Effects of a Peer-Influenced Goal Setting Strategy on Internal Locus of Control

Tim Antonides

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Effects of a Peer-Influenced Goal Setting Strategy on Internal Locus of Control

Abstract
Enabling children to take ownership of their learning is an ever-present challenge to educators. This study examined the effects of a six-month goal-setting strategy used with grade five students in a suburban, Christian middle school. Students were required to set three monthly goals and to describe how successfully these goals had been attained. In addition, the participants were asked to orally share their progress with their peers each month. The effects of this strategy on internal locus of control were monitored using the Nowicki-Strickland Control Scale for Children. Results of the study indicated no statistical correlation between the strategy and test scores. However, the researcher observed a marked improvement in classroom cohesiveness and an enhanced sense of classroom community and empathy.

Keywords
Master of Education, thesis, Christian education, middle school students, fifth graders, internal locus of control, Nowicki-Strickland Control Scale for Children, peer-influence

Subject Categories
Curriculum and Instruction | Education

Comments
Action Research Report Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Education

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The Effects of a Peer-influenced Goal Setting Strategy on Internal Locus of Control

by

Tim Antonides
B.A. Dordt College, 1992

Action Research Report
Submitted in Partial Fulfillment
of the Requirements for the
Degree of Master of Education

Department of Education
Dordt College
Sioux Center, Iowa
March 1998
The Effects of a Peer-influenced Goal Setting Strategy on Internal Locus of Control

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Date: 5-19-98

Director of Graduate Education
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Abstract

Enabling children to take ownership of their learning is an ever-present challenge to educators. This study examined the effects of a six-month goal-setting strategy used with grade five students in a suburban, Christian middle school. Students were required to set three monthly goals and to describe how successfully these goals had been attained. In addition, the participants were asked to orally share their progress with their peers each month. The effects of this strategy on internal locus of control were monitored using the Nowicki-Strickland Control Scale for Children. Results of the study indicated no statistical correlation between the strategy and test scores. However, the researcher observed a marked improvement in classroom cohesiveness and an enhanced sense of classroom community and empathy.
The Effects of a Peer-influenced Goal Setting Strategy on Internal Locus of Control

The area of student motivation is an obscure and complex one for classroom teachers. Disciplinary problems, academic achievement, and social interaction are all directly affected by the forces that influence each individual student. One element of motivation that has been addressed substantially is the concept of locus of control, which refers specifically to the location in which children perceive the control of their successes and failures lies. Theorists differentiate between internal and external locus of control. Children who have an internal locus of control perceive this control as existing within themselves. External locus of control implies that such control exists outside the individual; therefore, he or she is not responsible for success or failure.

As teachers, our desire obviously is to enable students to develop a clear internal locus of control; we want them to take ownership for their learning. A growing literature addresses the importance of personal responsibility for learning and discusses the impact of a number of factors on children's internal locus of control.
Glasser (1996) offers valuable insight into the idea that personal responsibility (ownership) and motivation are related. He proposes that individuals, in exercising control of their own success, need a sense of belonging, freedom, power, and fun. Correspondingly, he states, teachers must recognize that these needs are what motivate student behavior.

Sagor (1996) echoes much the same thesis. In order to prepare young people to be resilient in an uncertain future, he argues that we must help them develop feelings of competence, belonging, usefulness, and optimism by way of authentic, on-going school experiences.

From this viewpoint Knoop (1995) adds credence to this idea that personal ownership for learning is so vital. He lists three major reasons why individuals fail to take ownership for learning and responsibility for successes and failures: feelings of powerlessness (external locus of control), belief in a systems world (society as a self-regulating balance of objective forces), and the consequences of extreme introversion or extraversion. As a result, the teaching of personal responsibility in students
must necessarily involve promoting accountability, self-awareness, and critical reflection.

The importance of personal responsibility for success or failure (internal locus of control) is widely documented. Consequently, it is valuable to address the role of a number of dynamics on children's internal locus of control.

One perspective that has gained increased momentum is that of self-management. McCombs (1984) suggests that students who are given the opportunity to self-manage their learning to a significant extent will have an increased internal locus of control. Self-management may take the form of self- evaluative comments, personal charting, or a variety of other activities. Arlin and Whitley (1978) argue that if students see their classroom as a place where they have a significant role in managing their own learning, they are more likely to accept responsibility for their successes and failures. Their findings have led to the development of many self-management strategies, including such motivational skills training as self-talk, imagination, and stress management (McCombs, 1984).

Success achievement is another widely-cited approach to promoting internal locus of control. Proponents of the
approach such as Kourilsky and Keislar (1983) emphasize the value of intentionally structuring learning activities so that students will have a significant measure of success. Success-oriented teaching and learning, some researchers believe, will enable students to perceive control as existing within themselves. Research by Tomlinson (1987) suggests that learning experiences which allow effectiveness and contingency contracts help externally oriented students improve academically and attain a more internal orientation. She argues that allowing students to have success, even if difficulty level is reduced, will increase internal locus of control. Teachers, therefore, should promote success acquisition. One study found that students who were taught by success-oriented teachers had significantly larger gains in internal locus of control than students who were taught by failure-avoidant teachers (Kourilsky & Keislar, 1983).

The role of child development in influencing internal locus of control is another area that researchers have addressed. Some studies have suggested that there is a direct link between biological age and potential for internal locus of control. For instance, Skinner (1990) has found that children's beliefs about internal and external
influences on their behaviour become more differentiated from each other during middle childhood (i.e., children during this period begin to make a clearer distinction between internal and external locus of control). Another similar study suggests that as children grow older their internal locus of control increases correspondingly (Sherman, 1984).

Tollefson, Hsia, and Townsend (1991) offer an interesting insight into the discussion. They suggest that a dissonance often occurs between children's stated perception of control and teachers' perception of the same locus of control. That is, children may attribute more control to external forces than what teachers may believe. They further suggest that teachers need to improve communication between themselves and their students if they hope to have any effect on improving their students' locus of control.

Much of the recent research on internal locus of control has addressed the influence of goal setting. Zimmerman (1989) emphasizes the crucial role of setting appropriate academic goals. He advocates short-term (proximal) and long-term (distal) goal setting, accompanied by frequent self-judgement in attaining such goals. Alderman
(1990) proposes that short-term goals can serve as links to success and increased intrinsic control. Others found a similar sense of superiority in using proximal goal-setting as opposed to solely long-term goal-setting (Bandura & Schunk, 1981; Corno, 1993).

It is clear from the literature that although many factors influence internal locus of control, goal-setting strategies have the most impact. Though many researchers state the preference of proximal goal-setting, Zimmerman's (1987) proposal of a partnership of short- and long-term goals accompanied by self-evaluation has proven to be the most valuable. Yet, it fails to address the role of peer influence in maintaining goals. Goal-attainment remains primarily a matter between the student and his or her teacher.

The purpose of this study was to examine the effects on internal locus of control of three goal-setting strategies, one which takes into account the influence of peers. Many educators have witnessed the significant influence that cooperative learning can have on students' academic progress and level of motivation. Many teachers are discovering the value of cooperative learning with its emphasis on social
interaction and collaboration (Van Dyk, 1993). As well, the influence of peers is often a key motive behind students' behavior or misbehavior (e.g., attention-seeking, peer pressure). This study intended to determine if such an influence, when structured appropriately within the context of a goal-setting strategy, could increase a student's sense of control over success and failure. It was hypothesized that such a strategy would increase children's internal locus of control. A number of research questions were raised:

1. In what way has the locus of control changed?
2. What are some possible explanations for such a change?
3. What other factors could be coming into play?

This study compared three different types of goal-setting strategies (the independent level variable) and their impact on locus of control as measured by the score on the Nowicki-Strickland Internal-External Control Scale for Children (CNSIE), the dependent level variable.
Method

Participants

Sixty-two grade five students participated in the study. They came from three grade five classes in a large, suburban Christian middle school. One class served as the group receiving a goal-setting strategy which involved peer-sharing, another class served as the group receiving the same goal-setting strategy but without a peer-sharing component, and the third group was a control group. This group received no specific goal-setting strategy. All students were randomly assigned to classes by the school computer. The pre-test results were used to verify the similarity between the groups.

Design and Procedure

This study was conducted using a pre-test/post-test nonequivalent control-group design. The researcher administered the pre-test, the Nowicki-Strickland Internal-External Control Scale for Children (CNSIE), to each of the three classes at the beginning of the school year (Sept. 3, 1997). For the remainder of the six-month study, each class participated in a different goal-setting strategy.
Class A received a goal-setting strategy that included peer evaluation. Each student in the class was asked to set three long-term academic goals for the school year. These were discussed with the teacher in a conference and then recorded on a goal-setting form (see Appendix C). Each student was then asked to set three short-term goals (one for each distal goal) that would help them attain that distal goal. These short-term goals were set for the end of that month.

On the first school day of the next month (October), each student publicly shared in class the progress he/she had made in meeting his/her short-term goals and how this had helped him/her to move closer to the distal goals. After this was done, each student met with the teacher to set new short-term goals for the next month. This process was repeated every month until six months had passed. At the beginning of the seventh month, a post-test (again, the Nowicki-Strickland) was given to Class A to evaluate locus of control.

In five instances, the participants did not wish to have their progress shared with the class. The participants were permitted to refrain from sharing, but were involved in
the process again the next month if they felt comfortable to share.

Class B used an identical goal-setting strategy, except that there was no peer sharing component. The participants' progress was shared only with the classroom teacher.

Class C did not use any goal-setting strategy. The researcher met with the other two classroom teachers every two weeks to ensure consistency in how the study was being conducted.

Materials

For the study, pre-tests were conducted before and post-tests after each strategy was used, which involved the students completing the Nowicki-Strickland Internal-External Control Scale for Children (CNSIE) (see Appendix A). The CNSIE was used to assess the degree of internal locus of control of the participants. This instrument was inherently valid since it was measuring precisely the variable we were studying --- the level of internal locus of control. Omizo, Omizo, and Michael (1987) found significant correlation (concurrent validity) between the Nowicki-Strickland Scale and other scales that measure locus of control orientation, such as the Rotter I-E Scale and the six scales of Locus of
Control for Three Achievement Domains (LOCITAD). No specific correlation coefficients were provided, however. The scale has been used in a multitude of studies concerning locus of control and the data relevant to divergent and convergent validity is solid (Nowicki & Duke, 1983).

The pre- and post-tests were administered by this researcher. Since only one individual was scoring the tests and they were of an objective nature, reliability was enhanced significantly. Test-retest reliability has been found to be slightly above the .60 level (Nowicki & Duke, 1983).

The goal-setting strategy included a form on which the participants recorded three year-long academic goals, three short-term goals for each month that related to each of the long-term goals, and the extent of their attainment of these short-term goals (see Appendix B). For example, one student’s year-long goal was to hand in all assignments on time before the teacher’s deadline. His short-term goal for September was to hand in his assignments ahead of the deadline at least 50% of the time. This information was recorded on the form, as well as to what extent he attained this goal.
Results

A one-way ANOVA (Analysis of Variance) was run for both the pre- and post-tests. For Group A (the group receiving the goal-setting strategy with a peer-sharing component), the pre-test mean score on the Nowicki-Strickland test was 14.68. The post-test mean score was 14.82. Group B, which received the same goal-setting strategy, but without a peer-sharing component, demonstrated a pre-test mean score of 15.91 and a post-test mean score of 16.29. The control group (Group C) had a pre-test mean score of 18.59 and a post-test mean score of 19.36. There was no significant difference in mean scores either for the pre- or post-tests between any of the groups.

The results indicated no significant statistical differences between the three groups (see Table 1). A repeated measures ANOVA was also run to determine any within or between group differences. This too yielded no significant statistical differences.

Discussion

There are a number of possible explanations for the lack of statistical significance between the groups in this study. The strategy was used with only three small classes
in one school, which may have skewed the statistical results. It is also possible that the Nowicki-Strickland test was not a good instrument for measuring locus of control. It was designed in 1973 (suggesting possible antiquity of the test) and was rather long for grade five participants to complete. Perhaps a lack of interest in the test or fatigue may have prevented the participants from accurately completing the test.

It is also plausible that locus of control is too broad a variable to succinctly examine quantitatively. Perhaps focussing on a smaller, more specific variable may have resulted in more statistically significant results.

Although the results indicated no significant statistical differences as a consequence of the study, a great deal of insight was gleaned in the observation and maintenance of anecdotal records during the six-month project.

One important observation was that the process of monthly goal-setting improved the students' ability to introspect and metacognate. During the early stages of the study, the participants found the process of setting goals laborious and time-consuming. Reflecting on how to bring
about improvement in their learning required extensive introspective effort. Many began with rather short-sighted or vague goals (e.g., "to be a better student"). As the study progressed, however, the researcher noticed a gradual improvement in many of the students' metacognitive abilities. They took more time to reflect on their learning and what improvements they wanted to see. The goals that were articulated also became more concrete and succinct. These observations were noticed in both of the groups that received the goal-setting strategy (regardless of peer-sharing component). In essence, the idea of unwrapping God-given gifts and talents (one that teachers at the school have often reiterated) began to become more clear and less abstract a concept to the students. Many developed an awareness of the importance of examining how gifts and talents are being used and how to set clear, articulate goals in attaining them.

This heightened level of introspection seemed to also come through in the conferences that the researcher conducted with each participant at the end of each month. Whereas the conferences that took place in September and October were normally characterized by vagueness and sharing
of ambiguous goals, the conferences that came later in the study were generally more productive and concrete. It was observed that the participants became more aware of the importance of setting realistic and specific goals and how the short-term goals related to the long-term. They also articulated the value of clarity in goal-setting. Clearly stated goals, many realized, provided more impetus to achieve them. With respect to this, one participant's comment deserves special attention: "I guess if I know exactly what I want to try to do, it makes it easier to go and do it."

Another significant observation was made during the study with respect to the teacher-student relationship. The researcher found that as the study progressed, it became apparent that the conferencing component of the goal-setting process was effective in building and maintaining rapport between teacher and student. Whereas most dialogue between the two parties normally relates to teaching/learning activity, the conferences afforded the opportunity for the teacher to listen to the students' goals, reflect on them, and respond in a very individualized and personally meaningful manner. A spirit of teamwork between the two
existed, one in which both parties cooperated and consulted in order to benefit the needs of the student. This was an especially positive aspect of the study. The relationship between teacher and student moved from an authoritarian one to a more redemptive one, where the two individuals worked together to strengthen skills and unfold the child's gifts.

A rather intangible element but one which came through in the study was the enhanced sense of community within the classroom as a result of the peer sharing component. As the participants went through the process of sharing their progress with the class each month, a supportive atmosphere began to develop. Students asked questions of the individual who was sharing and provided an increasingly high level of feedback and encouragement. The participants became more and more comfortable with sharing their progress and the researcher found himself playing more of a facilitator's role in the process than a leader's. This was clearly the most encouraging component of the entire action research project. The communal task of goal-setting and reflecting on those goals began to take precedence over the participants' feelings of insecurity and shyness about sharing their progress. More and more students saw the importance of
building up one another in love. A spirit of brotherly acceptance and encouragement became present and was a powerful impetus for building self-worth within the students as children of God. Indeed, a strong sense of community as fellow workers in the Kingdom prevailed.

Due to the nature of the study and the results that were observed, the implications of this study to other classroom situations are clearly limited. Still, a number of key summary statements can be made. First, goal-setting strategies such as these improve students' introspective and metacognitive abilities, both through the goal-setting process itself and through the exercise of conferencing. An enhanced awareness of the gifts and talents with which they have been blessed is the most important result. Secondly, goal-setting strategies of this kind enhance teacher-student rapport and dialogue and more clearly reflect a biblical relationship of empathy and encouragement. Thirdly, when a peer sharing component is used along with the goal-setting strategy, community within the classroom is more effectively built.

A similar study of greater length (perhaps two to three years) would allow comparisons to be made across grade
levels and between developmental levels. For the purposes of examining goal-setting strategies on grade five students, however, this study afforded some valuable investigation into how students at that level view learning and their role in the learning process. More importantly, however, it offered insight into goal-setting as an avenue of redemption in the classroom, enabling children to build and celebrate their self-worth as individuals created by God and blessed with an abundance of Kingdom-building gifts.
References


control and attitude toward learning. Contemporary Educational Psychology, 8(2), 158-167.


at the Annual Convention of the American Psychological Association, Toronto, Ontario, Canada.


Appendixes
Appendix A

Nowicki-Strickland Internal-External Control Scale for Children (Nowicki & Strickland, 1973)

Respond to each question with either Yes (Y) or No (N).

1. Do you believe that most problems will solve themselves if you just don't fool with them? (Y)

2. Do you believe that you can stop yourself from catching a cold? (N)

3. Are some kids just born lucky? (Y)

4. Most of the time, do you feel that getting good grades means a great deal to you? (N)

5. Are you often blamed for things that just aren't your fault? (Y)

6. Do you believe that if somebody studies hard enough he or she can pass any subject? (N)

7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? (Y)

8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do? (Y)

9. Do you feel that most of the time parents listen to what their children have to say? (N)
10. Do you believe that wishing can make good things happen? (Y)

11. When you get punished, does it usually seem it's for no good reason at all? (Y)

12. Most of the time, do you find it hard to change a friend's opinion? (Y)

13. Do you think that cheering more than luck helps a team to win? (N)

14. Do you feel that it's nearly impossible to change your parents' minds about anything? (Y)

15. Do you believe that your parents should allow you to make most of your own decisions? (N)

16. Do you feel that when you do something wrong there's very little you can do to make it right? (Y)

17. Do you believe that most kids are just born good at sports? (Y)

18. Are most of the other kids your age stronger than you are? (Y)

19. Do you feel that one of the best ways to handle most problems is just not to think about them? (Y)

20. Do you feel that you have a lot of choice in deciding who your friends are? (N)
21. If you find a four leaf clover, do you believe that it might bring you good luck? (Y)

22. Do you often feel that whether you do your homework has much to do with what kind of grades you get? (N)

23. Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her? (Y)

24. Have you ever had a good luck charm? (Y)

25. Do you believe that whether or not people like you depends on how you act? (N)

26. Will your parents usually help you if you ask them to? (N)

27. Have you felt that when people were mean to you, it was usually for no reason at all? (Y)

28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today? (N)

29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them? (Y)

30. Do you think that kids can get their own way if they just keep trying? (N)

31. Most of the time, do you find it useless to try to get your own way at home? (Y)
32. Do you feel that when good things happen they happen because of hard work? (N)

33. Do you feel that when somebody your age wants to be your enemy, there's little you can do to change matters? (Y)

34. Do you feel that it's easy to get friends to do what you want them to? (N)

35. Do you usually feel that you have little to say about what you get to eat at home? (Y)

36. Do you feel that when someone doesn't like you there's little you can do about it? (Y)

37. Do you usually feel that it's almost useless to try in school because most other children are just plain smarter than you are? (Y)

38. Are you the kind of person who believes that planning ahead makes things turn out better? (N)

39. Most of the time, do you feel that you have little to say about what your family decides to do? (Y)

40. Do you think it's better to be smart than to be lucky? (N)

Note: External locus of control response shown in parentheses.
Appendix B

Goal Setting Strategy Form

Name______________________ Month____________________

Year-long Goal  This Month's Short-term Goal  To What Extent Did You Attain The Goal?

Goal #1

Goal #2

Goal #3
Tables
Table 1

One-Way Analysis of Variance (ANOVA) for Pre- and Post-tests

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</tbody>
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