her Bachelor of Science degree from Ursinus College. She has played on the United States First Team 8 years and on the United States Reserve Team for 2 years. Mrs. McKinny has a National umpires rating in lacrosse. She has been teaching for 10 years at the elementary, junior high and senior high school levels as well as club, association, and sectional teams. Mrs. McKinny has also coached at hockey and lacrosse camps. At the present time Mrs. McKinny primarily teaches middle and upper school; grades six through twelve.

APPENDIX H

Film Loop Evaluation Packet

FILM LOOP EVALUATION PACKET

NAME OF EVALUATOR: _____

DIRECTIONS: Included in this packet you will find an eval-
uation sheet for each of the film loops you will observe.
You are asked to complete the evaluation form for one film
loop before going on to the next.   Each evaluation sheet
consists of two parts.

PART I consists of a list of those key points of emphasis
considered to be essential for the efficient execution of
the technique performed in the film loop. Please review
these carefully before observing the film loop.   As you
observe the performance on the film loop, place a check
in the appropriate column:

        _____YES: if the point of emphasis IS CONSISTENTLY
                      PRESENT in each execution of the
                      technique

        _____NO: if the point of emphasis IS NOT AT ALL
                      PRESENT in each execution of the
                      technique

        _____INCONSISTENT: if the point of emphasis IS NOT
                      ALWAYS PRESENT in each execution of
                      the technique

PART II consists of a brief list of questions concerning the
general appearance and organization of the film loop. For
each of these you are asked to write YES or NO after each
question.

       You may view the film loop as many times as desired.
Feel free to press the HOLD button on the projector at any
time during your observation.

FILM LOOP EVALUATION SHEET
THE GRIP-CRADLE

NAME OF EVALUATOR:_____

THE GRIP

PURPOSE OF FILM LOOP: To show visually a grip considered to be appropriate for the efficient execution of several lacrosse techniques.

PURPOSE OF TECHNIQUE: To hold the lacrosse stick in a manner appropriate for the efficient execution of several lacrosse techniques.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
top hand			
1. "V" formed by thumb and first finger matches "V" shape of crosse formed by guard and wood	___	___	___
2. Thumb meets first finger around crosse, other fingers around stick spread slightly up crosse	___	___	___
3. Grip high on throat of crosse	___	___	___
4. Forearm relaxed so it drops along shaft of crosse	___	___	___
bottom hand			
1. Grip butt end of crosse naturally	___	___	___
2. Bottom hand at or above waist level	___	___	___

CRADLING

PURPOSE OF FILM LOOP: To show visually that movement which is considered to be appropriate for effectively maintaining the ball in the crosse.

PURPOSE OF TECHNIQUE: To enable the player to move while maintaining possession of the ball. The cradle is the basis of every technique in lacrosse.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
total action			
1. Cradle is vertical	___	___	___
2. Rhythmical movement fitted to movement of feet	___	___	___
3. Both hands work together: hands over one another	___	___	___
4. Open pocket of crosse faces away from player at end of each swing	___	___	___
5. Crosse remains close to head	___	___	___
6. Bottom hand not permitted to fall below waist	___	___	___
SWING TO RIGHT			
top arm			
1. Forearm pronated, slight flexion of wrist	___	___	___
2. Forearm relaxed and close to outside shaft of crosse	___	___	___

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CRADLING (continued)

	YES	NO	INCONSISTENT
SWING TO RIGHT (continued)			
bottom arm			
1. Forearm parallel to ground	—	—	—
2. Forearm wrapped close to waist	—	—	—
3. Wrist flexion toward body at end of movement	—	—	—
SWING TO LEFT			
top arm			
1. Wrist flexion	—	—	—
bottom arm			
1. Wrist extends as arm swings outward from body	—	—	—
2. Forearm parallel to ground	—	—	—
3. Elbow close to body, relaxed	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

FILM LOOP EVALUATION SHEET
CATCHING

NAME OF EVALUATOR: _____

PURPOSE OF FILM LOOP: To show visually those techniques considered to be appropriate for receiving a ball in the air.

PURPOSE OF TECHNIQUE: To enable the player to successfully receive the ball in the air from another player.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Top hand grip does not change	___	___	___
2. Wrist turns to present widest part of crosse toward ball	___	___	___
3. Crosse points into space into which performer is moving - "ask for ball"	___	___	___
4. Open pocket of crosse lined up behind path of ball	___	___	___
5. Cradle begins when weight of ball is felt in crosse	___	___	___
6. Crosse is "wrapped around" ball with relaxed, gentle motion	___	___	___

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appro-
priate for propelling the ball out of the crosse.

PURPOSE OF TECHNIQUE: To propell the ball in a controlled manner in an effort
to transfer possession of the ball to a teammate.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Pass is continuous movement following swing to right of cradling motion	—	—	—
2. Whole crosse goes to right side of body with the right shoulder back, left shoulder forward	—	—	—
3. Grip changes: top hand slipped around handle of crosse as crosse is taken to right	—	—	—
4. Elbow of throwing arm is back prior to lift of butt end of crosse	—	—	—
5. Bottom hand and butt of crosse lifted upward and pulls downward and backward as upper arm stretches up and over	—	—	—
6. Top of crosse finishes in direction of throw	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

FILM LOOP EVALUATION SHEET
THE UNDERARM PASS

NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appro-
        priate for propelling the ball out of the crosse.

PURPOSE OF TECHNIQUE: To propell the ball in a controlled manner in an effort
        to transfer possession of the ball to a teammate.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Upper part of body turned left as head of crosse cradled to left side	—	—	—
2. Crosse cradled to left, head of crosse dropped down toward ground in semi-circular motion and swung forward without any pause	—	—	—
3. Movement continuous throughout preparation and throwing phase	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

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PICKING-UP: BALL STATIONARY - BALL ROLLING AWAY FROM PLAYER

NAME OF EVALUATOR: _____

PURPOSE OF FILM LOOP: To show visually those techniques considered to be appropriate for picking up a ground ball which is stationary or rolling away from player.

PURPOSE OF TECHNIQUE: To gain possession of a ground ball which is stationary or rolling away from a player.

PICKING-UP: BALL STATIONARY

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Cradling action stopped as approach ball	___	___	___
2. Shaft of crosse along side of body to allow player to come close to ball	___	___	___
3. Right foot close to side of ball pointing forward	___	___	___
4. Knees, hips, and whole of body bent so all of crosse can be brought as close to ground as possible	___	___	___
5. Head over ball as body is bent and head of crosse goes under ball	___		___
6. Crosse is pushed under ball in straight forward motion	___	___	___
7. Cradle begins when weight of ball felt in crosse	___	___	___

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PICKING-UP: BALL STATIONARY (continued)

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
8. Crosse brought to vertical cradling position as soon as possible followed by continuation of movement forward	—	—	—

PICKING-UP: BALL ROLLING AWAY FROM PLAYER

	YES	NO	INCONSISTENT
1. Movements same as for stationary pick up	—	—	—
2. Player must be moving faster than ball	—	—	—
3. Increase speed as ball enters crosse	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

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NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appro-
     priate for picking up a ground ball which is rolling toward a player.

PURPOSE OF TECHNIQUE: To gain possession of a ground ball which is rolling
     toward a player.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Head over ball as body bends over approaching ball	―	―	―
2. Right foot close to side of ball pointing forward	―	―	―
3. Open part of crosse behind line of ball	―	―	―
4. Crosse "gives" backward as ball enters therefore crosse is practically vertical with the wood across top of crosse touching ground as ball enters	―	―	―
5. Cradle immediately follows, crosse is brought to vertical cradling position immediately	―	―	―

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

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4.   Is the quality of color good?

5.   Is the organization and continuity of presentation smooth?

6.   Do the camera angles used aid in clear detection and analysis of movement?

7.   Does the film loop serve the purpose for which it was intended?

COMMENTS:

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FILM LOOP EVALUATION SHEET
PIVOTING

NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appropriate for turning to run in the opposite direction.

PURPOSE OF TECHNIQUE: To enable the player to turn and run in the opposite direction from the one in which she started.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Big cradle toward forward foot prior to turn	___	___	___
2. Crosse swings over to other side with twist of body when player turns toward back foot	___	___	___
3. Top hand brushes close to head as crosse swings over	___	___	___
4. Performer turns away from forward foot - toward "open" side	___	___	___
5. Performer pivots on both feet	___	___	___
6. Crosse remains vertical throughout the movement	___	___	___

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

NAME OF EVALUATOR: _____

PURPOSE OF FILM LOOP: To show visually that movement considered to be appro-
    priate for getting by an opponent.

PURPOSE OF TECHNIQUE: To get by an opponent and maintain possession of the ball.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Begin dodge close to opponent	____	____	____
2. Twist upper body while cradling to side away from opponent	____	____	____
3. Body between crosse and opponent	____	____	____
4. Crosse kept close to performer throughout movement	____	____	____

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS: FILM LOOP: To show visually that technique considered to be appropriate for effectively placing and maintaining oneself between an opponent with the ball and the goal she is attacking.

PURPOSE OF TECHNIQUE: To restrict the movements of the player with the ball causing her to pass or to force her off a direct path to goal.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Defense begins to move backward with opponent before opponent approaches	—	—	
2. Top hand grip as for cradling	—	—	—
3. Crosse held at a 60 degree angle to ground toward opponent	—	—	—
4. Arms not stiff but slightly bent	—	—	—
5. Defender goes backward moving with opponent following each movement of opponent's body and crosse with her body and crosse	—	—	—
6. Small steps and fast footwork	—	—	—
7. No body contact	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

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FILM LOOP EVALUATION SHEET
BODY CHECKING

NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appro-
        priate for effectively placing and maintaining oneself between an
        opponent with the ball and the goal she is attacking.

PURPOSE OF TECHNIQUE: To restrict the movements of the player with the ball
        causing her to pass or to force her off a direct path to goal.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Defense begins to move backward with opponent before opponent approaches	—	—	—
2. Top hand grip as for cradling	—	—	—
3. Crosse held at a 60 degree angle to ground toward opponent	—	—	—
4. Arms not stiff but slightly bent	—	—	—
5. Defender goes backward moving with opponent following each movement of opponent's body and crosse with her body and crosse	—	—	—
6. Small steps and fast footwork	—	—	—
7. No body contact	—	—	—

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

BODY CHECKING (continued)

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS:

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CROSSE CHECKING

NAME OF EVALUATOR:_____

PURPOSE OF FILM LOOP: To show visually that technique considered to be appro-
priate for hitting an opponent's stick when she is in possession of
the ball.

PURPOSE OF TECHNIQUE: To dislodge the ball from an opponent's stick by hitting
it with a series of small taps in a controlled manner.

POINTS OF EMPHASIS	YES	NO	INCONSISTENT
1. Top hand proper grip at top of crosse	___	___	___
2. Both hands on crosse which is held up toward opponent in position to reach her crosse	___	___	___
3. Series of small sharp tapping movements downward and sideways	___	___	___
4. As soon as ball dislodged, player picks up or catches ball and continues on	___	___	___

PART II

1. Is the film loop sharp and clear in definition (focus)?

2. Is the film loop free from blemishes, scratches, and blotches?

3. Is there evidence of good distribution of light and shade?

4. Is the quality of color good?

5. Is the organization and continuity of presentation smooth?

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6. Do the camera angles used aid in clear detection and analysis of movement?

7. Does the film loop serve the purpose for which it was intended?

COMMENTS: