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An Analysis of Potential Factors Influencing a Beginner's Choice of Preferred Contest Throws after Seven Weeks of Instruction in the Sport of Judo

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AN ANALYSIS OF POTENTIAL FACTORS INFLUENCING A BEGINNER'S
CHOICE OF PREFERRED CONTEST THROWS AFTER SEVEN
WEEKS OF INSTRUCTION IN THE SPORT OF JUDO

A Thesis

Presented to
the Faculty of the College of Education
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of the Requirements for the Degree
Master of Arts
in Education

by
William A. Saville
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AN ANALYSIS OF POTENTIAL FACTORS INFLUENCING A BEGINNER'S
CHOICE OF PREFERRED CONTEST THROWS AFTER SEVEN
WEEKS OF INSTRUCTION IN THE SPORT OF JUDO

APPROVED: July 30, 1967

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INTRODUCTION

The sport of Judo contains many contradictions. Some of these are a result of the sport's historical and cultural background, while others are the result of some of the people in the sport being unable or unprepared to look at their sport critically and objectively.

Remarkably the sport has managed to remain detached and has developed without any regard for the many changes in other sports activities. Outside of Japan there has been little investigation into the sport and this has produced many of the sport's problems and contradictions. The sport is well established internationally and is one of the fastest growing sports in attracting new membership. Yet it is rarely regarded by the general public as a sport. It is usually thought of as some mysterious, esoteric cult, dangerous to get involved with in any way. Often people within the sport have encouraged this image and the sport's oriental affiliations encourage this lack of understanding. Bland acceptance of ritual and symbolism by the participants is the result.

From the beginning, the sport's ambassadors have been visiting "experts" from Japan and later from Korea. They were sincere in their efforts but generally failed to establish that they were themselves exceptional products of many years of hard work. Also, there was the assumption that because they were highly skilled performers they were equally skilled at teaching.
Because of the sports origin in Japan and because of their traditional supremacy, what was appropriate in Japan was delivered "en bloc" to the Western world with little or no adjustment to allow for the difference in culture and history. Use of Japanese terminology, because of the difficulties of accurate translation, is admirable for establishing an international language for the sport, but it also serves to heighten the "cult" image.

All this has led to many discrepancies in the natural development of the sport in the Western world. Some of the people who are attracted to the sport are attracted for the wrong reasons. The overly aggressive people think they can learn the "secrets" and break into the "cult" and achieve even more fearful reputations. More placid people feel a need to learn "the magic words" to be able to account for themselves in difficult situations and to offset their sedentary desk clerk images. Both sections fail to appreciate the "sport" aspect which is fundamental, and the many, long hours of rigorous practice needed to become a successful player. Soon discouraged, they will leave the sport and help to make up the figure suggested as high as eighty per cent who leave the sport within the first year of membership.

Some clubs and their personnel must also be held to task on this issue. With little understanding and less investigation into the physical and mental aspects and functions of the sport, some leaders have tended to go by the book and to cover up their own lack of awareness by relying upon ritual. They have been unimaginative in their approach to their teaching and often complete disregard has been shown for the major educational consideration of individual
differences. Disregard of other educationally sound principles such as progression, motivation, enjoyment, and constant evaluation, and concern with the "stylish form" and the ritual mumbo jumbo has sounded the death knell for many aspirants. Breakfalling is an example, in that such a negative emphasis has been placed on the need for breaking the fall effectively that the beginning participant is expecting to get hurt and is tense with apprehension. He cannot appreciate the need for movement to offset the effects of falling, and he does get hurt.

Although the sport was recognized educationally from its beginning, it is still not generally accepted as educationally desirable and sound, and often where it is included in a program, little thought has been given to why it is included. Consequently, people are introduced to the sport at an age when preconceived ideas, established movement patterns and societal effects have combined to limit the player's improvement and pleasure. It is often too late to establish the broad base of big movement upon which is built the more limited, specific and precise skills, and true natural appreciation of the essence of the sport is lost to them. A sound argument can be presented for the sports inclusion in the entire educational age range merely by analyzing the sport in the light of educational desirability and administrative feasibility. This co-educational, challenging, progressive, large movement patterned sport is a sound physical developer. It is mentally stimulating and it is appropriate for all body types. It stimulates and encourages character training and sound training in human relationships with natural carry-over possibilities. It requires a cheap uniform and the other equipment needed is readily available and multi-purpose. Large numbers are easily handled and
different ability levels present no problems. When the sport is considered alongside other sports that have achieved wide and enthusiastic popularity and acceptance in the light of the above mentioned criteria, it carries itself significantly.

Yet it has not matched the development educationally of some of the other sports. Encouragement either actively or passively of a questionable image, commercialization, a stubborn adherence to tradition and a failure to consider the sport in another cultural context, are some of the reasons. However, the two major factors were the sport's own insistence upon extremely high levels of performance as a criteria of teaching ability limiting the number of available instructors, and the lack of scientific, acceptable investigation of the fundamental factors and principles on which to establish the sound mechanical, instructional, and educational bases upon which teaching could be based rather than the instructor's personal playing ability.

We are entering a period of complete re-examination of the whole field of activity and how it can offset the effects of increased civilization and its accompanying mechanization and increased leisure time. Some study of the sport of Judo is indicated and this study is one contribution.

Summary

There is an apparent cycle in the history and appeal of a particular sport. When this cycle is completed there is a need for re-examination and change to initiate a further cycle. Judo in the Western world would appear to be reaching the end of such a cycle.
and examination and change is necessary for a variety of historical and cultural reasons to ensure that the sport of Judo embarks on another important cycle.
CHAPTER ONE

THE PROBLEM AND ITS BACKGROUND

One of the natural objectives of a participant in the sport of Judo is to successfully compete in contest. To compete successfully the player must make an appropriate choice of technique at the appropriate time and to execute it effectively. In choosing the technique from his repertoire he can base the choice on his own intended movement or upon the projected movement of his opponent. The perfect execution will come after sufficient perfect practice. There are many factors that influence his choice of technique.

Statement of the Problem

This study was conducted to investigate certain factors affecting beginning players in their choice of preferred contest throws after seven weeks of instruction in Judo.

The chosen subjects had contests during which their throw preference was established. Two groups were established on the basis of this preference and the group status in the isolated factors was compared.

Arbitrarily, the following factors were selected and investigated in this study: body size, agility, flexibility, strength, co-ordination, balance, the player's personality strengths and weaknesses and his exposure to different techniques.
Background to and Need for the Study

The introduction of beginners to the sport of Judo within the framework of a Required Physical Education Program poses several problems. In nine weeks the students are to be exposed to a new sporting experience which should be enjoyable and yet sufficiently instructive to provide them with a basis from which they can progress further after the course if they so desire. Thus the content of the course must be shrunk and yet not distorted.

In establishing the course content it is important to decide what should be introduced and the effect that this introduction will have upon beginners' performance in contest. This introduction should also be valid in the light of their future development in the sport. Some consideration should also be given to the player's individual physical differences and whether these will influence the content of the course. The specific needs of beginners in this sport are also important as there is an absence of direction in Judo literature.

Delimitations of the Study

The limitations of this study were as follows:

1. This study was limited to seventy-four male students who were enrolled in the Required Physical Education Program at Western Kentucky University, Bowling Green, Kentucky.

2. Administrative considerations limited the instruction period to seven weeks.

3. The factors studied were limited to those outlined.
4. The instruction was limited to Tachi-wazas. No Ne-wazas or Kanseis-wazas were taught.

Definitions

1. Tachi-waza is a throw executed from a standing position.
2. Ne-waza is a ground work technique used to secure an opponent on the mat.
3. Kanseis-waza is a locking technique used to gain a submission from the opponent.
4. Ippon is a full point.
5. Waza-ari is a near point (5/6ths).
6. Randori - for the purpose of this study practice during randori was not entirely free practice. Players were restricted to working specifically upon the techniques most recently worked upon and the player who was to attack was designated. This was done not to impose any artificiality upon the movements of the players but to remove the frantic element where the players are more concerned with survival than practice.
7. General practice - this was when the players were not restricted to the specific techniques and were allowed to try all they knew when an opportunity arose.

Summary

This study was conducted to investigate certain factors and to determine the affect that they had upon beginning Judo players' choice of preferred contest throws after seven weeks of instruction.

There is an absence of Judo literature concerning the specific needs of Judo beginners. Some further knowledge of the influence of
the factors investigated should provide some direction for beginners' course content.

This study was limited to seventy-four subjects in a Required Program and the instruction was limited to standing throw techniques.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This review is notable in that it reveals a lack of directly related literature concerned with the problems faced by beginners. The bulk of literature concerning Judo can be summarized into three types:

1. That which discusses Judo with Karate and Aikido.
2. That which is reflective of the empirical observations of writers.
3. That which represents the speculative magazine literature.

Discussion

The first group can be heavily criticized as misleading. Aikido is pure self-defense and Karate has no connection with Judo. Judo is not self-defense and has nothing to do with self-defense.

The second group has some value and they provide a source of the standard contents of the sport such as the names of throws and Judo procedures and they contain some graphic material. Rarely is an attempt made to establish basic principles that are valid at all stages of development. On the ground that the suggested material has worked for the authors for a period of time, little attempt is made to examine the sport in the light of the present day and the changing nature of activity. The illustrations often segment the throws and fail to convey
true "movement." They treat the human body as a series of isolated mechanical levers and the opponents as inanimate, boxlike objects.

The third group is current and interesting. Rarely does it offer any experimentally derived information, however. Instructional articles invariably reflect the speciality of the current champion.

From this mass of information it is possible to glean one positive text. In the book by Gleeson\(^1\) an attempt is made to view the sport as a whole and to offer justification for certain suggested changes in the approach used with beginners. He also establishes areas of importance to the beginner.

In the first section of the book the sport of Judo is incidental and he establishes principles of teaching and of the psychology of learning as ground rules to all activity teaching situations involving beginners. The factors isolated in this study can also be seen in a general context.

Gleeson's thoughts are modern and upon examination are soundly based upon modern trends not only in physical education but also education as a whole. Some examples will serve to make this point.

Gleeson emphasizes that any demonstrations should be done at the same speed as is required in the actual throw. He also states that "speed is essential to Judo so it should therefore, be stressed as early as possible in the general training."\(^2\)


\(^2\) Gleeson, *loc. cit.*, p. 36.
Specific research studies substantiate this. In a study of speed versus accuracy, Solley concluded from his results that:

speed developed under initial emphasis of speed readily transferred into performance where speed and accuracy were considered important and the transfer was persistent. Accuracy gained at low rates of speed was lost almost immediately when the rate of the performance was increased.  

Because his groups were all approaching equal levels in speed and accuracy towards the end of his experiment, he suggests the following alteration to Poppelreuter's law:

1. In skills in which speed is the predominant factor for successful performance the most efficient results are obtained by early emphasis on speed.
2. In skills in which skill and accuracy are important to successful performance emphasis on speed and accuracy yields the most desirable results.

Fulton indicates that there do not appear to be "habits of inaccuracy" when speed is emphasized, and where momentum is a prerequisite, early emphasis on speed is even more justified.

A general conclusion of the research in this area is aptly expressed by Knapp who says "that where speed is vital to performance speed is a part of form and should therefore be emphasized from the beginning."

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Judo turning movements do possess a degree of momentum and accuracy; although ballistic movements are capable of degrees of speed, practice and experience should achieve the correct rate for the movement and thus total speed should be emphasized from the start.

The aspect of timing is connected with demonstration and whole part teaching. Gleeson advocates a brief, skilled demonstration on the grounds that the first "picture" will have a profound effect. He then suggests that they should then try to copy the demonstration that they have seen at the same speed, however clumsy the result, with the minimum of verbal direction.

Knapp says "that the early stages in skill learning are vital to future progress and the essence of most complex skills of the type found in Physical Education and Physical Recreation is timing." She also states "that the time spent on showing beginners an expert performance should be brief and no analysis should be attempted. They should immediately attempt to perform the skill." She sums up existing evidence and says "it seems that so far as individual type activities, in which the performer acts on his own, are concerned, the evidence, though not conclusive, is predominantly in favor of the whole-part method for beginners."

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8 Gleeson, loc. cit., p. 35.
9 Gleeson, loc. cit., p. 40.
10 Knapp, loc. cit., p. 22.
11 Knapp, loc. cit., p. 28.
12 Knapp, loc. cit., p. 62.
Lawther adds that "attention to precise details of movement tends to slow down the rate of learning and to interfere with an integrated total activity performance." He further substantiates the suggestion of initial minimal verbal instruction and says that "unless the learner can translate words into action, they are of little value to him except at times as a means of motivation."

With a complex motor skill such as a Judo throw, Battig's findings that the value of verbal pre-training decreases as a skill becomes more complex, should be mentioned. It is much better to try the movement, for as Gleeson suggests, it is extremely difficult to convey movement with words as there are so many different interpretations of the same word.

Gleeson continually stresses the importance of motivation and criticizes the sport for failing to appreciate this aspect. Lockhardt states that, "In order to learn, at least two things are necessary; 1. capability, and 2. motivation."

Knapp lists the types of motivation and mentions the attraction of physical activities with an element of risk and danger, and the overcoming of these attracts a certain type. This is related to facing a

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14 Lawther, loc. cit.


16 Gleeson, loc. cit., p. 40.

challenge and controlling the emotions in stressful situations. Self
appraisal and finding out about oneself is an attraction, as is a
desire for physical conditioning. There is an innate desire in children
to wrestle and fight without hurting each other. She mentions the
belt system, a specific in Judo, as a way of motivating players.
Finally, she points out that frequently, activity taken up in the
first place for what ever reason becomes an end in itself. 18 These
motivational factors mentioned by Knapp are all applicable to Judo
and Gleeson's concern with this aspect is justified.

The second part of the book utilizes the "gestaltic" theory
of learning and outlines a teaching method for beginners. (See
Appendix) This Group Method approach was the one used in this study,
and in the researcher's opinion produces Judo players who develop a
skill basis which is sound in the light of future development and which
gives them an appreciation of what they are doing more quickly than when
using traditional methods. Throughout, his work is mechanically and
physiologically sound and the illustrations, with one exception, give
the vital, fluid, overall impression, particularly the action stills.

Hicks, an experienced teacher and player, reviewed the sport of
Judo in the light of accepted physical education objectives. He
strongly supports Gleeson's Group Method for work with beginners. He
also supports the whole-part teaching method and stresses the importance

18 Knapp, loc. cit., p. 117.
of work done with beginners and the effect it can have on their total development. 19

Aggression, Personality and Attitude

Again there is no literature directly related to the sport of Judo concerning aggression, personality and attitude. Some work has been done in the sport of Wrestling and with other athletes with regard to attitude, and this will be reviewed as an indication of the attitude of combative sport participants.

A review of work done by Husman, 20 Johnson and Hutton, 21 Johnson, Hutton and Johnson, 22 Middleton and Moffet, 23 and Sperling permits the following general conclusion. There would appear to be a higher level of aggression associated with participants in combative sports. Champion athletes also show this high level of aggression and


a high degree of self assurance. There appears to be little
correlation between height and weight and dominance in men.

Motivation

Again a review of literature in this area would indicate a
general conclusion. Works by DeVries, Steinha and Ikai, Henry, Faclough, Munro, Johnson, and Nelson and Johnson would indicate that while some individuals improve their performance when motivated, others do not. Because of the problem of motivation certain measures, particularly of strength and endurance, would appear to be unreliable when seeking maximal response or effort.


The majority support motivation when testing, in an effort to bring physiological limits closer to psychological limits.

Classification, Height, Weight and Age

Work in this area establishes that after the age of seventeen, age has little or no effect upon performance in general athletic ability testing.\(^{32}\) Age was disregarded as a factor in this study, as all the subjects were over seventeen years of age.

Summary

The amount of literature related to the needs of beginning Judo players is limited. The work by Gleeson is concerned with these needs and he endeavours to look at the sport of Judo objectively. His suggestions are substantiated by research in the various areas.

There is no available work related to the attitude of Judo players but other combative sport participants and some champion athletes tend to be more aggressive than other sport participants.

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CHAPTER THREE

PROCEDURES AND EXPERIMENTAL DESIGN

Introduction

The subjects were selected and given fourteen hours of instruction. Seven hours were spent in one major area of throws and then the next seven hours were spent in the second major area. The first major area was called Method of Instruction A and represented throws that were executed by turning the back to the opponent. The second area of throws was called Method of Instruction B and represented the throws that were executed while keeping a relatively frontal position to the opponent. (See Appendix A for throws) Two classes were taught Method A first followed by Method B and two other classes were taught the two methods in the reverse order. After the period of instruction each class had two hours of contest during which time they were evaluated and placed into Group I or Group II according to their choice of preferred contest throws. All the subjects were then tested for strength, agility, flexibility, balance, co-ordination, personality strengths and weaknesses, and they were weighed and measured.

Selection of Subjects

The participants in four classes of the Required Physical Education Program were used as subjects. Included were eighty males, aged from 18 - 21, with no previous experience in Judo. A full
attendance record during the period of instruction was required for inclusion in the study. During the course of the study, three subjects dropped the course, and three others did not have full attendance. These six subjects were eliminated from the study.

Selection of Tests

A group of tests and measurements were selected after consideration of relevant research. The criterions for eventual selection are outlined.

Classification - Height and Weight

The McCloy formula for college men of six times height plus weight, the Cozens' Classification and the Ponderal Index, which establishes the degree of removal from ectomorphy, were all considered. Observation was made of the fact that the AAU and the NCAA only consider weight when establishing their categories for national championship events. The same applies to the official body for the combative sport of wrestling. (See Appendix B)

Agility

In an investigation by Gates and Sheffield, fifteen tests of change of direction ability were selected to establish if change of direction was an important factor in agility and games ability. They sought to establish a smaller representative battery of tests that would conveniently measure this particular ability.

Their conclusions were as follows:

1) Evidence...tends to indicate that the change of direction skill is an important factor in determining agility and games ability.
2) Tests suggested in the final battery are valid for measuring agility and games ability.
3) The tests suggested were particularly desirable as a measure of agility and games ability because they were a) easy to administer, and b) the equipment needed was readily available in any gymnasium.

The thirty feet shuttle run appears in the three test battery and it is the easiest of the three to administer.

In a study by Young, referred to by McCloy, the factor of change of direction was established and was linked with agility. Thus, the thirty feet shuttle run was selected as a test of agility, or ability to change direction.

Strength

Total strength was considered by Fleishman as made up of three components; static strength, dynamic strength, and explosive strength.

Explosive strength was defined as the ability to expend a maximum of energy in one or a series of explosive activities. He found this factor to be distinct from other strength factors in that it required a mobilization of energy for a burst of effort, rather than

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than a continued strain, stress or repeated exertion of muscles. He suggests the 100 yard shuttle run as a test of explosive strength.\(^5\)

He further states that the change of direction factor did not significantly emerge as a separate factor and felt that it was accounted for by the explosive strength factor, mentioned above.\(^6\)

In the light of the contradictory evidence mentioned, it was decided to use the thirty feet shuttle run as an indication of agility or ability to change direction. This distance was chosen in preference to the 100 yards, as the latter distance does suggest an endurance factor related to "repeated exertion of muscles" as opposed to the explosive nature of the factor, which Fleishman states is distinctive.

**Static Strength**

Fleishman describes this as

the maximum force which a subject can exert, even for a brief period, where the force is exerted up to this maximum. It is in contrast to other strength factors as this is the force that can be exerted against external objects.\(^7\)

Bookwalter, et al., states that "grip strength is one of the most reliable dynametrical measures of human strength." \(^8\) Accordingly, grip strength is a likely component in strength test batteries, or as a single item reasonably representative of total body strength.\(^8\)


\(^7\) E. A. Fleishman, *loc. cit.*, p. 130.

Fleishman also recommends the hand grip dynamometer test and this was selected as a test of grip strength and static strength.  

Dynamic Strength

Fleishman calls this:

the ability to exert muscular force repeatedly or continuously over a period of time. It represents muscular endurance and emphasizes the resistance of the muscles to fatigue. The common emphasis of tests measuring this factor is on the power of the muscles to propel, support or move the body repeatedly or to support it for prolonged periods.  

He also states that

no separate endurance factors or speed factors appeared. It does not seem necessary to provide separate measures of muscular endurance in the strength area.... It appears that this kind of endurance and dynamic strength both depend on the same underlying ability factor.  

Thus, of the tests in this area, push-ups were taken in preference to pull-ups for ease of administration and push-ups for fifteen seconds rather than push-ups to maximum because of the time factor and the problems of motivation.

Flexibility

Fleishman identifies two areas of flexibility: extent flexibility, and dynamic flexibility. He describes extent flexibility as the ability to flex or stretch the trunk and back muscles as far as possible in either a forward, backward or lateral direction.

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9E. A. Fleishman, loc. cit., pp. 72, 130.
10E. A. Fleishman, loc. cit., p. 130.
11E. A. Fleishman, loc. cit., p. 70.
He describes dynamic flexibility as the ability to make repeated, rapid, flexing movements. The resiliency of the muscles in recovering from strain or distortion seems critical here since speed of the repeated movements is emphasized.

In these two areas he recommends the Twist and Touch test and the Bend, Twist and Touch test as valid tests of these two factors. These two were selected for ease of administration and simplicity of required apparatus.

Balance

Fleishman again determines two distinct areas of balance as represented by balance with the eyes closed and balance when taking advantage of visual cues.

Drowatzky and Zaccato felt that tests of static balance and dynamic balance do not measure the same factor. Bass asserts that static balance and dynamic balance are separate factors. She accepts, however, that the elements of static balance are present in dynamic balance and that the latter is associated with other areas such as co-ordination. Her dynamic balance test had a slight but positive correlation with the static tests. (Average .344) It was higher when the static balance tests were conducted with the eyes open. (Average .47) She adds that "the correlation between static

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balance and ratings of rhythm and motor abilities is high enough to suggest that this type of balance plays an important part." She further adds that,

the factor analysis seems to show that dynamic balance consists of the important factors in static balance plus other components, as yet undetermined. Thus static balance would appear as a part of the dynamic balance which appears as an important factor in general rhythm skills.¹⁶

Fleishman's suggested test--one foot lengthwise, balance board test (with eyes open)--was selected as a measure of static balance.

Gross Body Co-ordination

Fleishman defines this factor as "the ability to co-ordinate the simultaneous actions of different parts of the body while making gross body movements." He maintains that this is an identifiable trait and that the Cable jump test is a valid measure of this.¹⁷

Personality and Attitude

The area of attitude testing is wide and debatable. The inconsistencies of human nature and the effects of irrelevant factors makes this an area for which the perfect measure is still being sought.

Due recognition is given to this fact. A thorough review was made of alternative tests and their relative merits, and this served to indicate that if one is aware of a test's limitations, and the use


that is made of the test, there are tests that provide a better indication than a purely subjective estimation.

One of the major weaknesses in this area would appear to be that the testee may strive to indicate what he feels he ought to be rather than what he knows to be true. Thus, the researcher turned to the Edwards Personal Preference Schedule as a test that makes some attempt to control the subject's endorsement of socially desirable items by use of the forced choice from two questions with a comparable degree of social desirability and with a differing personality variable. Reviews of this particular test in the Mental Measurement Year Book run the whole gamut from outright acceptance to cautious limitation.\textsuperscript{18}

Shaffer writes "it is a long time since this reviewer has seen a questionnaire that seems to possess such potentialities for use and research."\textsuperscript{19} Gustad says that "it is intriguing, promising and in many ways a carefully conducted experiment but it is still an experiment, and it should not be released for any other purpose."\textsuperscript{20}


Reviews by Barron, Fiske, Radcliffe, and Bjerstedt suggest that it is not ideally suited for counselling or personnel selection. However, these reviewers agree that it has value as a research tool. It should be pointed out that particular environmental factors influence a few individuals on a few coinciding occasions, but are particular to these individuals and not indicative of the group. The Western Kentucky University Education Department, counselling section, endorsed the above comments on the E.P.P.S. Thus, this test was used in this study as an indication of personality strengths and weaknesses.

Control of the Study

All subjects were told that they were involved in a study of various methods of teaching Judo to beginners. All classes were held in the morning, in the same area with the same instructor. Each class had the same amount of instructional time, contest time and the instructional methods were taught in the same way to each class.

Teaching Procedures

Appendix A shows specific teaching material and order of progression used in the four classes. Major throws that were considered

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fundamental to the sport of Judo were classified as either executed after a turn that placed the attacker's back to the opponent or those that were executed while a relatively frontal position was maintained. The former were grouped together and labeled Instructional Method A throws. The same types of throws were used to place subjects in Group I, after the contest period. The throws from the front facing position were grouped together and labeled Instructional Method B throws. Again, Group II was composed of players preferring this type of throw.

Classes one and two were taught Method A for seven hours and this was followed by Method B for seven hours. Classes three and four were taught Method B for the first seven hours and this was followed by Method A for seven hours.

Movement is of prime importance to the sport of Judo and so the subjects were taught to throw and defend on the move as quickly as possible, i.e., during the first class hour. A simple method of breakfall was taught and practiced after they had experienced throwing and being thrown. The whole-part-whole method of instruction was employed. After two or three skillful demonstrations of the throw, to be introduced at the same speed as when used in contest, the subjects were asked to emulate what they had seen. Basic principles were established and parts of the throw were practiced and emphasized briefly and then the completed throw was again attempted. Very little time was spent working with a static partner; controlled movement was introduced to enable the students to practice the throw realistically and to minimize the heavy falls that result from throws from a static position. A simple defense to the attack was also introduced at an early stage to encourage the
spirit of movement in both players and to encourage the attacker to make complete, uninhibited, aggressive attacks knowing that he had to catch his opponent, and knowing that he would not be submitting his partner to frequent heavy falls.

The Japanese names of the throws were not introduced. Projects were often set after they had a small repertoire of throws, asking the subjects to see if they could link them together.

Verbal instruction was kept to a minimum and used only to bring out individual coaching points of obvious problems and to act as a motivator. Each class had the same warm-up activities before each class. During randori and general practice the partners were frequently changed to give them experience of working with a variety of body types.

Contests

After the fourteen hours of instruction and practice, each subject had four two-minute, stop time contests with partners randomly selected by drawing names from a box. Names were called out in a group of five to allow for warm-up, and adjustment was made to give players who had just played time to adequately recover. It was stressed to each player that the result of the contest was unimportant and that as much activity from both players as possible was encouraged.

During the contest period each player was evaluated and his technique preference determined. A record was kept of the number of attempts the players had of each type of throw, i.e., with a turn or while facing the opponent. An attempt was recorded if the opponent had to take evasive action to prevent being thrown or if the attacker with intention attempted a throw and arrived at the mat with an advantage.
over his opponent. At the end of the contest period the number of attempts of each player were totaled up and the number of attacks using Method A and B throws were determined. Subjects were then placed in Group I or Group II on the basis of preferred throws. Where the totals of Method A and B throws were equal a decision was reached by considering only those throws that had resulted in the attacker being awarded an ippon (point) or a waza-ari (near point) for his attack. Where this was not sufficient evidence to reach a decision, a further contest was allowed. The subjects were unaware of the classification procedure or of their final classification. They were told that they were being evaluated for their bi-term practical grade and that maximum movement and activity would be to their advantage. Non-participating class members were encouraged to add their vocal support during the contests.

Testing Procedures and Administration of Tests

The following potential factors were isolated as important to a beginner in making his preferred choice of contest throw after seven weeks of instruction; height and weight, agility, strength, flexibility, co-ordination, balance, the player's personality, and the throws to which the beginner was introduced.

**Height and Weight.** - Each subject was weighed and measured. His weight was rounded off to the highest pound, while dressed only in shorts. The scales used were the conventional bar weight type and the scales were tested before and afterwards with a fifty pound standard weight. For height, the subjects were measured with a sliding graduated bar device which was checked for accuracy with a steel tape. From these measurements
each subject was given a body size unit score based upon McCloy's formula for college men, as given in his Classification Index. They were also classified according to the Cozens Classification. The Ponderal Index was found for each from the Ponderal Index Scale.

**Agility.** - Two lines were marked on the floor with masking tape thirty feet apart and parallel to each other. The subject started behind one of these lines and made three complete trips, touching outside the lines with feet only on each trip. The subject's score was the time taken to make the three round trips. A practice trial was allowed. The subject was started with "on your mark-set-go." The watch was started upon "go". If anyone became confused with the number of trips they had completed or fell in such a way as to affect their time significantly, they were retested after sufficient rest.

**Grip Strength and Static Strength Test.** - A Stoelting hand dynamometer was used. The dynamometer was placed in the palm of the subject's preferred hand with the dial facing away from the palm. The student stood and held his hand down by his side, away from his body with the palm facing his side. He was told at the command "squeeze" that he was to squeeze the dynamometer once sharply and steadily as

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hard as he could. He was allowed three attempts with at least a
minute rest in between. The mean of the three attempts was recorded.29

**Dynamic Strength.** - The subject was told to do as many push-ups
as possible in fifteen seconds. In a prone position, his hands were
placed far enough apart so the forearms made a right angle with the
floor, hands by the chest, fingers pointed forward. Feet were
together, body straight, and only the chin and the chest were allowed
to touch the floor. The body was raised until the arms were stiff and
the back was not arched. One was counted as this position was
achieved. The score was the number of push-ups completed in fifteen
seconds.

**Extent Flexibility.** - A measuring scale was drawn off on a
chart and this was affixed to the wall. The scale was thirty inches
long and was marked off in inch intervals from zero to thirty. **This**
scale was sufficiently wide to allow for differences in height of the
subjects. Another line was drawn on the floor, perpendicular to the
wall and in line with the twelve inch line on the scale. The right-
headed subjects stood with their left sides to the wall, toes touching
the line on the floor, feet together and perpendicular to the line on
the floor. The subject stood far enough away from the wall so that he
could just touch the wall with his left fist when his arm was held
horizontal from the shoulder.

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29 W. P. Kroll, "Reliability theory and research decisions in
After assuming this position the subject's feet were kept in place by two assistants and he extended his right arm straight out to the side at shoulder height. His palm faced the floor with fingers extended and together. From this position he twisted clockwise around his back so that he touched the scale on the wall with his right hand. He was allowed one practice attempt to get the feel of the test and to correct any errors. The next try counted. The farthest point reached and held for two seconds was recorded. For left handed subjects an alternative scale and reverse directions of movements were used.

**Dynamic Flexibility.** - The subject stood with his back to the wall and far enough away so that he could bend without hitting the wall. His feet were shoulder width apart. Directly behind the middle of the back and at shoulder height an "x" was marked with tape on the wall. Another "x" was marked on the floor between the subject's feet. On the signal "go" the subject bent and touched the "x" on the floor with both hands and then he rose up and turned to the left and touched the "x" on the wall. This counted as one. Next he bent to touch the "x" on the floor and then rose to touch the "x" on the wall by twisting to the right. He twisted to alternate sides on each cycle. Three cycles were demonstrated with the emphasis on speed. Three cycles were allowed for practice. The watch was started on "go" and the score was the number of completed cycles in twenty seconds.

**Balance with Visual Cues.** - The balance rail was a piece of wood 1½ inches high, 3/4 inch wide and 24 inches long. This was mounted on a stable wooden base.
The subject was told to balance on the rail on the preferred foot, lengthways, with his eyes open and with his hands on his hips. His score was the length of time from when he said "go" to the time he touched the floor with any part of his body or removed his hand from his hip. He was allowed one unrecorded practice, and two attempts and the total score of the recorded trials was recorded. If he reached twenty seconds he was told to stop and twenty was recorded.

_Gross Body Co-ordination._ - A twenty-four inch rope was used. The subject was told to hold the rope in front of him with one hand grasping each end, with the end of the rope visible outside the clenched fists. He held the rope in front of him and jumped over the rope without letting go. He had to jump over the rope, land on his feet and not lose his balance, and maintain his grip on the rope to score. His score was the number of successful jumps out of five attempts.

_Personality._ - The Edwards Personal Preference Schedule was used. This test was administered in a classroom. This is a test for college students and adults developed between 1953-57. It has fifteen scores: achievement, deference, order, exhibition, autonomy, affiliation, intraception, succorance, dominance, abasement, nurturance, change, endurance, hetero-sexuality, and aggression, two supplementary scores, test consistency and profile ability.

Fifteen variables of the Henry A. Murray "Need System" have been selected. The schedule consists of 210 pairs of items in a

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forced choice format with items from each of the fifteen scales being paired off twice against items from the other fourteen. In addition, fifteen items are repeated in order to obtain an estimate of the respondent's consistency. The pairing of the variables against one another thus yields an assessment of the relative strength of competing needs within the person. However, the relative strength of such needs in persons representative of the general population remains the basic point of reference.

Two studies were found that indicated that simulated patterns can be obtained. For example, the scores on deference, order, endurance, and achievement were increased when the subjects were told to simulate a "good impression," at the expense of the scores on autonomy, heterosexuality, aggression, change, succorance, and exhibition.

Taking these findings into consideration, the subjects were given the following information when the test was administered:

1. All scores would be confidential;
2. All scores would not affect their bi-term grade or college career in any way;
3. Particular attention was drawn to the information in the penultimate paragraph on the front page of the test book.

With the practical tests, the order was such that the subjects had sufficient time to recover from the previous test. Fleishman

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suggests that the order of the tests used in his battery did not influence the test score providing the above provision was made.\textsuperscript{33}

Throughout the practical tests, the students were constantly encouraged verbally by the tester and other subjects. Throughout, if, in the opinion of the tester, a subject's score was adversely affected by extraneous factors, the score was not counted and the subject was retested.

The extent flexibility test was administered before the dynamic flexibility test to ensure a pure measure unaffected by warm up.

The same order of testing was used with the four separate subject groups. Throughout the testing, the subjects wore shorts, vests, and tennis shoes. While waiting for their turn they were not permitted to practice the test. The same stop watch, equipment, area, and tester were used throughout the testing.

**The Two Methods of Instruction - Method A and Method B**

In the time available it was impossible to introduce the subjects to all possible techniques and some categorization was necessary to group the throws so that the subjects could be introduced to a representative sample. The following alternatives were possible. The Japanese names for the throws indicate certain areas; Gleeson, the British National Coach, has made a technical distinction between throws where you fix the bottom half of the opponent and move the top half of his body and those where you fix the upper part of his body and kick away

\textsuperscript{33}L. A. Fleishman, loc. cit., p. 131.
the supporting bottom half (the legs); finally another classification could be devised.

The first choice is probably the most specific but it is complicated by the subtlety of the distinctions between the throws being lost in the imprecise translation of the Japanese terms into English approximations. The second alternative is more general and is valid for most of the major areas but also the distinctions overlap with certain of the major throw areas that were considered important to include. Finally, a separate classification of techniques used in this study was made by the researcher. Techniques were classified as those that were executed by turning the back upon the opponent to implement the throw, and those where a relatively frontal position was maintained in relation to the opponent while implementing the throw.

This classification includes enough of the major techniques to be representative of the major areas relative to the instruction time available. Also, this classification indicates an association to a greater or lesser degree with the factors being examined. The degree of flexibility, agility, and co-ordination should decide the efficiency of the turn, while body size and strength should influence the area where one has a greater need to control the opponent's movement. The personality characteristics of the player should decide if he will disregard the instinctive preference to remain facing his adversary. The factor of balance would seem to affect both areas but experience would seem to indicate a greater need for the small, less strong player to pay even greater attention to this in order to throw a larger, stronger opponent.
Thus, Method of Instruction A relates to those techniques that require at least a one-hundred and eighty degree turn to place the attacker's back to the opponent to execute the throw. Method of Instruction B refers to those techniques requiring the player to maintain a relatively frontal position to his opponent to execute the throw.

Assignment to Groups

During the contest period all subjects were evaluated. Their attacks were recorded if they caused their opponent to take defensive action to prevent being thrown. Also, if they attacked with intention and arrived at the mat with an advantage over their opponent. The subjects were divided into two groups. Group I primarily used the turning throws and Group II the front facing throws. Their preference was decided according to the type of throw that they used most frequently during the contest period.

Summary

Seventy four beginning Judo players in a Required Program were selected as subjects. They were taught a variety of throws in different orders and at the end of a seven week instructional period, they were evaluated and placed into a group according to the types of throws that they preferred to use during contest. These groups were designated Groups I and II. The subjects were then tested with appropriate tests and their status in strength, flexibility, agility, balance, co-ordination, personality strengths and weaknesses, height and weight was established.
CHAPTER FOUR

ANALYSIS AND INTERPRETATION OF DATA

As a result of the tests outlined in Chapter Three, scores were obtained for the subjects and the two groups were established as a result of the evaluation of preferred throws conducted during the contest period. Group I consisted of the subjects who preferred to attack by turning and Group II consisted of the subjects who preferred to use the front facing attacks.

The value of this study rests in the determination of the significance of selected basic physical traits, height and weight, personality traits, and initial instructional emphasis on the use of throws in Judo during actual contests. The critical ratio and the chi-square techniques were used to determine the statistical significance of differences in these factors among subjects in Groups I and II. Both these statistical tests are designed to determine the truthfulness of the Null Hypothesis - that any differences observed between the two groups could be attributed to chance. Should the Null Hypothesis be retained, the differences between the two groups, representing different throw preferences during competitive Judo, in the factors studied should be minimized in importance. Should the hypothesis be rejected, a definite relationship can be shown between throw preferences and the factors studied.
Preferred Judo Throws and Basic Physical Traits

Included for study were static strength, dynamic strength, extent flexibility, dynamic flexibility, balance, co-ordination, and agility. Table One shows the basic computations utilized in deriving critical ratios between Group I and Group II in each of these traits.

**TABLE 1.**—A summary of the means, standard deviations, and critical ratios for Group I as compared with Group II in basic physical traits

<table>
<thead>
<tr>
<th>Factor Studied</th>
<th>Group I</th>
<th>Group II</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Mean</td>
<td>S. Dev.</td>
</tr>
<tr>
<td>Static Strength</td>
<td>39(a)</td>
<td>49.692</td>
<td>5.902</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Strength</td>
<td>40</td>
<td>16.05</td>
<td>2.958</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent Flexibility</td>
<td>40</td>
<td>17.4</td>
<td>6.507</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Flexibility</td>
<td>40</td>
<td>18.7</td>
<td>1.806</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-ordination</td>
<td>40</td>
<td>4.30</td>
<td>.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agility</td>
<td>40</td>
<td>16.027</td>
<td>.798</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a)Incomplete data on one subject because of injury.

In static strength, those subjects preferring turning attacks (Group I) had a mean grip strength of 49.692 kilograms, and those
preferring the front facing attacks (Group II) 49.000. The standard deviations were 5.902 and 7.952 respectively. The small difference observed in the means was not statistically significant. Grip strength evidently had little to do with throw preference.

The mean score differences for Groups I and II in the basic physical traits of dynamic strength, extent and dynamic flexibility and balance were also small and were not statistically significant. These means were 16.05 and 15.696, 17.4 and 17.491, 18.7 and 19.117, 22.425 and 20.029 respectively. The conclusion that these basic physical traits had little to do with throw preference was again reached.

The mean score of successes in the cable jump test for Group I subjects was 4.30 and for Group II it was 3.50. This difference of .80 was statistically significant at the five per cent level of confidence. The trait of co-ordination would appear to affect the type of throw that the subjects preferred during the competitive Judo.

The factor of agility, very closely related to co-ordination when measured by a shuttle run, also produced a significant difference in the mean score of Group I and Group II. Evidently the subject's status in this factor had some influence upon his eventual choice of preferred contest throws.

In discussing the influence of basic physical traits upon preferred choice of contest throws, the factor of variability should be mentioned. It is possible in the cases where there was a difference in the means and a significant critical ratio that the difference in variability may also have contributed towards this significance.
However, the results of this study have indicated that strength, flexibility and balance are physical traits that do not have any great influence upon the beginning contest player's throw preference. It should be added that the measurements in dynamic flexibility and static balance may represent the player's status in areas other than those specifically appropriate to the needs of the contest Judo players. Agility and co-ordination are homogenous traits. Both these areas similarly appear, from the results, to have some influence upon throw preference of beginners.

Height and Weight and Preferred Judo Throws

The mean height and weight for Group I and for Group II were determined and the critical ratios were calculated. The basic details are outlined in Table Two.

<table>
<thead>
<tr>
<th>Factor Studied</th>
<th>Group I</th>
<th>Group II</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Mean</td>
<td>S. Dev.</td>
</tr>
<tr>
<td>Height</td>
<td>40</td>
<td>69.35</td>
<td>2.328</td>
</tr>
<tr>
<td>Weight</td>
<td>40</td>
<td>157.775</td>
<td>18.468</td>
</tr>
</tbody>
</table>

The mean height for Group I was 69.35 inches and for Group II 68.941 inches. The mean weights were 157.775 pounds and 168.882 pounds. The standard deviations from these means were 18.468 and 32.445 and this difference in variability is worthy of note. However, although
these differences existed they were not large enough to be statistically significant at the five per cent level of confidence. Chance alone could have produced the differences and the factors of height and weight would not appear to affect choice of throws at the beginner stage. This is interestingly contradictory to accepted doctrines of the sport. Often it is heard that this particular throw is a "big man's" throw, and that one is the prerogative of the "small man". In fact a large portion of some instructor's teachings are directed along these lines. This may be the case at latter stages of development but the beginners in this study did not appear to be influenced by their size.

Personality and Judo Throw Preference

The Edwards Personality Preference Schedule was used to study personality strengths and weaknesses and to examine the effect of these strengths and weaknesses upon Judo throw preference. The items of aggression, autonomy and dominance were isolated as an indication of personality strengths while deference, succorance and abasement raw scores were examined as an indication of personality weaknesses. Table Three shows the basic figures used in obtaining critical ratios between Group I and Group II in each of these strengths and weaknesses.

The differences between the mean raw scores obtained for aggression and autonomy were small and not statistically significant. The difference between Group I and II in personality dominance was larger but it also was not significantly large. Thus personality strengths apparently has little to do with throw preference. Similarly,
the differences between Group I and Group II in the personality weakness areas were not significantly large and a similar conclusion concerning the effect of the weaknesses was reached.

TABLE 3.--An outline of the mean raw scores, standard deviations and critical ratios for Group I and II with relation to the Edwards Personality Preference Schedule

<table>
<thead>
<tr>
<th>Factor Studied</th>
<th>Group I</th>
<th>Group II</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Mean</td>
<td>S. Dev.</td>
</tr>
<tr>
<td>Aggression</td>
<td>40</td>
<td>12.325</td>
<td>4.288</td>
</tr>
<tr>
<td>Autonomy</td>
<td>40</td>
<td>12.450</td>
<td>3.930</td>
</tr>
<tr>
<td>Dominance</td>
<td>40</td>
<td>14.225</td>
<td>5.092</td>
</tr>
<tr>
<td>Deference</td>
<td>40</td>
<td>9.55</td>
<td>3.106</td>
</tr>
<tr>
<td>Succorance</td>
<td>40</td>
<td>12.275</td>
<td>4.117</td>
</tr>
<tr>
<td>Abasement</td>
<td>40</td>
<td>15.325</td>
<td>3.843</td>
</tr>
</tbody>
</table>

Attacks Recorded by Groups I and II

In Table Four are details of the differences between Group I and Group II with relation to the number of attacks that were recorded by each group during the contest period. The critical ratio derived from these differences can be seen to be significant at the five percent level of confidence.

These differences were examined to determine if either group attacked significantly more than the other. It can be seen that the Group I mean number of attacks was 12.205 while the mean number for
Group II was only 9.033. The implications that can be drawn from this are that either the subjects who preferred to turn into attack were capable of more attacks or that the turning attack allowed a greater opportunity to attack. Whichever, chance alone was not responsible for the greater number of attacks by Group I.

TABLE 4.--A comparison of the means, standard deviations and critical ratios between Group I and Group II with relation to the number of attacks recorded during the contest period

<table>
<thead>
<tr>
<th>Factor Studied</th>
<th>Group I</th>
<th>Group II</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Mean</td>
<td>S. Dev. Number</td>
</tr>
<tr>
<td>Attacks during Contest</td>
<td>39(b)</td>
<td>12.205</td>
<td>4.238</td>
</tr>
</tbody>
</table>

(b) Five subjects had additional contests.

Instructional Emphasis and Throw Preference

To establish if there was a significant relationship between the preferred choice of contest throw and the method of instruction emphasis chi square was used. The statistical difference between the observed frequency and the estimated frequency of subjects in the two groups was noted.

Of the two classes that had been introduced to Method of Instruction A, one would expect that fifty per cent would have preferred Group I and fifty per cent would have preferred Group II because of the influence of chance. The same should apply to Method of Instruction B and the classes that were introduced to these throws first. Differences other than this indicates that something other than chance was
Table Five gives the details of the number of subjects that were exposed to the two instructional methods and the numbers that subsequently chose Group I or Group II.

**TABLE 5.**--The relationship between Methods of Instruction and choice of preferred contest throw

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Instruction Subjects</th>
<th>Group I</th>
<th>Group II</th>
<th>$X^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>43</td>
<td>29</td>
<td>14</td>
<td>5.2324</td>
</tr>
<tr>
<td>B</td>
<td>31</td>
<td>11</td>
<td>20</td>
<td>2.6128</td>
</tr>
</tbody>
</table>

The above table indicates a positive relationship between Method of Instruction A and Group I. At the five per cent level of confidence, a significantly large number of the subjects who were taught by Method of Instruction A first preferred to use the throws represented by this Method of Instruction during the contest period.

The relationship was not established between Group II and the Method of Instruction B at the five per cent level of confidence.

**Summary**

The scores obtained for Groups I and II were compared statistically. The critical ratio test was used to compare the differences between the mean scores in the various factors for Groups I and II. Significant differences were not established at
the five per cent level of confidence for the factors of strength, flexibility, balance, height, weight, and personality strengths and weaknesses.

There were significant differences at the five per cent level of confidence between the mean scores for Groups I and II in the factors of co-ordination, agility, and in the number of attacks recorded during the contest period. These significant differences were in favor of Group I and these factors would appear to have had some influence upon Group I subjects' choice of preferred contest throw after seven weeks of instruction.

Chi square was used to establish at the five per cent level of confidence if there was a relationship between the two methods of instruction and the groups that had been exposed to them. It was indicated that Group I and Method of Instruction A were related and Group II and Method of Instruction B were not, at the five per cent level of confidence.

The more agile, co-ordinated type of player experienced early success with the throws included in Method of Instruction A. Also, when taught this group of throws first, he used these more frequently in contest.

The player's status in strength, flexibility, balance, and personality did not influence his choice of preferred contest throws.

The player's height and weight also did not affect his choice of preferred techniques. However, in this study there were no short, slender people as classified under the Cozens' Classification. No implications concerning height and weight can be applied to this group.
It should be pointed out also that the effect of the relationship between Method of Instruction A and Group I may have outweighed certain of the possible effects of the other factors. In the light of the contradiction between empiricism and the association of certain throws with certain body types and the results of this study, this relationship may have been a limiting factor.
CHAPTER FIVE

SUMMARY AND CONCLUSIONS

Summary

The problem investigated in this study involved seventy-four beginning Judo players and the influence that their status in strength, flexibility, agility, balance, co-ordination and personality needs had upon their choice of preferred contest throw after seven weeks of instruction. A further study was made of the influence that their exposure to different techniques had upon their choice of preferred contest throws. The subjects' heights and weights were also compared with their choice of preferred contest throws to see if size was an influencing factor.

The experimental procedures consisted of a seven week period of instruction with different throws being introduced to different groups. At the end of this period the subjects had a period of contests during which they were evaluated and their preference for contest technique was determined and two groups were established. These two groups corresponded to the two instructional methods used during the instruction period. The subjects were tested in the factor areas with appropriate tests and measurements.

The data thus collected was then analyzed by a comparison of one group with the other and critical ratios were established for any differences to see if they were significant. The five per cent level
of confidence was established for this purpose. The relationship between the type of throw preferred and the type of throw introduced first was also compared statistically.

Conclusions

The results of the analysis of data permit the following conclusions to be drawn:

1. There was no relationship between the choice of preferred contest throws after seven weeks of instruction and dynamic and static strength, extent and dynamic flexibility, balance, height, weight, and personality needs.

2. There was a positive relationship at the five per cent level of confidence in the favor of Group I (turning attack group) and agility and co-ordination.

3. The effect of the emphasis of the instructional method was sufficient to establish a relationship between Group I subjects and Method of Instruction A at the five per cent level of confidence. The relationship between Group II subjects and Method of Instruction B was not significantly established.

4. Group I attacked more often during the contest period than Group II.

Recommendations

Any recommendations resulting from this study must be qualified by the limited instructional period, the exclusion of ne-waza and kansetsu-waza, and the fact that the Group Method of Instruction was used. Additionally, it should be decided if the objective behind the
beginner's introduction to the sport is early success to ensure motivation or total, long term development.

This researcher feels that the results of this study permit the following recommendation for introducing the sport of Judo to beginning players within the framework of a Required Physical Education Program. The throws to which they are introduced should be from both Method of Instruction A and B. The more agile and co-ordinated players would succeed with Method A throws and the others should have experience of alternative throws to facilitate early success to ensure motivation and a positive attitude towards the sport.

The introduction of the sport on a longer term, club basis suggests another possible consideration. The turning throws represented in Method of Instruction A are an integral part of the player's repertoire and must be mastered. The initial introduction of these throws would allow the well co-ordinated, agile player to use these with success in his early contests. The less co-ordinated and agile players would also have a greater exposure to these throws and this would give them the additional work in this area that they required. The front facing throws could be introduced later to allow for the total development of the players.
APPENDIX A

SPECIAL TEACHING OUTLINE

The classification into two areas of concentration was made on the basis of whether the attacker utilized a turn to implement the throw or whether he maintained a relatively frontal position to his opponent while executing the throw.

The turning attack was called the Method of Instruction A and included the following throws taught in this order:

Tai-o-toshi
Seoi nage, plus variations (Ippon Seoi nage, Morote seoi nage, Makikomi)
Harai goshi
Uchimata

The other classification was called the Method of Instruction B and included the following throws taught in this order:

O-uchi-gari (Ko-uchi-gari)
O-soto-gari (Ko-soto-gari)
Tsurikomi-ashi (Hiza-guruma)
Tomoe-nage

Progression for teaching the throw were suggested in the Group Method devised by G. R. Gleeson.

Renraku-waza and Kaeshi-waza were largely achieved by using a project method.
A detailed outline of the teaching progressions of the first throws taught in each classification follows:

Tai-o-toshi (First Throw, Method of Instruction A)
1. Demonstration of whole throw (Tai-o-toshi).
2. Jumping up and landing in position without turn.
3. Jumping up turning about and clearing one Tatami width.
4. Jumping up and placing hands on mat.
5. Jumping in holding partner.
6. Complete throw.
7. (Breakfall on first lesson).
8. Attacking retreating opponent.
10. Attack and defense on the move.

O-Uchi-Gari (First Throw, Method of Instruction B)
1. Demonstrate O-Uchi-Gari.
2. Practice hopping in and looking leg.
3. "Static movement" - opponent steps, left leg leading to completion of throw.
4. Hopping backwards down mats attacking advancing opponent.
5. Defense by letting go and turning away from attacked leg to right.
6. Attack and defense on move.

Ko-Uchi-Gari
1. Demonstrate Ko-Uchi-Gari.
2. Practice hopping and tapping foot progressively forward till opponent falls.
3. "Static Movement" opponent stepping right forward.

4. Hopping back down mats attacking right leg.

5. Defense by letting go and turning to left.

6. Attack and defense on move.

7. Attack and defense with both throws.
APPENDIX B

HISTORICAL REVIEW

Nippon den Kodakan Judo is the traditional name for Kodokan Judo, which in turn has been shortened to Judo to encompass the many associations which have grown out of the original association. Some authorities refute completely the suggestion that Judo was a development from Jujitsu, while most others accept this suggestion and suggest further that Judo has Jujitsu as its basis and that Jujitsu developed as a martial art from the traditional Japanese sport of Sumo Wrestling.

Some traditional Japanese sports originated in Japan during the "Hunting, Fishing," and the "Cultivation" Periods while others came from the Asian Mainland and were gradually assimilated. During the "Age of Cultivation" (200 B.C.) festivals were held at shrines to encourage the support of the deities to ensure a good crop of rice and dances. Sports and other activities became an accepted part of these festivities. Archery and Sumo Wrestling were among the sports that became popular during these festivals. These sports first developed under the patronage of noblemen.

Gradually the governing class of noblemen gave way to the Warrior Class (Samurai) and this change was well established by the Twelfth Century. This period became known as the "Feudal Age" and lasted some seven hundred years until the mid-Nineteenth Century. The noblemen's sports became increasingly popular with the Warrior Class.
and in the latter part of the "Feudal Age" (1573-1867) they became increasingly popular with the General Samurai Class and the common people, despite official edicts prohibiting martial arts to anyone other than the elite Samurai. By this time Jujitsu had become a distinct form of martial art from Sumo Wrestling.

The martial arts originated during the "Hunting Age" (500-200 B.C.) and developed as offensive and defensive arts on the battlefield. There were as many as sixty different types of martial arts, and biannual contests were staged and the winners feted and rewarded handsomely.

The Shogungote Government fell in the mid-Nineteenth Century, and in 1868 with the restoration of Emperor Meiji, the old feudal system was replaced and this ended the period of power for the Samurai and the feudal lords. Japan experienced a rapid westernization in practically everything and the martial arts and other traditional sports started to decline as western sports such as baseball, tennis, rowing and track and field became popular. This westernization in turn induced a revival of Confucian ideals and nationalism and people strove to encourage Japanese institutions.

In 1882, Jigoro Kano established his unique branch of Jujitsu which he called Kodokan Judo. Kano has been called the "father of Physical Education in Japan" and as well as founding the Kodokan, he was president of Tokyo Higher Normal School from 1893-1920, president of the Japanese Amateur Athletic Association from 1911-1920 and a member of the International Olympic Committee from 1910-1938, the year of his death.

He became a student of Jujitsu in 1878 and he became aware of the physical and personality changes his practice had upon himself. He
felt that the principles he had learned could be applied to the affairs of life and came to believe that Jujitsu, if adapted, could have educational value as did physical activity in general. His philosophy is familiar; he emphasized the importance of human relationships, he believed that the mind and the body were closely related, and that man obtained self confidence through his own physical performance. Good use of energy became a favorite doctrine of his and he defined Judo as an art to use the body and the mind most efficiently and effectively.

As President of the Tokyo Higher Normal School, he encouraged all students to participate in physical activities and stressed their educational importance. In 1899 he established a Department of Physical Education and advocated that physical education was important to the character building and moral education of students.

While a student of Jujitsu he studied a number of methods and developed a practice that was a combination and was safe. Yet, it was still challenging and he eliminated or modified all the hazardous holds and techniques. In 1882 he established a small twelve tatami (mat) dojo or club with nine students with himself at the age of twenty-three as the instructor.

Today, the Kodokan has five hundred tatami and approximately 500,000 registered Black Belt holders and is recognized as the International Judo Headquarters. In 1911 the first educational institution included Judo in the curriculum and by 1930 it had gained wide popularity throughout Japan. Today it is one of the world’s fastest growing sports. In 1951 the International Judo Federation was formed of fifty-four nations and three world championships have been held. The zenith was reached in 1964 when Judo was included in the Tokyo Olympics.
The sport was introduced into America in 1902 when Professor Yamashita, a student of Kano's, came here at the request of Theodore Roosevelt. Kano's visit in 1932 to the Los Angeles Olympics initiated the formal organization of the sport. With the end of the Second World War, many servicemen returned who had studied at the Kodokan and this helped to boost the sport. National AAU Championships were held in 1953 and also the Amateur Judo Championships were held in Cuba. A National Collegiate Judo Association has been formed under NCCA eligibility rules in six weight divisions and in 1964 the first National High School Judo Championships were held in California.
APPENDIX C

The following two tables indicate the comparison between height and weight and the McCloy Index, the Cozens Classification, the Ponderal Index and the A.A.U. weight categories. Table One includes the subjects in Group I and Table Two includes the subjects in Group II.
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