Effects of an Individual Goal-Setting Intervention on Goal Orientation, Self-Confidence, and Riving Accuracy in Average Golfers: A Quantitative Design

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THE EFFECTS OF AN INDIVIDUAL GOAL-SETTING INTERVENTION ON GOAL ORIENTATION, SELF-CONFIDENCE, AND DRIVING ACCURACY IN AVERAGE GOLFERS:

A QUANTITATIVE DESIGN

by

MICHAEL S. SHIVETTS

(Under the Direction of A. Barry Joyner)

ABSTRACT

The purpose of this study was to examine the effects of a four week individual goal-setting intervention program on driving accuracy performance, state self-confidence, and goal orientation in average golfers. The participants were obtained from two intermediate golf physical activity classes (n = 43). The experimental group (n = 20) was educated on all aspects of proper goal-setting while the control group (n = 23) was asked to do their best. The Sport Orientation Questionnaire (SOQ; Gill, & Deeter, 1988) was used to measure overall goal orientation. The State Sport Confidence Inventory (SSCI; Vealey, 1986) was used to measure each participant’s sport confidence. Two-way ANOVAs with repeated measures were used to examine the statistical differences between groups for driving accuracy and self-confidence. Correlation coefficients were used to examine the relationship between pre-goal orientation and driving accuracy performance. The results revealed a significant interaction between goal-setting and driving accuracy performance.

Index words: Goal-setting, Self-confidence, Self-efficacy, Goal orientation, Golf, Physical task.
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A QUANTITATIVE DESIGN

by

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B.S., West Virginia University, 2000

A Thesis Submitted to the Graduate Faculty of Georgia Southern University in Partial Fulfillment of the Requirements for the Degree

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A QUANTITATIVE DESIGN

by

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Electronic Version Approved:
May 2006
DEDICATION

This Thesis is dedicated to my fiancée, Courtney. You have been there through the ups and downs that come along with completing a master’s degree and have been more patient with me than what I probably deserve. Without your constant support and encouragement this may not have happened. Thank you for your love and understanding.

This thesis is also dedicated to my parents, Thomas and Deborah Shivetts. Thank you for your constant support and encouragement throughout my life. You have taught me that hard work and determination can go a long way and that with a positive attitude anything is possible. Without your love and parenting this wouldn’t be possible. You have made me the person I am today. Thank you, I love you.

Last, but not least, I would like to dedicate this thesis to my very supportive and loving sister, Danica. It is your view on life and your encouraging and enthusiastic words that help me through tough times and inspire me to reach higher. I love you and thank you.
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The cooperation and help that Georgia Southern University and Southern Links Golf Course have shown has made the process of completing this project possible.
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INTRODUCTION

People venture into golf through many avenues, whether it’s through a business meeting or a friend who insists they give it a try. According to the National Golf Foundation the number of golfers in America is no longer increasing. While as many as three million new players try golf each year, about an equal number stop playing the game. (http://www.roundsplayed.com/cgi/about.asp). One reason may be that many people find the game too difficult and intimidating. As with many other skills we are taught, we expect there to be an overnight cure without the commitment to practice and set goals for ourselves. Golf is a sport that takes a great deal of commitment and motivation to excel and many times people lack this understanding.

Rotella and Boutcher (1990) reported that professional golfers contribute 90 percent of their golf performance to their mental strength and only 10 percent to their physical ability. According to Gould, Eklund, and Jackson (1992), more successful athletes have demonstrated a better understanding of effective goal-setting and evaluation techniques for enhancing performance. However, Ericsson and Charness (1994) found that peak performance is accomplished through extensive practice and repetition over a long period of time.

There have been many studies conducted examining psychological skills which might be useful in enhancing performance. Some have studied and examined the incorporation of cognitive-behavioral skills, pre-shot routines, and the effects of goal-setting. For instance, Kirchenbaum and Bale (1980) examined the effects of cognitive-behavioral skills and found that a third of the participants improved their golf scores over the course of the study. Furthermore, Crews and Boutcher (1986) implemented a
designed pre-shot routine for novice golfers who were taking a collegiate golf class and reported an improvement in performance and golf scores. McCaffery and Orlick (1989) reported that touring professionals (elite athletes) set more specific goals and were more precise with the evaluation of their progress than club professionals.

Goal-setting is a form of mental practice and is a recognized and often effective method for influencing the proficiency of physical performance (Miller & McAuley, 1987; Rushall & Lippman, 1997). Every year millions of people attempt to commit to a New Year’s resolutions and find themselves back to their old routine in days. It’s not that these people can’t identify their goals, it’s that they lack the structure that provides direction and enhances motivation (Weinberg & Gould, 2003). Locke (1968) was among one of first to research the effects of goal-setting. Most of Locke’s research was designed to try and understand why and how goal-setting could enhance task performance. His research was also based on the regulation and monitoring of human behavior for the accomplishment of completing a task and that setting specific and difficult goals are more effective than those individuals who just do their best. Locke and Latham (1985) studied the relationship between goal-setting and sport more in depth and reported that task performance in the industrial/organizational and the exercise/sport setting have many commonalities in that they both contain the mental and physical characteristics. It may be that research in the exercise and sport environment should produce equivocal results as in the industrial/organizational environment. Weinberg, Stitcher, and Richardson (1994) suggest that the sport and exercise setting should not only be equivocal to that of the industrial/organizational setting, but may produce better results due to the fact that many sports may be easier to measure, such as golf scores. However, according to Boyce,
Johnston, Wayda, and Bunker (2001), 90 percent of the research in the industrial/organizational setting supports the use of goals over no goals and for those in the exercise and sport setting only about 70 percent of the research supports the notion that goal-setting enhances performance.

Locke (1991) has identified some of the reasons why there is a lower percentage of goal-setting effectiveness in the sport and exercise setting than in the industrial/organizational setting. Locke specifically contributed three major flaws that may have limited the success rate of goal-setting in a motor task. First, there was a lack of control for spontaneous goal-setting in the “do your best” (control group). Second, the types of goals set lacked specificity as well as difficulty. These findings are comparable to McCaffery and Orlick (1989) in that specificity plays an important part in successful goal-setting. Lastly, there were no measurements of the participants’ personal goals. Weinberg and Weigand (1993, 1996) approach the issue of limiting spontaneity in goal-setting by giving the participants a choice of task. Locke (1991, 1994) stated that spontaneous goal-setting could be controlled by removing naturally occurring feedback, however, Weinberg and Weigand (1993, 1996) said eliminating feedback would threaten external validity and generalizability. Additionally, they reported that many participants in these studies were already highly motivated to enhance their performance therefore detracting from the effectiveness of goal-setting.

Burton (1989) studied the effectiveness of a goal-setting program for a collegiate swimming team over the course of a season and reported that swimmers who followed the program and set effective goals displayed better performance than those who did not set effective goals. Similar research done by Weinberg et al. (1994) reported comparable
findings with a university lacrosse team. Although they didn’t find statistical significance, they did find that the differences between the groups did favor the goal-setting group. These studies deal with a goal-setting intervention program for elite athletes in a competitive environment over an entire season.

Boyce, Johnston, Wayda, and Bunker (2001) examined the effects of three goal-setting conditions (instructional set, self set, and “do your best”) on nine beginning tennis classes and found that the instructional set and self set groups were far more effective than the control group. They also reported that the instructionally set goals were significantly more effective than the self set goals during certain trials. Boyce et al. (2001) concluded that instructional and self set goals enhance student performance in tennis serving. Furthermore, Miller and McAuley (1987) examined the effects of a five week goal-setting intervention on free throw shooting in 18 non-elite undergraduate athletes. They were randomly assigned to either a goal-setting group or a control group. Their findings were similar to that of Weinberg et al. (1994) in that they didn’t find statistical significance. However, Miller and McAuley (1987) did find that their participants reported a higher perception of success and self-efficacy. Kingston and Hardy (1997) further examined the relationship between goal-setting and self-efficacy (self-confidence) by using non-elite golfers and implementing two different goal-setting interventions: performance goal-setting and process goal-setting. Their findings indicated that the golfers who set process goals significantly improved performance and had less anxiety. Furthermore, Weinberg and Gould (2003) suggest that confident individuals are more likely to set challenging goals and pursue them actively and less confident individuals are more likely to set easy goals and not push themselves.
Self-confidence has been defined as the belief that a person can successfully perform a desired behavior (Weinberg et al. 2003). Recently, research suggests that self-confidence can be both state-like and trait-like. In other words, state self-confidence is felt in the particular situation whereas trait self-confidence is a more consistent and personality driven (Vealey, 2001). Research has shown that the factor that is most consistent in distinguishing highly successful from less successful athletes is confidence (Jones & Hardy, 1990). Comparable research involving athletes at the Nagano Olympic Games found that confidence was among the most common factors that influence performance (Gould, Greenleaf, Lauer, & Chung, 1999).

Many researchers have suggested that goal orientations influence peoples’ perception of success and failure (Dweck and Leggett, 1988; Roberts, 1984). These orientations have been labeled as task and ego involvement. Individuals who are task oriented typically focus their attention towards learning, individual improvement, and the mastery of the skill. Ego oriented individuals measure and evaluate themselves in comparison to other individuals (Burton, 1992). Furthermore, Burton (1992) suggests that success oriented individuals measure their ability as high, while failure oriented individuals measure their ability as low.

Even though there are several strategies that golfers use to increase their chances for desired performances and enhance their confidence levels, the focus of this study concentrated on a single strategy. The purpose of this study was to examine the effects of a four week individual goal-setting intervention program on driving accuracy performance in average golfers. A second purpose of this study was to examine the effects of a four week goal-setting intervention on participants’ state self-confidence. A
third purpose of this study was to examine the effects of a four week goal-setting intervention on participants’ goal orientation. It was hypothesized that the implementation of a short goal-setting intervention for average ability golfers would increase driving accuracy performance. It was also hypothesized that participants in the goal-setting group would report greater increases in state self-confidence than the control group. Lastly, it was hypothesized that participants in the experimental group who initially report higher scores in goal orientation will have greater increases in driving accuracy performance.
METHOD

Participants

Participants \((n = 44)\) were volunteers from two intermediate golf physical activity classes from a southern university. The participants consisted of men who ranged in age from 18 years and older. Only participants that have an average golf score that fell between 80 and 110 were eligible for this experiment. This sampling procedure helped ensure that the participants have the ability to complete the test trials. Each participant needed to play at least ten scored rounds of golf (18 consecutive holes played) in the past year to be eligible. The participants were divided into either an experimental group \((n = 20)\) or a control group \((n = 23)\) depending on which class the students were enrolled. The study took place on the driving range at Southern Links Golf Course in Statesboro, Georgia. All procedures were approved by the IRB and all participants were informed of the procedures and purpose of the experiment and were required to sign an informed consent (Appendix H) to participate in the study.

Instrumentation

To measure driving accuracy, a white painted line (center line) was drawn down the middle of the practice range with a fairway outlined by white painted lines on both sides. The center line was marked by 10 one-foot tall orange cones that were spaced every 10 yards. The orange cones began at 175 yards and ended at 290 yards to enhance the visualization of the center line. These cones were also placed on both sides to outline the boundaries of the grid. The boundary lines were 60 yards apart, 30 yards on each side of the center line. Five intermediate white lines were drawn in five yard intervals from the center line to the outer white lines. Each interval represented a level of performance
with regards to the center line. The first interval on each side of the center was represented by the number “6”. The following interval on each side was represented by the number “5”. This continued outward alphabetically until the number “1” was reached on both sides of the center line (Appendix D). Participant’s scores were determined by their total score after completing swings with their driver. A score of “0” was given to all shots landing outside of the grid. The study was completed with the assistance of fellow graduate students and employees of the golf course. The assistants stood alongside the researcher on the teeing area towards the outer boundaries of the grid.

The Sport Orientation Questionnaire (SOQ; Gill, & Deeter, 1988) is a multidimensional, sport specific measure of individual differences in sport achievement orientation. This 25-item questionnaire allows participants to rate their agreement in a Likert-scale format on a 5-point scale ranging from “strongly agree” to “strongly disagree.” The SOQ is comprised of three separate but related subscales which have been labeled (a) Competitiveness, which assesses the desire to enter and strive for success in sport competition situations; (b) Win Orientation, which reflects a desire to win and avoid losing in interpersonal competition in sport; and (c) Goal Orientation, which reflects a desire to reach personal goals in sport (Gill, Kelley, Martin, & Caruso, 1991). The competitiveness subscale consists of 13 items, and both goal and win orientation subscales have six items. Test-retest reliability (.73 to .89), internal consistency (.79 to .95), intraclass reliability (.84 to .94), and construct and concurrent validity have been established (Gill & Deeter, 1988)(Appendix C).

The State Sport Confidence Inventory (SSCI) is based on one’s sport ability in a specific situation. The SSCI consists of 13 items in which participants rate their sport
confidence on a 9-point Likert scale (1=low and 9=high). The SSCI asks individuals to think about how they feel right now about performing in an upcoming competition with regards to the most confident athlete they know (Vealey, 1986). Internal consistencies, as assessed by Cronbach’s alpha Coefficients is .95. The content validity has also been found to be satisfactory (Vealey & Campbell, 1988)(See Appendix B).

Pilot test

The pilot test was conducted to determine the reliability and validity as well as to acknowledge any difficulties that may arise during the testing of driving accuracy. The pilot test took place in the same location as the main study and was set up to simulate the experiment. The participants were instructed to warm up as they normally would before swinging a golf club. When they were ready to be tested they were instructed to take 10 swings with their driver or three wood and to get as close to the center line as possible. Participants were re-tested two days after their original test. Following the pilot test, each participant was asked if they felt this was a valid measurement of driving accuracy. Thirteen golfers, including two club professionals, were selected for this study. The stability reliability was .90 indicating acceptable reliability. The examination of the participants’ perceptions of the validity revealed that content validity was acceptable. From the pilot study, the following changes were made to the procedures. First, to aid in the accuracy of data collection, the addition of an extra person to stand on the opposite side of the grid would be necessary. Second, because of the inconsistency in bounces, it was decided to measure the golf ball where it lands rather than where it comes to rest. Finally, golf balls that land on a line were given the higher score.
Design and Procedure

Because the study took place in an outdoor arena, it only proceeded when the weather conditions were optimal and least effecting to a golf balls’ flight. Studies have shown that it takes at least a 23 mph gust of wind to significantly alter the trajectory and placement of a well struck soccer kick (Thilmany, 2004; as cited in Welle, 2004). However, the distance and velocity achieved in a soccer kick are less than that of a full golf shot. Therefore, the weather was conducive for ball flight accuracy when any form of precipitation was absent and the winds must be below 10 mph in order to continue (Welle, 2004). Wind was measured using a portable Hammacher Schlemmer electronic wind meter.

This study was designed as an individual goal-setting intervention over a four-week period. Prior to the start of the intervention all participants were asked to complete the SOQ and the SSCI in a quiet setting. The participants were also instructed to record their last ten golf scores on a 3x5 index card to determine eligibility. This information was also used to compare ability levels of the two groups and to make sure the overall ability of each group were equal and not extremely different. Instructions were given to each participant to complete the SOQ, SSCI, and golf scores as accurately and honestly as possible as well as to answer each question the way they feel and not the way they think the researcher wants them to answer.

Following the administration of the SOQ and SSCI and prior to the start of the goal-setting intervention the experimental and control group were tested on their driving accuracy performance. Each participant was instructed to take 10 swings with their driver or 3-wood and to aim for the center line marked with orange cones. The teeing area was
set up similar to that of a standard tee box on a golf course. The teeing area was also set up so the middle of the teeing area was directly aligned with the center line of the measuring grid. The participants were instructed to find 10 quality range balls out of the barrel staged next to the teeing area. For example, balls that resemble a standard golf ball and were free of cracks. The participants were instructed to aim for the center line and their goal was to get a close to the center line as possible. Each swing outcome was measured for accuracy to establish a performance baseline. Each group was tested again at the end of the intervention to determine if there was a significant change in performance.

In the next meeting, the experimental group was given the results of their pre-test. During this meeting, the experimental group received extensive coverage of effective goal-setting techniques. The participants in this group were educated on long-term, short-term, outcome, performance, and process goals and were instructed to implement these goal-setting techniques towards improving their driving accuracy. Following this lecture the participants were given a handout consisting of the important aspects of effective goal-setting (Appendix E). They were then instructed to write down their outcome, process, and performance goals on the goal-setting worksheet (Appendix F) and return them to the researcher for evaluation. The researcher reevaluated their goals and gave feedback to them at the beginning of the following week. Each week the participants were instructed to read over their adjusted goals and proceed accordingly. Participants in the goal-setting group were asked to complete the goal-setting process each week, while the control group was instructed to do their best to improve their driving accuracy and not set goals. The control group was also uninformed of their results from the pre-test on
driving accuracy. At the beginning of each week, both groups were given the same instructions on techniques for driving accuracy. The instructions were given and demonstrated as follows: week 1 = posture and alignment, week 2 = weight transfer and ball positioning, week 3 = shoulder turn and swing plane, and week 4 = constant spine angle and consistent contact. To control for research bias and inconsistent instructions in teaching, a supervisor attended classes periodically.

The experimental group was informed that they have four weeks before the next driving accuracy test was administered. They were also informed that they may use class time to practice and were free to practice as much as they want. Additionally, the participants were informed that they could not miss class for the first eight weeks, when in actuality, they were allowed to miss one class throughout the experiment. Before the post-test on driving accuracy, the participants were instructed to complete the SOQ and the SSCI. They were also reminded to answer each question as accurately and honestly as possible and not the way they feel the researcher wants them to answer. Following the experiment, the control group was administered two questions. First, did you set any goals? If so, what were they and how did you do this. Second, did you practice? If so, how often did you practice? (See Appendix G)

Data Analysis

The independent variable in this study is the goal-setting condition and the dependent variables are driving accuracy, goal orientation, and self-efficacy. A two-way ANOVA with repeated measures was used to examine the statistical differences found in driving accuracy between the experimental and control group. A two-way ANOVA with repeated measures was also used to examine the differences found in self-efficacy.
Correlation coefficients were used to examine the relationship between pre-goal orientation and change in driving accuracy for each group. A Fisher’s z-test was used to determine significant differences in the relationships for the two groups. Alpha was set at .05.
RESULTS

The results from this study indicated similar ability levels between the experimental and control group when averaging the overall golf scores of the group with one another. An independent t-test revealed no significant difference between the experimental and control groups for self-reported average score (p>.05). As a whole, the experimental group had an average golf score of 97.18 (+/- 7.53). One participant was dismissed from the study due to a lower scoring average than 80, while three more were dismissed because of absences. The control group had an average golf score of 94.47 (+/- 7.23). No participants were dismissed due to falling outside of the required golf score range. However, three participants were dismissed because of absences. The final number of eligible participants consisted of 23 for the control group and 20 for the experimental group.

Driving accuracy was analyzed using a two-way ANOVA with repeated measures and revealed a significant interaction (F(1,41) = 11.65, p=.001) (Figure 1 and Table 1) between the experimental (goal-setting group) and the control group (no goal-setting). The plot shows the experimental group increased their driving accuracy significantly more than the control group. After the intervention the participants in the control group were asked specific questions about their use of any goal-setting strategies and extra practice outside of class. The results from these questions revealed that eight participants in the control group claimed to set goals. However, these participants only reported setting outcome goals with no direction or structure to their goal. Six control group participants reported practicing outside of class but no one reported practicing more than three extra times.
The State Sport Confidence Inventory (SSCI) was used to measure participants’ self-efficacy in the experimental and control group. A two way ANOVA with repeated measures was also used and revealed no interaction (F(1,41) = 1.626, p = .209) (Figure 2) within the experimental and control groups for self-efficacy. However, there was a significant increase in SSCI scores from the pre to post tests for both groups (p<.001) (Table 2). Furthermore, the analysis revealed a significant difference between groups (F(1,41) = 4.118, p = .049).

The correlation between pre-goal orientation and change in driving accuracy was .075 (p=.735) for the control group and .168 (p=.479) for the experimental group. Neither of these correlations was found to be significant, therefore, no further analysis was necessary.
DISCUSSION

The present study consisted of a task that requires the execution of many subtasks to effectively perform the entire task (driving a golf ball). The golf swing has been known to be a very precise task that requires motivation and commitment to the learning and practice of many subtasks. This study utilized effective goal-setting strategies to enhance the process of learning these subtasks and decrease the time wasted practicing with no direction.

The primary hypothesis of the present study was that a four week goal-setting intervention on driving accuracy performance would result in a greater increase in driving accuracy for the goal-setting condition than the “do your best” condition. The results of the present study indicated that a short goal-setting intervention is an effective strategy for improving a physical activity such as a driving accuracy. Comparable research by Locke and Latham (2002) found similar results in their review of goal-setting research suggesting that individuals who set and work towards a specific and difficult goal show greater increases in their performance than those who were instructed to do their best. In contrast, research by Seijts, Latham, Tasa, and Latham (2004), who examined goal-setting and goal orientation, found that individuals in the performance goal group did not outperform those in the “do your best” group. These results were rationalized by differing their study from past research on goal-setting and indicating that their study contained a highly complex task. However, Seijts et al. (2004) defined a highly complex task as a task in which minimal previous performance routines were nonexistent and past strategies used were no longer effective. Although the present study utilized the complex task of a golf swing, it did not consist of individuals who have not had experience with.
driving a golf ball. Therefore, the present study’s use of participants with average ability and past experience in driving a golf ball would foster the effectiveness of performance goals.

It was also hypothesized that participants in the experimental group will report greater increases in state self-confidence than the control group. The results of the present study indicated that there was no interaction between the goal-setting condition and state self-confidence. Both the experimental and control groups revealed an increase in self-confidence throughout the four week goal-setting intervention. Research has suggested that goal-setting plays a significant role in positively influencing a golfer’s self-efficacy, confidence and anxiety (Kingston and Hardy, 1997). Perhaps these positive influences in psychological components are not a direct result of goal-setting itself, but an indirect result of what goal-setting fosters in an individual such as practice (Weinberg & Gould, 2003). Considering this study consisted of students in a physical activity class who had to attend class and practice for a grade, it is suggested that practice may have increased self-efficacy for both conditions. Locke et al. (1986) and Bandura and Locke (2003) suggest that the past successes or failures may have an effect on individuals present and future self-efficacy, goals, and task performance. The success that participants may have encountered during this study may have been the result of their success in their practice and therefore, influenced self-efficacy positively.

Finally, it was hypothesized that participants in the experimental group who initially report higher scores in goal orientation would have greater increases in driving accuracy performance. The correlation results for the experimental group and the control group revealed no significant correlations. However, both conditions reported an increase
in overall goal orientation after the four week goal orientation. Goal orientation has been broken down into two components: task and ego (Nicholls, 1984). Furthermore, it has been suggested by Papaioannou and Kouli (1999) that ego-oriented individuals (concerned with social comparison) reported higher levels of anxiety and lower levels of self-confidence. Where as, Seijts et al. (2004) suggest that the learning of a specific goal (process goal) foster greater increases in performance. With this being said, the goal-setting strategies utilized in this study consisted of performance and process goals. Therefore, it can be suggested that the goal-setting intervention would have focused the attention of the goal-setting condition to concentrate on executing a specific task (task oriented).

This study revealed that goal-setting is an effective strategy for increasing the performance of driving a golf ball. However, no interactions were found to support that goal-setting is an effective way for increasing psychological components such as self-efficacy or goal orientation. The goal-setting strategies utilized in this study helped the participants in the goal-setting condition to organize and structure their practice session. These strategies gave participants direction and a purpose for practicing during each session while the control group (“do your best”) entered their practice sessions with little direction and purpose other than obtaining a grade in the course. Little research has examined the effectiveness of the length of a goal-setting intervention and its influences on psychological states. Perhaps influences in physical performance are more easily changed in less time than psychological states. Although, Burton (1989) studied the effects of a five month goal-setting intervention on self-confidence anxiety, and motivation and reported that those who effectively set goals revealed better performance
as well as more positive cognitions. Miller and McAuley (1987) found similar results to that of Weinberg et al. (1994) revealing no significance but participants did report higher perceptions of success and self-efficacy. Therefore, it may be that a four week goal-setting intervention is too short a time period for psychological states to be significantly influenced. It may take months to see a significant interaction between goal-setting and positive influences in psychological states. However, it can be concluded that even a short intervention can significantly facilitate the physical performance of a complex task such as driving a golf ball.

The implication of this study suggests that goal-setting is an effective and useful tool for enhancing the learning process in a physical task. Coaches, physical activity teachers, as well as recreational participants in sport should consider the use of effective goal-setting as a tool to foster the learning and enjoyment of an activity. Future research should consider the examination of the length of a goal-setting intervention and its relationship with psychological influences. Furthermore, future research should consider examining the differentiation between task and ego oriented individuals and their effects on performance in a short term goal-setting intervention.
REFERENCES


Table 1

Means for Driving Accuracy

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving</td>
<td>control</td>
<td>18.9130</td>
<td>10.07658</td>
</tr>
<tr>
<td>Accuracy</td>
<td>experimental</td>
<td>14.2500</td>
<td>7.28282</td>
</tr>
<tr>
<td>Pre-test</td>
<td>Total</td>
<td>16.7442</td>
<td>9.09498</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving</td>
<td>control</td>
<td>22.7391</td>
<td>7.58118</td>
</tr>
<tr>
<td>Accuracy</td>
<td>experimental</td>
<td>26.0000</td>
<td>9.79259</td>
</tr>
<tr>
<td>Post-test</td>
<td>Total</td>
<td>24.2558</td>
<td>8.72897</td>
</tr>
</tbody>
</table>
Figure 1. Interaction Between Goal-setting and Driving Accuracy
Table 2

Means for State Sport Confidence Inventory (SSCI)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCI</td>
<td>control</td>
<td>81.6087</td>
<td>15.50290</td>
</tr>
<tr>
<td></td>
<td>experimental</td>
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<td>23.70898</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td>20.55786</td>
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<tr>
<td>SSCI</td>
<td>control</td>
<td>91.0870</td>
<td>14.83826</td>
</tr>
<tr>
<td>Post-test</td>
<td>experimental</td>
<td>83.2500</td>
<td>17.13376</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>87.4419</td>
<td>16.24119</td>
</tr>
</tbody>
</table>
Figure 2. Interaction Between Goal-setting and State Confidence
APPENDIX A

RESEARCH QUESTIONS, DELIMITATIONS, LIMITATION, ASSUMPTIONS, AND DEFINITIONS
Research Hypothesis

1. It is hypothesized that the implementation of a short individual goal-setting intervention for non-elite athletes will increase driving accuracy performance compared to a control group.

2. It is hypothesized that participants in the experimental group will report greater increases in state self-confidence than the control group.

3. It is also hypothesized that participants in the experimental group who initially report higher scores in goal orientation will have greater increases in driving accuracy performance.

Delimitations

1. Participants are all male.

2. The subjects were chosen from an intermediate golf class.

3. The subjects had an average golf score between 80 and 115 and played at least ten scored rounds of golf in the past year.

4. The subjects were from a single southeastern university.

Limitations

1. The participants may not have fully understood effective goal-setting.

2. The goal-setting intervention was short, lasting only four weeks.

3. The participants were not given a choice of their skill. Instead, participants were instructed to work specifically on driving accuracy.

4. The participants were not randomly selected. They were chosen through debilitative sampling.

5. The driving accuracy measurement was held outdoors which may cause variables
such as weather to affect the flight of the golf ball.

6. Weather conditions were not consistent for all participants.

Assumptions

1. The experimental group strictly followed their goal-setting schedule for goal attainment.

2. The control group did not set their own personal goals to improve their accuracy.

3. Participants accurately and honestly complete all the questionnaires and inventories to the best of their ability.

4. Participants performed to the best of their ability.

5. Participants consistently attempted to aim for the center line during the pre and post tests for driving accuracy.

6. The participants would be present throughout the entire intervention.

Definitions

1. Average golfer – For the purpose of this study an average golfer was defined as a golfer who, on average, scores between 80 and 115 and has played at least ten rounds of golf in the past year.

2. Driving accuracy – For the purpose of this study driving accuracy was defined as the golfers’ ability to keep ball as close to the center line as possible and not defined as distance accuracy. It was measured by summing the total number of points earned during the participants 10 swings with their drivers.

3. Goal-setting – Goal-setting is a systematic but adjustable process to help individuals or teams to accomplish a specific goal.

4. Outcome goals – outcome goals focus on achieving a certain result of an event
such as winning a race, earning a medal, or doing better than another participant (Weinberg and Gould, 2003).

5. Performance goals – performance goals focus on achieving standards or performance objectives and are not dependent on others. These goals are usually set in comparison with one’s own previous performance (Weinberg and Gould, 2003).

6. Process goals – Process goals focus on the actions an individual must accomplish in order to execute or perform well (Weinberg and Gould, 2003).

7. Self-efficacy (self-confidence) – The perception of one’s ability to perform a specific task successfully (Weinberg and Gould, 2003). It was measured by using the State Sport Self Confidence Inventory.

8. Goal orientation – Goal Orientation will be defined as a focus on personal standards and to improve one’s own performance and not to win (Weinberg and Gould, 2003). It was measured by using the Sport Orientation Questionnaire.
APPENDIX B

STATE SPORT CONFIDENCE INVENTORY
State Sport Confidence Inventory

Think about how confident you feel right now about performing successfully in the upcoming competition. Answer the questions below based on how confident you feel right now about competing in the upcoming contest. Compare your self-confidence to the most self-confident athlete you know. Please answer as you really feel, not how you would like to feel. Your answers will be kept completely confidential. How confident are you right now about competing in the upcoming contest? (circle number)

1. Compare the confidence you feel right now in your ability to execute the skills necessary to be successful to the most confident athlete you know.

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2. Compare the confidence you feel right now in your ability to make critical decisions during competition to the most confident athlete you know.

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3. Compare the confidence you feel right now in your ability to perform under pressure to the most confident athlete you know.

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4. Compare the confidence you feel right now in your ability to execute successful strategy to the most confident athlete you know.

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5. Compare the confidence you feel right now in your ability to concentrate well enough to be successful to the most confident athlete you know.

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6. Compare the confidence you feel right now in your ability to adapt to different competitive situations and still be successful to the most confident athlete you know.

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7. Compare the confidence you feel right now in your ability to achieve your competitive goals to the most confident athlete you know.

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</table>

8. Compare the confidence you feel right now in your ability to be successful to the most confident athlete you know.

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</table>
9. Compare the confidence you feel right now in your ability to think and respond successfully during competition to the most confident athlete you know.

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<th>High</th>
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</table>

10. Compare the confidence you feel right now in your ability to meet the challenge of competition to the most confident athlete you know.

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<th>Low</th>
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11. Compare the confidence you feel right now in your ability to be successful based on your preparation for this event to the most confident athlete you know.

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12. Compare the confidence you feel right now in your ability to perform consistently enough to be successful to the most confident athlete you know.

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<td>1</td>
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</table>

13. Compare the confidence you feel right now in your ability to bounce back from performing poorly and be successful to the most confident athlete you know.

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APPENDIX C

SPORT ORIENTATION QUESTIONNAIRE
**Sports Orientation Questionnaire**

The following statements describe reactions to sport situations. We want to know how you usually feel about sports and competition. Read each statement and circle the letter that indicates how much you agree or disagree with each statement on the scale: A, B, C, D, or E. There are no right or wrong answers; simply answer as you honestly feel. Do not spend too much time on any one statement. Remember, choose the letter which describes how you usually feel about sports and competition.

<table>
<thead>
<tr>
<th>Strongly Agree 1</th>
<th>Slightly Agree 2</th>
<th>Neither A or D 3</th>
<th>Slightly Disagree 4</th>
<th>Strongly Disagree 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. I am a determined competitor.   1 2 3 4 5
2. Winning is important.           1 2 3 4 5
3. I am a competitive person.      1 2 3 4 5
4. I set goals for myself when I compete.  1 2 3 4 5
5. I try my hardest to win.        1 2 3 4 5
6. Scoring more points than my opponent is very important to me  1 2 3 4 5
7. I look forward to competing.    1 2 3 4 5
8. I am most competitive when I try to achieve personal goals.  1 2 3 4 5
9. I enjoy competing against others.  1 2 3 4 5
10. I hate to lose.                1 2 3 4 5
11. I thrive on competition.      1 2 3 4 5
12. I try my hardest to win when I have a specific goal.  1 2 3 4 5
13. My goal is to be the best athlete possible.  1 2 3 4 5
14. The only time I am satisfied is when I win.  1 2 3 4 5
15. I want to be successful in sports.  1 2 3 4 5
<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Performing to the best of my ability is very important to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. I work hard to be successful in sports.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. Losing upsets me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. The best test of my ability is competing against others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Reaching personal performance goals is very important to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. I look forward to the opportunity to test my skills in competition.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22. I have the most fun when I win.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23. I perform my best when I am competing against an opponent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24. The best way to determine my ability is to set a goal and try to reach it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25. I want to be the best every time I compete.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX D

PERFORMANCE GRID
APPENDIX E

EFFECTIVE GOAL-SETTING STRATEGIES
Effective Goal-setting Strategies

1. *Set specific goals.* Specific goals, as compared with general “do your best” goals, are most effective for producing behavioral change.
   - “Do” goal: Lower cholesterol from 290 to 200 by...[how]
   - “Don’t” goal: Lower cholesterol.

2. *Set difficult but realistic goals.* Goals should be “moderately” difficult—hard enough to challenge, but realistic enough to achieve.


4. *Set performance and process goals, as well as outcome goals.* For every outcome goal, set several performance and process goals that will lead to the desired outcome.

5. *Set practice and competition goals.*

6. *Record goals.* “Ink it, don’t think it.”

7. *Develop goal-achievement strategies.* Develop specific goal-achievement strategies that include how much and how often things will be done in an effort to achieve a goal. Be flexible, however.

8. *Consider participants’ personalities and motivations.* Consider factors such as achievement motivation (high versus low achievers), stages of achievement motivation, social comparison, and task or ego orientation when setting goals.

9. *Foster an individual’s goal commitment.* Promote goal commitment by encouraging progress and providing consistent feedback. Solicit the athlete’s or exerciser’s input.

10. *Provide goal support.* Enlist support from significant others to make goal-setting effective.

11. *Provide evaluation of and feedback about goals.* Goal evaluation and feedback are essential parts of facilitating behavioral change via goal-setting.
Goal Setting Worksheet

1. Set your outcome goal (ultimate goal) for the goal-setting intervention. In other words, considering your results from your pre-test on driving accuracy performance where would you like your results to be at the end of the four week intervention.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Set process goals for the week ahead. What do you have to accomplish in order for you to execute or perform well. (i.e. work on your alignment, keep your elbow in, work on a consistent swing plane, set time aside to practice etc.)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Set performance goals for the week ahead. With your previous performance in mind what goals can you set.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. Did you accomplish your goals from last week? If not, how have you adjusted your goals for this week?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX G

CONTROL GROUP QUESTIONS
Control Group Questions

1. Did you set any goals to improve your driving accuracy? If so, how did you attain your goals?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

2. Did you practice outside of class? If so, how often did you practice?
__________________________________________________________________________
__________________________________________________________________________
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APPENDIX H

CONSENT FORM
My name is Michael Shivetts and I am a graduate student currently enrolled at Georgia Southern University.

The purpose of this study is to measure the effectiveness of a goal-setting intervention on sport orientation, self-confidence, and performance of driving accuracy in golf.

Participation of this study will involve taking a pre and post test on driving accuracy performance in golf over a 4 week period. You will be instructed to take ten swings with your driver. Before each performance test each participant will complete two inventories and one questionnaire. These measurements consist of the Sport orientation Questionnaire (SOQ) and the State Sport Confidence Questionnaire (SSCI). Following the first set of measurements each participant will be tested on their driving accuracy performance before the goal-setting intervention begins. The participants will then be measured again on the SOQ, SSCI, and their driving accuracy performance following the intervention.

**Risks:** There are minimal risks associated with this study. The most potential for injury may occur due to the lack of preparation to swing a golf club. These injuries may include a strain on your back, shoulders, and wrists. I understand that medical care is available in the event of injury resulting from research but that neither financial compensation nor free medical treatment is provided. I also understand that I am waiving any rights that I may have against the University for injury resulting from negligence of the University or investigators.

**Benefits:** Although benefits cannot be guaranteed, it is possible that this study may help improve your driving accuracy as well as your overall golf game. It may also have a positive effect on your work ethic.

**Extent of Confidentiality:** At the beginning of the study you will be assigned a number. This number will identify you for the pre-tests and the post-tests. This will ensure your participation remains anonymous. The only people who will have access to the information acquired from you will be the primary investigator and their faculty advisor to protect your confidentiality.

**Right to ask questions:** Participants have the right to ask questions and have those questions answered. If you have questions about this study, please contact the researcher or the researcher’s faculty advisor, whose contact information is located at the end of the informed consent. For questions concerning your rights as a research participant, contact Georgia Southern University Office of Research Services and Sponsored Programs at 912-681-0843.

**Voluntary Participation:** You do not have to participate in this research. You may also
end your participation at any time. You do not have to answer any question you do not want to answer. There is no penalty for not participating in the study nor is there a penalty for deciding to drop out.

You must be 18 years of age or older to consent to participate in this research study. If you consent to participate in this research study and to the terms above, please sign your name and indicate the date below.

You will be given a copy of this informed consent for your records.

**Title of Project:**
The Effects of a Goal-setting Intervention on Sport Orientation, Self-confidence, and Driving Accuracy Performance

Principal Investigator: Michael Shivetts, 205-246-2032, mshivetts@hotmail.com
Faculty Advisor: Dr. Barry Joyner, 912-681-0775, joyner@georgiasouthern.edu

_________________________________________  _____________________
Participants Signature    Date

I, the undersigned, verify that the above informed consent procedure has been followed

_________________________________________  _____________________
Investigator Signature    Date
Goal-setting

Some of the earliest research based on goals was conducted by Atkinson and Reitman (1956). This research compared a one-goal and two-goal group and the effects of added incentives and found participants in the multiple goal group showed better performance than the one-goal group. Furthermore, it was concluded that individuals should pursue a number of goals rather than focus on one particular goal.

Locke is responsible for some of the earliest major work done in the area of goal-setting within the industrial/organizational setting. His work in this area has laid the foundation for much of the research that has followed on the effects of goal-setting, both basic and applied. Much of this research was directed toward understanding the effects of how goal-setting can enhance task performance. In a review of about 400 studies, Locke (1981) found that over 90% of the examinations resulted in a positive influence on behavior. Locke (1981) suggests that a great deal of the goal-setting research has reported that setting difficult and specific goals instead of general goals help in attaining higher levels of performance. Further research in the industrial setting by Ronan, Latham, and Kinne (1973), who collected survey data from 2929 independent southern plywood producers, reported that goal-setting resulted in higher productivity and a lower number of injuries in employees. Shortly after that, Latham and Kinne (1974) reported that a one day training program on goal-setting had a positive effect on absenteeism and productivity than those workers in the control group (“do your best”).

Locke’s (1968) development of the goal-setting theory and his extensive work in the area on how goals play a significant role in human motivation is still one of the most popular and widely accepted by most researchers in the industrial/organization setting.
The Goal-setting Theory is based on two principles that suggest that there is a linear relationship between goal difficulty and performance and that specific and difficult goals influence performance in a more positive way than easy or “do your best” goals (Locke and Latham, 1990).

Steers and Porter (1974) examined the role of goals attributes in the industrial/organization setting and found two significant variables that affect performance. First, the study indicates that an increase of goal specificity had greater increases in performance than general goals. Secondly, the results of this research reveal that the level of acceptance for the goal by the participant had an effect on goal performance suggesting the acceptance of the goals should happen natural and should not be forced.

Locke, Shaw, Saari, and Latham (1981) reported that there are four ways in which goal-setting influences performance: goals direct attention to the important tasks, help mobilize efforts, increase persistence, and develop and adapt new strategies. On the other hand, Burton (1983) contends that goal-setting is influenced by an athletes’ level of anxiety, motivation, and confidence. More in depth research by Kingston and Hardy (1997) have found comparable results in that process goals are effective in positively influencing golfers’ self-efficacy, confidence, and anxiety.

Past research has established that there is a linear relationship between the difficulty of the realistic goals and performance as well as specific goals foster enhanced performance more so than easy or general goals (Locke and Latham, 1990). These two main findings in the Goal-setting Theory are suggested to be the most significant. In addition to these findings, goal-setting has been found to be effective whether the goals
were self-set, instructionally set, or a combination of both in the field and laboratory settings.

Furthermore, the level of self-set goals set by individuals has been examined by Phillips and Gully (1997). This research has revealed that an individual’s ability played a great part in the level of goals set and reported that the higher the individual’s ability in the task the higher the level of self-set goals.

There has been a great deal of research on the topic of goals setting, however, not until the mid 1980s has research focused their attention in the sports setting. Some of the earliest research conducted involving goal-setting in the sports arena was done during the late 1970s and early 1980s (Botterill, 1977; Burton, 1983, 1984). Much of these early works on goal-setting in sports showed many positive results and has led to an abundance of research in the field.

Several studies have incorporated a goal-setting intervention in a variety of sports such as lacrosse, basketball, and golf have demonstrated a positive influence that goal-setting has on performance (Weinberg et al. 1994; Swain et al. 1995; & Kingston et al. 1997).

Botterill (1977) studied youth ice hockey players on an exercise endurance task in combination with a variety of goal difficulty, specificity, and goal type conditions. Botterill reported that goal-setting enhanced performance and found that difficult goals were more effective in enhancing performance than easy goals. Additionally, Botterill (1977) reported that explicit goals were more effective than subjective goals. Burton (1989) studied the effects of a five month goal-setting program on self-confidence, state anxiety and motivation in male and female collegiate swimmers. Burton (1989) reported
that participants who participated in the program learned to focus on performance goals and that those who were better at setting their goals displayed better performance and more positive cognitions.

Anderson, Crowell, Donman, and Howard (1988) examined the effects of goal-setting and publicly posting performance results for “checking” on a collegiate hockey team. Results revealed an increase in performance and that the publicly displayed performance results were associated with improved performance. Comparable research by Swain and Jones (1995) examined goal-setting in four collegiate male basketball players. This study revealed a positive change in three out of four identified behaviors and found that goal-setting was an effective way for changing desired behaviors.

Dimitrova (1970) examined the effects of voluntary individuals effort and its effects on overcoming difficulties. The study consisted of 30 students who where instructed to run certain distances while maintaining a high knee lift and lifting dumbbells. They were instructed to perform this activity to failure and set goals to accomplish this activity as long as possible. Dimitrova found that individuals who set greater goals produced a greater voluntary effort. It was also found that for individuals who realized failure was imminent, their effort was reduced. Furthermore, participants who made there goals known to the public and received feedback as the task progressed, displayed higher goal commitment and larger increases in work volume.

Gould (2001) suggests that goal-setting is one of the many techniques used by athletes in achieving personal growth and enhancing performance. Gould also reports that goal-setting not only influences performance but has shown to be successful and make a positive change in psychological states such as confidence, anxiety, and motivation.
Types of Goals

There have been many ways in which research has tried to explain how goal-setting influences performance. Burton (1983) has examined more cognitively oriented theories of how goal-setting influences performance. In contrast, Locke et al. (1981) has suggested a more direct mechanistics approach to the relationship between goal-setting and performance.

Goals can be defined as “attaining a specific standard of proficiency on a task, usually within a specific time” (Locke et al. 1981 p. 145). It is suggested that goals should focus on a standard and therefore be measurable. Furthermore, goals should be set to be accomplished within a specific time frame.

Subsequent research has broken down the definition by Locke et al. (1981) even further. McClements (1982) differentiated between subjective, general objective goals, and specific objective goals. Subjective goals refer to set goals such as having fun or doing your best. General and objective goals are more specific and refer to more measurable goals such as making a team or lowering turnover/assist ratio. More recent research by Marten (1987) differentiated between outcome goals and performance goals. According to Martens’ (1987) research, outcome goals refer to winning or beating an opponent while performance goals focus on improvements in relation to their previous performances. Hardy, Jones, and Gould (1996) made further differentiations by incorporating process goals. These goals focus on accomplishing specific task procedures such as keeping your glove down while fielding a ground ball.

Hardy et al. (1996) suggest that outcome goals focus on social comparison, failure or success, and are product oriented while performance goals focus on improvement and
execution. Furthermore, Kingston and Hardy (1997) have separated performance from process goals and suggest that performance goals are more focused on improving overall performance while process goals are focused improving the technique of performing the task. In addition, Filby, Maynard, and Graydon (1999) have suggested using performance and process goals instead of outcome goals because these goals have been found to improve self-efficacy and control. Further research on the effects of process goals by Harackiewicz, Sansone, and Manderlink (1985) displayed similar results; suggesting individuals more directed towards evaluating their performance on a particular goal and not social comparison put more time and effort into the task.

Filby et al. (1999) demonstrated that by using a combination of goal strategies such as outcome, performance, and process goals produce significantly better improvements in performance than only using one type of goal strategy. Filby et al. (1999) suggested that athletes need to prioritize their goals and use different goals at different time to maximize the positive influences of goal-setting.

A meta-analysis by Mento, Steel, and Karen (1987) compared key components of the Goal-setting Theory which examined the effects of hard versus easy goals as well as specific versus general goals. Their findings suggest that difficult, but realistic goals led to a greater improvement in performance than easy goals. They also reported that specific goals were more likely to produce better performance than general goals.

Zimmerman and Kitsantas (1999) examined the effects of process goals and outcome goals on students performing a writing revision task. The researchers found that participants in the process goal condition outperformed the other participants who were in the outcome goal condition. Furthermore, students who were encouraged to focus on
process goals instead of outcome positively influenced self-efficacy and satisfaction of their performance (Kitsantas, 2002; Zimmerman & Kitsantas, 1999). More recent research by Burton et al. (2001) examined the use of outcome, performance, and process goals and reported these goals are best when the use is balanced and maintained.

Boyce (1992) examined the effects of long and short-term goals on performance and found that participants in the long-term goal group displayed greater improvements than participants in the short-term or do your best goal group. It was also reported that participants in the long-term group had greater increases in performance than the short-term and long-term combined group. However, Boyce (1992) did report that all groups improved significantly. In contrast, Weinberg, Bruya, Longino, and Jackson (1988) found no significant difference between the short and long-term goal grips in their research in sit-up performance in students. Furthermore, Carver and Scheier (1982) reported that short-term goals are more effective because they provide individuals with immediate feedback and incentives.

Locke et al. (1981) has reported many studies that have shown specific and difficult goals improve performance more so than general and easy goals. Additionally, Tenebaum, Pinchas, Elbasz, Bar-Eli, and Weinberg (1991) supported this in their research on sit-ups in physical activity class. Locke and Latham (2002) report that people who set specific and challenging goals can lead to higher task performance if the individual can attain this specific goal and if the individual is committed to achieving this goal. Steers et al. (1974) and Locke (1991) suggest that goals should be specific and difficult. In other words, individuals who set easy specific goals result in lower levels of performance. Furthermore, they suggest difficult goals create a higher standard of
performance.

Mento et al. (1987) compared the effects of setting difficult versus easy and specific and general goals. In their review of 70 studies for goal difficulty, they reported that setting difficult goals led to better performances than did the general goals. In their review of the 49 studies on goals specificity, they found that specific, difficult goals were better and more effective in influencing performance than vague, easy goals. Further research by Wood, Mento, and Locke (1987) suggested that task complexity would influence the effects of specific and difficult goals. They hypothesized that difficult and specific goals would be stronger for less complex tasks than more complex tasks. The results from their study supported their hypothesis and additionally reported that these results could be generalized across tasks and populations. Comparable research by Locke and Latham (1990) supported these findings, reporting that the effects of setting specific and difficult goals were dependent on task complexity and concluded that these goals had a stronger effect on less complex tasks than more complex tasks.

Although Locke and Latham (1990) reported that there are several variables that have been suggested to moderate the relationship between performance and goal difficulty. Other research on goal-setting has found there to be more involvement. Yukl and Latham (1978) reported in their study that goals were better predictors of performance and satisfaction than an individuals need for achievement. Furthermore, Locke and Latham (2002) suggest that self-set goals help mediate the relationship between personality variables and performance and that most research regarding personality moderators were inconsistent.
Self-efficacy

Locke (1991) suggests that when conducting a research study on goal-setting the researcher should measure self-efficacy and the individual’s subjective difficulty because subjective difficulty reveals the objective goal difficulty and the participant’s perception of their ability to achieve the goal.

Bandura (1977) refers to self-efficacy as one’s perception that one can successfully execute a specific task required to produce a desired outcome. Weinberg and Gould (2003) use the term self-efficacy and self-confidence interchangeably and refer to self-efficacy as a situation specific form of self-confidence. Bandura (1997) further explains that self-efficacy is not concerned with an individual’s actual ability but the individual’s perception of their ability and what they can do with the skills that the individual possesses. Furthermore, Bandura and Cervone (1986) confirmed that self-efficacy is positively related to the amount of effort and persistence and individual puts into a task when facing obstacles between goals and performance.

Locke and Latham (2002) report that self-efficacy is a very important aspect in goal-setting. Individuals with higher self-efficacy in a task use better strategies to attain their goals, respond more positively to negative feedback, and are more committed than individuals with lower self-efficacy.

Martin and Hrycaiko (1983) suggest that skill development of athletes can be achieved by demonstration, role playing, verbal instructions, verbal feedback, as well as the knowledge of the positive effect of corrected performance. Bandura (1977) suggests that these approaches influence an athlete’s skill and motivation which, in turn, increases one’s perception of self-efficacy. According to Bandura, self-efficacy is mainly affected
by one’s past performances and experiences. He also suggests that self-efficacy is a major component for optimal performance under stressful conditions which has been recognized in athletic circles (Bandura, 1986). Mahoney and Avener (1977) found that finalists in the 1976 Men’s Olympic Gymnastics who reported experiencing occasional doubts about their abilities were less successful during their qualifying meets. They also reported that of the 12 finalists there was a positive correlation between performance and pre-meet self-confidence.

Bandura and Locke (2003) suggest that experiencing repeated success might result in setting more challenging goals and an increase in self-efficacy. In contrast, repeated failures may result in setting lower goals and a decrease in self-efficacy. Therefore, athletes’ past performances may have an effect on their present and future self-efficacy, goals, and task performance. Comparable research by Spieker and Hinsz (2004) found participants who had repeat success set higher goals than those participants who only had a single success. In contrast, Spieker et al. (2004) found past successes or failures did not significantly influence self-efficacy.

Self-efficacy has been found to influence the effectiveness of goal-setting and is directly related to task performance (Stajkovic & Luthans, 1982). Comparable research by Bandura (1982) suggests that higher self-efficacy led to a greater performance outcomes. Furthermore, Eccles and Wigfield (2002) investigated the relationship between self-efficacy and goal mastery and reported that an individual’s level of self-efficacy influences the persistence and the amount of effort willing to be invested in a task. Steers et al. (1974) suggests that the higher the self-efficacy level is for achieving a goal the greater the increase in the improvement of performance. Furthermore, suggesting
individuals who have a greater contribution to the determination of the goal have higher performance standards

**Goal Orientation**

Locke contends that goal-setting is reliant on the goal setters’ motivation levels in that setting and accepting difficult goals will lead to a higher level of performance than accepting and setting less challenging goals. Later research by Locke (1975) established a correlation between goal-setting, motivation, performance, and the level of effort. Locke concluded that goal-setting by itself is an effective strategy for influencing performance, however, the motivation of participant was even greater when a structured plan of action was implemented in the participants training program. Locke suggests that consistent success of goal attainment can be further enhanced by incorporating a pertinent action plan to more thoroughly structure the behavior of the participant.

Nicholls (1984) reports that there are two components associated with goal orientation: task and ego. Individuals who are task oriented focus their attention on self-improvement while ego oriented individuals focus their attention on success and failure with regards to set goals. Weinberg (1996) suggests that ego-oriented individuals may experience more anxiety due to the fact that the outcomes are not under their control.

Papaioannou and Kouli (1999) reported individuals who try to out perform their peers (ego-oriented goals) reported higher levels of somatic anxiety and lower self-confidence than those individuals focused on performing the task. Similarly, Duda (1989) found students that were ego-oriented were more likely to stop participating in sport.

In research conducted by Duda (1989), it was found that individuals who were involved in organized sports displayed higher task mastery than social comparison. This
research also indicated that individuals who participated in recreational sports or quit organized sports reported higher levels of social comparison than task mastery. Furthermore, Duda suggested that individuals who did not attain their goals led to a loss of interest and eventually a lack of participation in sport. In conclusion, this research shows individuals who were focused on task mastery goals led to more success. Comparable research on goal-setting and evaluation focus by Harackiewicz et al. (1987) suggest that individuals who were more focused on their social comparison lost interest in their task more easily while focus on task mastery resulted in the individual putting more effort into the task.

Brett and VandeWalle (1999) found that individuals who are more focused on performance goal orientation tend to be more focused on the outcome of their performance. On the other hand, individuals who are more focused on learning goal orientation are more likely to concentrate on the task and mastering it to develop their competence and to learn from a new skill. Locke and Latham (2002) suggest goal orientation affects the tasks people choose when setting goals. They further suggest that both ability and task complexity are moderators in the goal-setting process.

Seijts, Latham, Tasa, and Latham (2004) examined the goal-setting and goal orientation in a business simulation and found that a specific learning goal led to greater increases in performance than a general goal or specific performance goal. Furthermore, this research suggests that goal orientation predicts performance when the goal is general. VandeWalle (2000) suggested that individuals seeking feedback is important due to the fact that it suggests ways for the individual to improve performance. Those individuals who have a performance goal orientation (outcome goal oriented) perceive
their abilities as constant and therefore avoid seeking feedback out of fear of criticism.

**Feedback**

Feedback plays an essential part in performance enhancement and has been proven to be an important component for all age groups. Chapanis (1964) suggested that both teams and individuals have benefited from consistent feedback by providing intrinsic and extrinsic feedback to direct attention where needed in order to achieve a specific goal. Chhokar and Wallin (1984) examined the effects of feedback frequency on performance by studying 58 employees during a ten month period. This research reported an improvement and accomplishment of a set goal when feedback was given and lessoned when the feedback was withdrawn. Furthermore, the participants in this study who did not receive feedback only improved again once feedback was introduced again.

Mesch, Farth, and Podsakoff (1994) examined the effects of positive and negative feedback on goal-setting and task performance. Their study examined 177 undergraduate students divided into groups of three and their ability to complete a group word recognition task. The groups were given either positive or negative feedback. Mesch et al. suggested that the negative feedback groups were less satisfied with their progress but set more difficult goals and performed at higher levels than the positive feedback groups. This research emphasizes the need for consistent challenges in order to improve the mastery of a task and that a combination of positive as well as negative feedback where certain elements of the task need improvement.

A meta-analysis by Tubbs (1986) examines goal difficulty, goal specificity, and feedback on goal-setting participation, suggested that the combination of these components would strengthen performance more so than difficult and specific goals
alone. Their results suggest that the combination of these components were strongly associated with an increase in performance.

Erez, (1977) examined necessity of providing feedback to improve performance in the goal-setting process. This research revealed that the effects of receiving feedback after the performance of a task were significantly greater than when no feedback was provided. In conclusion, Erez suggests that feedback or goals alone do not affect performance. Performance changes occur best when the combination of the two are utilized effectively. Steers et al. (1974) found that feedback has a moderate effect on the success of a goal and determination of what goals are established. Therefore, feedback should be a consistent component in the goal-setting process.

**Goal-setting Intervention**

Weinberg (1994) has suggested that much of the earlier research in goal-setting has been characterized by a number of methodological problems such as the control group spontaneously setting goals, competition between groups, and lack of control over participant motivation. Therefore, Weinberg (1994) concludes that much of the previous research in the area have limited implications. However, Kyllo and Landers (1995) concluded that goal-setting was a successful psychological technique for enhancing performance after their meta-analytical statistical review of 36 studies in the area of goal-setting and sport. Burton, Naylor, and Holliday (2001) found in their review of literature that 44 of 56 studies reported a moderate to strong effects on performance in sport and exercise.

Locke (1991) studied the problems with goal-setting research and their solutions and found that the failure to control the “no goal” or “do your best” conditions from
setting spontaneous goals can result in mixed findings. It was suggested that by controlling these groups can elevate the importance of goal-setting for improving performance. Therefore, it is crucial to refrain from providing feedback to these conditions when conducting research.

Tenebaum et al. (1991) suggest that participants may perceive research experiences to be competitive and therefore, may perform their best no matter what condition they are assigned to. Hall and Byrne (1988) suggest that research that is designed in a way in which social comparison can occur participant may ignore their goal condition and perform as well as they can to outperform other participants.
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