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Attribution theory and assessment of children

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Abstract

Attributions can be defined as a person's beliefs about why he/she succeeded or failed at a task. For example, a person can either attribute success on a job to ability, effort, knowledge, and other internal attributes or to luck, help from others, mood, task difficulty, and other external attributes. Knowledge and understanding of attribution theories, research, assessment, and intervention have important implications for school psychology practice. When school psychologists have gained this knowledge and understanding, they will be better equipped to effectively design intervention plans to assist others in developing success attributions. There are several ways that attributions for student academic success and failure seem relevant to school psychology practice.

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Attribution Theory and Assessment of Children

Attributions can be defined as a person's beliefs about why he/she succeeded or failed at a task. For example, a person can either attribute success on a job to ability, effort, knowledge, and other internal attributes or to luck, help from others, mood, task difficulty, and other external attributes.

Knowledge and understanding of attribution theories, research, assessment, and intervention have important implications for school psychology practice. When school psychologists have gained this knowledge and understanding, they will be better equipped to effectively design intervention plans to assist others in developing success attributions. There are several ways that attributions for student academic success and failure seem relevant to school psychology practice.

First, an awareness of teachers' attributions for student academic success and failure can direct school psychologists in helping teachers alter faulty attributions that have a negative impact on student performance. Second, awareness of how school psychologists' personal attribution style influences intervention design can assist them in guarding against inappropriate personalization. This insight can enhance school psychologists' ability to recommend interventions based on the students' attributional styles instead of school psychologists' personal attributions. Third, awareness of students' personal attributions of academic success and failure can assist school psychologists in recommending interventions to increase success attributions. This paper will focus on the third area of attribution research: students' attributions for academic success and failure.

Attribution will be defined and followed by a discussion of the history and theories of attribution. The major reasons why it is important to have an understanding of the history of attribution theory will be described. Attribution and locus of control theories

have proliferated for approximately thirty years. These theories will be described in chronological order: Atkinson's Achievement Motivation Theory, Rotter's Social Learning Theory, Weiner's Attribution Theory, and Covington's Self-Worth Theory. Each theory's explanation of student academic success and failure will be examined.

Empirical evidence for some theories will be cited. However, empirical evidence for Weiner's theory will be focused upon for two reasons. Weiner's theory has been a major theory of attribution for the past twenty years and the attribution measurement instrument with the best psychometric properties, Survey of Achievement Responsibility, is based upon Weiner's theory of attribution. A brief history of learned helplessness and research focusing on this phenomenon also is described. Finally, the relationship between self-efficacy and academic performance is discussed based on a meta-analytic investigation (Multon, Brown, & Lent, 1991).

Psychometric properties and standardization procedures of assessment instruments that measure students' attributions for academic success and failure will be presented. The instruments will be presented in chronological order. The following criteria will be used to select the best assessment instrument: psychometric properties, supporting empirical data, theory base, and degree to which the instrument is related to academic success and failure. Major school psychology texts on state-of-the-art knowledge and assessment will then be examined for evidence of attention to the attribution construct. Based on the review of theory; research; available assessment techniques; and textbook foci, inferences will be formed about school psychologists' knowledge and understanding of attributions. Directions for future research of attribution assessment and intervention practices of school psychologists will be suggested.

Definition of Attribution

Attribution is the term used to signify a person's beliefs about why he/she succeeded or failed at a task. For example, a person can attribute a job well done to either

ability, effort, or knowledge (internal attributes) or to luck, help from others, mood, and task difficulty (external attributes). Attributions shape academic self-esteem, and self-esteem has an effect on expectations for future success and sense of efficacy for related future tasks (Woolfolk, 1993).

Weiner (1979) adds two additional concepts to the definition of attribution: controllable/uncontrollable and stable/unstable. He theorized that typical effort is controllable, stable, and internal; ability is uncontrollable, stable, and internal. In addition, typical help from the teacher is controllable, stable, and external while luck is uncontrollable, unstable, and external. It is when students attribute failures to stable, uncontrollable causes that the greatest motivational problems arise (Weiner, Russell, & Lerman, 1978). When a student has developed a maladaptive pattern of attribution it can be changed with effort from teachers, school psychologists, and parents. The effort will involve teaching the student to attribute their failures in school or social situations directly to effort or strategy instead of to ability (Dweck, 1975; 1986).

These are the students whom teachers, school psychologists, counselors, and parents need to focus on and assist. The prevalence of learned helplessness should be decreased if students can be compelled to use external, unstable, and specific causes rather than internal, stable, and global causes to explain the occurrence of bad events (Peterson, 1992).

The approach to altering one's attributions is called attribution retraining. Attribution retraining in the classroom should be approached as a collaborative effort between student and teacher. The student and teacher work together to develop explanations of performance and test these against available evidence (Peterson, 1992). Dweck (1975) has shown that when students who generally attribute failure to a lack of ability are instructed instead to attribute failure to a lack of effort, they show more resilience to academic setbacks and disappointments.

History and Theories of Attribution

It is important to have knowledge and understanding of the history of attribution theory for several reasons. First, since early theories were in the initial stages of idea development they tended to be simplistic and incomplete. Subsequent theories enriched and added to initial idea development. The most recent theories of attribution included the initial ideas and added new variables. The addition of new variables has led to multidimensional explanations. Therefore, if an individual has knowledge of just one original theory and bases assessment on that particular theory, he/she will be lacking a full assessment of the multiple dimensions of attribution. Accordingly, he/she may be developing simplistic interventions that may not be fully effective.

Second, school psychologists should have an interest in attribution theories to determine the best instrument to use in assessment and intervention. An academic intervention design, based on assessment instruments that do not relate to academic success and failure, will not be as effective as one based on assessment instruments that do relate to academic success and failure. Lastly, a knowledge and understanding of attribution theory and it's history is important so that researchers do not duplicate what is already known.

The history of attribution theory began with Heider (1958) and his work on personal perception. His theory was essentially the same as locus of control theory. He believed that observers try to make sense of events much like scientists do. He presumed that observers try to explain the actions of another actor as due to something either within the actor (personal cause) or external to the actor and associated with the environment (situational cause).

Jones and Davis (1965) developed a second major and influential attribution statement. They specified the conditions under which someone favors a personal or trait explanation of a person's action over an environmental explanation. One such condition is if someone does something unique or socially undesirable, an observer makes inferences

about that person's internal characteristics rather than attributing it to environmental effects.

Additionally, Kelley (1967) examined the nature of cues that an observer uses to decide between personal and environmental determinants. He noted that individuals evaluate cues in three ways. First, an observer evaluates a cue based on an actor's consistency over time. Second, a cue is evaluated over different situations (distinctiveness). Third, a cue is evaluated by noting the total number of other actors behaving this way (consensus). Kelley is also responsible for publishing one of the earliest works on attribution theory.

Bem (1967) noted that the same attributional cues used to explain others' behaviors can be applied to one's own behavior. He presented the radical idea (at the time) that people do not really know much more about why they do things than why another person does. A person simply looks at the behavior of either himself/herself, or of the other individual, for cues.

Jones and Nisbett (1971) hypothesized that people often perceive events in line with motivational biases. One of these biases is known as ego-defensive or egocentric attribution: individuals are motivated to perceive the world in such a manner that their self-image is enriched or guarded from threat. In accordance with this bias, people often view themselves as the source of positive events but do not accept personal responsibility for negative events.

At approximately the same time as the above individuals were laying the foundation for attribution theory, John Atkinson was developing a theory of achievement motivation that is closely related to theories of attribution.

Atkinson's Achievement Motivation

John Atkinson's (1964) achievement motivation theory was clearly influenced by the work of Henry Murray (Weiner, 1992). Murray was the first to call attention to a need for achievement. He devised a taxonomy composed of 20 basic human needs. One of

these needs was called achievement. It was conceived as the desire

> to accomplish something difficult. To master, manipulate or organize physical objects, human beings, or ideas. To do this rapidly and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent. (Murray, 1938, p.164)

The main goal of Atkinson's theory was to predict whether an individual would approach or avoid an achievement task (Atkinson, 1964). Atkinson contends that a person's motive to achieve (n Ach), his or her motive to avoid failure, and his or her anticipation of success greatly influences that person's motivation as it is expressed in level of aspiration, temperament for risk, and willingness to put forth effort and to persevere in an activity (Atkinson & Feather, 1966). The amount of n Ach a person possesses can determine his or her degree of motivation. For example, parents who foster their children's efforts toward achievement and provide opportunities for them to demonstrate ability have children who are usually relatively high in n Ach. The opposite is true of children who are low in n Ach. The parents of these children often punish their children's failures and remain neutral about their successes (Covington, 1984).

Just as there is a need or motive to achieve there is a counterpart, the motive to avoid failure. This motive directs individuals away from achievement situations (Stipek, 1988). A person who is highly motivated to avoid failure sees failure as an inherently bad occurrence. This type of individual will experience shame when faced with failure. The motive to avoid failure can be measured as anxiety (Stipek, 1988).

The two motivational tendencies, to approach tasks and to avoid tasks, are in direct conflict with each other. If the tendency to approach is stronger, the person will approach a given task. On the other hand, if the tendency to avoid is stronger, the person will avoid a given task.

There are a few problems with Atkinson's theory, which could explain why it has had only moderate success in accurately predicting behavior. The two major motives, need for achievement and need to avoid failure, are extremely difficult to measure. Some researchers have also argued (Canavan-Gumpert, Carner, & Gumpert, 1978) that Atkinson's theory is too simplistic. They state that there are other factors which affect motivation in addition to expectancy and value, such as social or material gains.

Despite the problems, Atkinson's theory has contributed to the area of achievement motivation. For example, his theory of expectations and emotions affecting achievement behavior sparked the fire for future cognitive motivational theorists who have built on Atkinson's basic ideas (Stipek, 1988).

Julian Rotter (1966) proposed a social learning theory to explain achievement behavior. He attempted to combine the two major approaches of stimulus-response theory and cognitive theory.

Rotter's Social Learning Theory

Rotter (1966) developed his theory to explain achievement behavior. The main focus of Rotter's theory was explaining choices an individual makes when confronted with numerous possible alternatives of behaving (Phares, 1976). Rotter is perhaps best known for his idea of locus of control (LOC). LOC refers to an "individual's beliefs regarding the contingency of reinforcement" (Stipek, 1988, p.78). There are two types of LOC: internal and external. An individual is described as having an internal LOC when she/he believes that events or outcomes are dependent on one's own behavior or on a somewhat permanent personal characteristic such as ability. External LOC refers to the belief that an event or outcome is caused by factors outside of an individual's control, for example luck; difficulty of task; or fault of teacher.

Rotter developed the Internal-External (I-E) Control Scale (Stipek, 1988) to measure a person's belief system. The survey forces the respondent to choose between

two statements, one representing an internal belief and one an external belief. The items fall in one of six categories: academic recognition, social recognition, love and affection, dominance, social-political, and life philosophy (Rotter, 1966). Two examples, one from the life philosophy category and one from the academic category, are:

1. a. Many of the unhappy things in peoples lives are partly due to bad luck. (external response)
   b. People's misfortunes result from the mistakes they make. (internal response)
2. a. The idea that teachers are unfair to students is nonsense. (internal response)
   b. Most students don't realize the extent to which grades are influenced by accidental happenings. (external response)

Rotter's research produced an extensive amount of literature relating students' academic achievement to locus of control. Stipek and Weisz (1981) conducted a review of the conceptualization and measurement of the control dimension of academic achievement from three theoretical perspectives, one being social learning theory. They examined the most commonly used locus of control measures for children and found that measures varied in both content and form. There was also a large variation in the characteristics of the children tested. Therefore, it was difficult to reach specific conclusions regarding the relationship between locus of control and achievement. The Stipek and Weisz (1981) review revealed little support for the common assumption that locus of control measures concerning only achievement situations are more highly correlated with achievement than are more general measures. Furthermore, the studies that used locus of control measures provided evidence of a relationship between children's perceptions of personal causality and achievement.

Most individuals will tend to believe in either an internal locus of control or an external locus of control as the explanation for academic success and failure. Once the locus of control belief has developed and has been established, it can be changed with

effort from teachers, school psychologists, and parents through attribution training (Dweck, 1975).

Weiner's Attribution Theory

Bernard Weiner's attribution theory (1972, 1974) has refined and expanded upon Rotter's concept of locus of control. Attribution theory states that individuals naturally seek an understanding about why events occur, particularly when the outcome is important or unexpected.

Causal attributions are perceptions about the source of achievement outcomes. The two most common attributions made in achievement situations are ability and effort (Stipek, 1988). An individual who attributes his/her achievement to ability will say things like, "I received an A on the last test because I am smart"; "I did not perform very well on the last test because I am stupid". An individual who attributes his/her achievement to effort may say things like,"I did poorly, because I didn't study hard enough"; "I did well because I spent a lot of time studying and reviewing" (Weiner, 1986).

Knowing the causal attributions a person makes does not explain things in entirety. Even more important are the underlying dimensions of the attributions (Weiner 1979; 1985; 1986). Effort and ability attributions, which are treated as internal equals by Rotter, have different connotations for behavior. Ability is perceived as a relatively stable and uncontrollable trait. Effort is often perceived as a relatively unstable and controllable trait. These two dimensions of stability and control allow more specific predictions based on beliefs about the cause of success and failure (Stipek, 1988) than those of Rotter.

In addition to the attributions of effort and ability, Weiner has defined ease or difficulty of the task and luck as two underlying dimensions of attributions. These are both environmental causes. Ease or difficulty of the task is seen as a stable trait much like ability. On the other hand, luck is viewed as an unstable trait just as effort and motivation are unstable traits.

In sum, Weiner's theory of attribution (1972, 1974) maintains that there are three dimensions of the causes to which students attribute their successes or failures: (a) locus (location of the cause internal or external to the individual), (b) stability (whether the cause changes or stays the same), and (c) responsibility (whether the person can control or change the cause).

The locus dimension seems to be related to feelings of self-esteem and self-worth (Weiner, 1980). When success or failure is attributed to stable, internal factors, obtained success leads to a sense of pride and increased motivation. In this same manner, obtained failure leads to a decrease in self-esteem or self-worth.

The stability dimension of Weiner's theory is closely related to expectations about the future. If students attribute their success (or failure) to stable factors, such as difficulty of task, they will expect to succeed (or fail) on difficult tasks in the future. On the other hand, if students attribute their success (or failure) to unstable factors such as luck, they will expect (or hope for) changes in the future.

The responsibility dimension is related to emotions such as anger, pity, gratitude, or shame. When a person is confronted with a controllable task and fails, he or she may feel shame or guilt. However, if the person succeeds at the same controllable task, he/she may feel proud. Failing at an uncontrollable task may lead to anger toward the person or institution in control. Succeeding at an uncontrollable task leads to feeling lucky or grateful.

Based on Weiner's theory of attribution, Nolen-Hoeksema, Girgus, and Seligman (1986) studied the relationship between maladaptive attributional patterns and low school achievement. Maladaptive attributional patterns included: explaining a bad event by a cause that is stable rather than unstable, explaining a bad event by a cause that has global effects rather than one with situation specific effects, and explaining a bad event by a internal rather than external cause.

One of the purposes of their study was to examine the relationship between achievement and attributional style. Subjects (n = 168) consisted of 87 males and 81 females ranging in age from eight to eleven years. The children were predominantly Caucasian and were from middle-class families.

Achievement was measured using the California Achievement Test (California Testing Bureau, 1982) while achievement related behaviors were measured by the Student Behavior Checklist (Fincham & Cain, 1984) completed by the students' teachers. Attributional style was measured using the Children's Attributional Style Questionnaire (refer to page 22 for a description) (Seligman, Peterson, Kaslow, Tanenbaum, Alloy, and Abramson, 1984).

Results indicated that maladaptive attributional patterns were associated with significantly lower levels of achievement and helpless behaviors in the classroom. Scores on the California Achievement Test battery correlated significantly (r = .26) at the $p < .05$ level with CASQ scores taken 1 month prior to the achievement test. Similarly, CASQ scores significantly correlated with the teacher ratings on the Student Behavior Checklist of helpless behaviors (r = -.51, $p < .0002$) and mastery behaviors (r = .56, $p <$ .0002). The results of this study support Weiner's theory that maladaptive attributional patterns can lead to academic difficulties for the student.

In support of Weiner's theory, Ryckman and Peckham (1986) studied gender differences on attribution patterns in academic areas for learning disabled (LD) students in Seattle Public Schools. Subjects (n = 553) consisted of 376 LD boys and 177 LD girls. Approximately 49 percent of the LD students were minority students (compared to a district-wide average of 47 percent). The Survey of Achievement Responsibility (SOAR) see page 24 for description, (Ryckman, Peckham, Mizokawa, and Sprague,1990) was administered by classroom teachers to students in grades four through eleven as part of a district-wide Effective Schools Project.

The data were analyzed with four repeated measures analyses of variance (ANOVA) for each of the four dependent variables of effort, ability, task, and luck. These variables are directly based on Weiner's theory of attribution. The two within-subject variables were content areas (math/science and language arts) and polarity (success and failure). The between subjects variable was gender.

Results indicated the attributional patterns of LD girls were more maladaptive than the patterns of LD boys. The LD girls had higher effort scores for success (mean = 3.76) than for failure (mean = 3.22). As previously stated effort is an internal but unstable attribution. The LD boys also had higher effort scores for success (mean = 3.59) than for failure (mean = 3.47) but the difference in scores was insignificant. The LD girls also did not attribute their successes to ability (mean = 1.36) indicating that they seldom take creit for their successes with stable attributions.

The LD boys showed small success or failure score differences on each of the attributions. Since the score differences for LD boys were relatively small between all of the variables, neither learned helplessness or mastery orientation seemed characteristic.

The results of this study appeared to indicate that LD girls may benefit more from attribution retraining than LD boys. Perhaps through attribution retraining, LD girls will develop a mastery oriented approach to academic tasks rather than a learned helplessness approach.

Martin Covington (1984) focuses on self-worth in his self-worth theory of achievement motivation. A fundamental principle of Covington's theory is that when an individual's self-worth is threatened by failure, the individual will naturally strive to protect his/her own sense of self-worth by making excuses such as I didn't try hard enough (Covington, 1984). His theory is described in more detail in the next section.

Covington's Self-Worth Theory

Self-worth is similar to self-esteem and self-respect. It can be defined as an

individual's appraisal of his/her own value (Stipek, 1988). The basic assumption of Covington's self-worth theory is that numerous elements influence one's sense of worth and adequacy: performance level, self-estimates of ability, and degree of effort extended. Covington (1984) created a model of self-worth that suggests that ability and effort are combined to achieve performance. An individual's self-worth is based upon successful performances.

Covington and his colleagues have theorized that a person's need for achievement, attributions for success and failure, beliefs about ability, and self-worth come together in three types of motivational sets: mastery oriented, failure-avoiding, and failure-accepting (Covington, 1984; Covington & Omelich, 1984, 1987).

Mastery-oriented students have a high need for achievement, set learning goals that are difficult and challenging in order to increase their skills and abilities, and see ability as improvable. They are not fearful of failure because failure does not threaten their sense of competence and self-worth. They generally attribute success to internal factors such as their own effort; and, therefore, they assume responsibility for learning. Mastery-oriented students also make use of adaptive strategies such as trying another method or way of doing the task, seeking assistance, and practicing/studying more.

Failure-avoiding students have a high fear of failure, seek situations to "look smart", and set performance goals that are either very easy or so difficult that no one can succeed. In order to feel competent, they must protect themselves (and their self-images) from failure. If they have experienced success, they may avoid failure by not taking risks, and "sticking with what they know". However, on the other hand, if they have experienced limited success but also much failure, they may use self-defeating strategies such as procrastination, feeble efforts, and claiming not to care. A low sense of self-worth appears to be linked with failure avoiding strategies intended to protect the individual from the consequences of failure. These strategies may seem at first to help the individual but

they are destructive to motivation and self-esteem in the long run.

If failures continue and strategies cease to help, students may finally decide that they are incompetent. This is what they feared in the first place but they gradually accept it. Failure accepting students expect to fail, are depressed, apathetic, have low self-worth, and have a feeling of helplessness. They firmly believe that their problems are due to low ability and that there is little hope for change. They can no longer protect themselves from this conclusion.

In addition to theories of attribution, locus of control, and academic achievement motivation, the theory of learned helplessness is important to investigate. A brief description of it follows.

Learned Helplessness

The phenomenon of learned helplessness, related to an earlier concept of "learned hopelessness" put forth by Mowrer (1960), was first described by animal learning researchers at the University of Pennsylvania (Overmier & Seligman, 1967; Seligman & Maier, 1967). Mongrel dogs, after being exposed to inescapable electric shock, showed deficits in escape behavior 24 hours later when placed in a chamber in which simply jumping over a barrier would terminate shock. Unlike dogs who had not experienced the inescapable shock, these animals seemed helpless. In learned helplessness, the important variable is not the occurrence of the aversive event but the perception of the relationship between one's behavior and the occurrence of that event.

Dweck and Reppucci (1973) found that learned helpless children, in an academic setting, tended to attribute failure to a lack of ability. According to Weiner's theory, this negative attribution causes children to respond to failure with less effort, to give up, and/or to suffer from diminished self-esteem.

Dweck (1975) hypothesized that a long-term attribution training program, in which children were taught to take responsibility for failure and to attribute it to a lack of effort,

would lead to increased persistence on the task in the face of failure. Subjects were five females (three Anglo-American and two African-American) and seven males (four Anglo-American and two African American) between the ages of 8 and 13 years. The subjects were identified as "helpless" by their school psychologist, their principal, and their classroom teacher. The subjects were randomly assigned to one of two treatment conditions: Attribution Retraining (AR) ($\underline{n} = 6$) or Success Only (SO) ($\underline{n} = 6$) and were compared to their persistent classmates (non-helpless) of the same age and gender.

Measures on which the helpless subjects were compared to their persistent peers included: the Intellectual Achievement Responsibility Scale [(IAR) see page 19 for a description of this measure], two subscales of the Test Anxiety Scale for Children, and a Repetition Choice task. The Effort versus Ability Failure Attribution Scale, developed specifically for this study, was expected to yield the greatest change as a result of attribution retraining.

The results from the IAR were consistent with the results from an earlier study by Dweck and Reppucci (1973). The total I scores of the twelve helpless subjects were significantly lower than those of the persistent children. Helpless children took less personal responsibility for the outcomes of their behavior and tended to place less emphasis on the role of effort in determining success and failure than did their persistent peers. The AR subjects showed consistent and substantial decreases in their maladaptive reactions to failure. On the Effort versus Ability Failure Attribution Scale, the subjects in the AR treatment condition showed a significant increase in the choice of effort alternatives from pretraining to posttraining. The subjects in the SO treatment condition showed no increase.

In summary, the subjects in the AR treatment condition showed large changes in their recognition of effort as a determinant of failure as reflected in the difference of their scores, pre- and post-treatment, on the Effort versus Ability Failure Attribution Scale, the measure most closely related to the attribution retraining treatment. The subjects in the AR

treatment failed, however, to show reliable changes on the other more global measures such as the IAR.

Caveats included small sample size, wide age range of subjects, and a lack of reliability/validity information on the Effort versus Ability Failure Attribution Scale. Since it was developed by the author specifically for this study, no psychometric properties were available.

Abramson, Seligman, and Teasdale (1978), pointed out at least one potential problem with Dweck's original helplessness model: its lack of explanation for the self-esteem loss frequently observed among depressives. Specifically, Abramson and Sackeim (1977) sought explanations as to why individuals blame themselves for events in which they perceive they have no control. The original helplessness model offered no explanation of the chronicity and generality of helplessness and depression nor of the dilemma of self-esteem loss following helplessness.

In light of these shortcomings, Abramson et al. (1978) revised the helplessness theory to include the individual's causal explanations of the original bad events. According to this revision, when people face uncontrollable bad events, they ask why. Their answer affects how they react to the events. Abramson et al. (1978) described three explanatory dimensions of the theory. First, the cause may either be internal or external. Second, the cause may be stable or transient. Third, the cause may affect a variety of outcomes (global explanation), or it may be limited just to the event of concern (specific explanation).

Their reformulation theory assigned specific roles to each of the three dimensions. Attributions of internality affected self-esteem following bad occurrences. Self-esteem loss was likely to occur if the individual attributed the bad event to internal factors. On the other hand, if the individual attributed the bad event to external factors, self-esteem loss was less likely to occur. Stability of causal beliefs affected the persistence of helplessness and depression following bad events. If a bad event was attributed to a persistent cause, rather

than a transient one, depressive responses to that event tended to persist. Finally, globality of attributions was involved if a person believed that a global factor caused a bad event. In this instance, helplessness symptoms tended to occur globally. In the same manner, if an individual believed that the cause was a specific factor, the deficits tended to be limited in scope.

Self-Efficacy and Academic Performance

Self-efficacy can be defined as beliefs and expectancies about one's ability to effectively perform tasks and bring about desired outcomes (Bandura 1977, 1982, 1986). Schunk (1987) hypothesized a model of motivated learning which links children's self-efficacy beliefs, motivation, and academic performance. He proposed that, based on past educational experiences and aptitude, children develop efficacy and expectations for outcomes of cognitive tasks. These expectations affect students' motivation, which then effects performance outcomes. Subsequent self-efficacy and outcome expectancies are then affected. Research with elementary school children has generally supported the hypothesized links among children's motivation, performance, and self-efficacy (Schunk, 1987).

A meta-analytic investigation (39 studies) of the relationship between self-efficacy beliefs and academic outcomes (Multon, Brown, & Lent, 1991) indicated statistically significant and positive causal relationships between self-efficacy beliefs and academic performance across a wide variety of subjects, experimental designs, and assessment methods. Self-efficacy beliefs accounted for approximately 14% of the variance in student's academic performance and approximately 12% of the variance in their academic persistence. Multon et al.'s (1991) meta-analytic investigation provided compelling support for the potential value of assessing and intervening in children's attributions.

Summary of History and Theories of Attribution

The construct of attribution was first developed in the area of personal perception

(Heider, 1958). About ten years later, motivation was incorporated into the idea of attribution (Jones & Nisbett, 1971). John Atkinson added achievement motivation in 1964 and Julian Rotter made additions of Social Learning Theory at about the same time. Bernard Weiner, whose theory of attribution has been influential in the field, refined and expanded upon Rotter's theory with the addition of two dimensions: stability and responsibility. Martin Covington's contribution of self-worth theory added a dimension of affect to the attribution idea. Learned helplessness and self-efficacy theories have focused on the relationship to academic achievement to help educators assess and intervene with low achieving students.

Various instruments are available to measure attribution and locus of control. The instruments presented here are most current, have information on psychometric properties, and are most closely related to academic achievement. Descriptions of the instruments follow.

Attribution Instruments

Locus of control and attribution measurement instruments "assess beliefs about the causes of achievement outcomes" (Clinkenbeard & Murphy, 1990). Locus of control instruments recognize the difference between internal (one's own ability or effort) and external (teacher, the task, classroom setting) causes. The attribution measures offer four or more choices (ability, effort, task difficulty, luck) as causes of a particular outcome. "The relationship of these measures to motivation is that certain attributional belief patterns will make it more likely that a student will put forth continuing effort to achieve" (Clinkenbeard & Murphy, 1990).

The instruments, described in chronological order, include: Intellectual Achievement Responsibility Scale (IAR), Nowicki-Strickland Locus of Control Scale (NSLCS), Attributional Style Questionnaire (ASQ), Children's Attributional Style Questionnaire (CASQ), and Survey of Achievement Responsibility (SOAR). See

Appendixes A, B, and C for copies of the ASQ, CASQ, and SOAR instruments. An exhaustive list of instruments is not included in this paper. Rather, the instruments were selected based on how current they were, available psychometric properties, and relationship to academic achievement. The instruments will be described in detail to provide a knowledge base for choosing the best instrument. A rich knowledge base may lead to a full understanding of the complex nature of students' attributions and instruments can then selected which reflect this multidimensional complexity.

Test users cannot rely on only the test name to guide them in selecting the best instrument for their purpose (Witt, Elliott, Kramer, & Gresham, 1994). Three problems that arise in using the test name alone to judge content validity are referred to as the "jingle fallacy", the "jangle fallacy", and the "jungle fallacy" (Kelly, 1927; Messick, 1984). The jingle fallacy occurs when it is assumed two tests with the same name are measuring similar things. The jangle fallacy causes the consumer to incorrectly assume that two tests with different names are measuring different things. The jungle fallacy is present when two tests that are supposed to measure different things are in fact highly statistically significant. The correlation is seen as evidence that the two tests are measuring the same thing. The fallacy involves not differentiating between what is being measured and the instruments used for measuring.

Information provided for each of the instruments will include: psychometric properties, empirical data, and which theory, if any, each instrument is based upon. This information will be used as the judging criteria in choosing the best attribution instrument. The best attribution instrument should have available psychometric properties, supporting empirical data, be theory based, and be directly related to academic achievement.

Intellectual Achievement Responsibility Scale (IAR)

The Intellectual Achievement Responsibility Scale (IAR), developed by Crandall, Katkovsky, & Crandall (1965) was designed to "assess children's beliefs in reinforcement

responsibility exclusively in intellectual-academic achievement situations". The IAR is not a commercially available instrument. The IAR appears to be based on Atkinson's theory of achievement motivation (1964), (i.e. the responsibility for success and responsibility for failure scales appear to be related to Atkinson's conceptions of motive to achieve success and motive to avoid failure). It consists of 34 forced choice items that represent success and failure in school situations. The testee indicates whether the outcome was due to an internal or external cause.

The IAR provides three scores: responsibility for success (I+), responsibility for failure (I -), and a total score (I total). These three scores can be further subdivided into those which attribute the outcome to the ability of the subject versus those which attribute the outcome to the subject's motivation. Thus the I+ score can be subdivided into I+E (effort) and I+A (ability); the I - score can be subdivided into I - E (effort) and I - A (ability).

The sample used to collect normative data when developing this instrument consisted of 923 elementary and high-school students drawn from five different schools. None of the students came from a large metropolitan area. The consistency of testees' IAR responses over a two month period was moderately high. Forty-seven of the children in grades 3, 4, and 5 were administered the test a second time. The test-retest correlations for these children were .69 for total I, .66 for I +, and .74 for I -. These correlations are all significant at the .01 level. To calculate internal consistency, the even numbers of each subscale (positive and negative subscales) were compared to the odd numbers of each subscale. Based on a random sample of 130 younger children, a correlation of .54 for I+ and .58 for I - after correction with the Spearman-Brown Prophesy Formula was obtained. For a similar random sample of older children, the correlations were .60 for both the I+ and the I - subscales.

Construct validity was examined by correlating IAR scores with two measures of

academic achievement in the present samples. The Iowa Test of Basic Skills and their report card grade averages were the measures of academic achievement used for the younger children. Total I scores correlated positively and significantly with almost all achievement test measures (reading, math, and language subscores and total achievement test scores) and with report card grades for grades three, four, and five.

Nowicki-Strickland Locus of Control Scale (NSLCS)

The Nowicki-Strickland Locus of Control Scale (NSLCS), also referred to as the Children's Nowicki-Strickland Internal-External Control Scale, was developed by Stephen Nowicki and Bonnie Strickland (1973). The NSLCS is not a commercially available instrument. This scale was constructed on the basis of Rotter's definition of the internal-external control of reinforcement dimension. It was developed out of a need for a reliable instrument for researchers to use to study the effects of a generalized locus of control orientation of a child's behavior. Unlike Rotter's Internal - External Control Scale, the NSLCS is easily administered to groups.

This instrument measures generalized locus of control in third through twelfth graders. The higher the score attained, the more external the locus of control. The test consists of 40 questions written at a fifth grade reading level in an agree-disagree format. The instrument was normed with over 1,000 predominantly Caucasian children in a southern suburban county.

Psychometric properties included internal consistency estimates via the split-half method, corrected by the Spearman-Brown formula of $\underline{r} = .63$ (for grades three, four, and five); $\underline{r} = .68$ (for grades six, seven, and eight); $\underline{r} = .74$ (for grades nine, ten, and eleven); and $\underline{r} = .81$ (for grade twelve). Test-retest reliabilities sampled at three grade levels, six weeks apart, were .63 for third grade, .66 for seventh grade, and .71 for tenth grade. Construct validity with the IAR was also examined. In a sample of African-American third graders ($\underline{n} = 182$) and African-American seventh graders ($\underline{n} = 171$) there were significant

correlations with I+ (.71) but not with the I- scores (.31). The IAR I- scores are responsibility for failure scores, the low correlation between the IAR and the NSLCS may imply that the NSLCS does not focus on failure situations.

Attributional Style Questionnaire (ASQ)

The attributional style questionnaire (ASQ) was developed by Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman (1982) for adults. It is presented because it is the basis for the Children's Attributional Style Questionnaire (CASQ) which follows. It is a self-report measure of attributional style for a particular event. The scale describes 12 hypothetical events, half of the events are good events and half are bad events (see Appendix A for a copy of the instrument). The test can be administered individually or to groups.

As of 1985, the ASQ had only been used as a research instrument that was used primarily in studies of depression. The ASQ was not designed as a clinical tool and is not commercially available. However, evidence indicated that the scale could also be used in studies of achievement motivation, self-esteem, life change, gender and sex role differences in causal attributions, parental behavior, and responses to aversive life events.

Peterson et al. (1982) reported internal consistencies of the Locus, Stability, and Globality Scales in a sample of 100 undergraduates. Reliabilities ranged from .44 to .69 using Cronbach's (1951) alpha.

Peterson and Seligman (1984) reported that a revised version of the ASQ with 18 bad events produced improved coefficient alphas ranging from .66 to .88. However, the revised version of the ASQ has not been extensively used and evidence of its validity is undetermined. Furthermore, the revised ASQ does not present respondents with hypothetical positive events. This limitation of good events may be critical for researchers interested in the relation between attributional style and achievement related behaviors.

Seligman et al. (1984) developed the CASQ based on the ASQ. The CASQ was

developed because it was found that young children had trouble with the ASQ, especially globality.

Children's Attributional Style Questionnaire (CASQ)

The Children's Attributional Style Questionnaire (CASQ) also occasionally referred to as the KASTAN, was first used in a study by Seligman et al. (1984). Two research questions guided their research: Are depressive symptoms in children associated with internal, stable, and global attributions for bad events; and does this style precede and put children at risk for later depressive symptoms?

These researchers recruited 96 elementary school children from two Philadelphia schools for their study. The subjects consisted of 50 boys and 46 girls ranging in age from 8 to 13 years. The subjects completed the Children's Depression Inventory and the CASQ at two times, separated by a 6 month interval. Results indicated that depressive symptoms and attributional style correlated moderately with each other with alphas ranging from -.54 to +.51. Also, attributional style for bad events predicted later depressive symptoms.

These results provide empirical support for the attributional reformulation of helplessness theory. As predicted, children exhibiting depressive symptoms were more likely than the nondepressed to apply internal, stable, and global attributions for bad events. The opposite style for good events was also associated with depressive symptoms. Furthermore internal, stable, and global attributions for bad events predicted depressive symptoms in children six months later.

The CASQ measures attributions according to three dimensions: internality, stability, and globality. These three dimensions appear to be similar to the three dimensions of Weiner's theory described earlier. Weiner's three dimensions include: (a) locus - internal or external, (b) stability - does the cause change or stay the same, and (c) responsibility - can the individual control or change the cause.

The CASQ, like the ASQ, has only been used as a research instrument and is not

commercially available. The CASQ uses a forced choice format and consists of 48 items, each of which consists of a hypothetical good or bad event involving the child and two possible causes of the event (see Appendix B for a copy of the instrument). Unlike the revised ASQ, the CASQ does include both good and bad hypothetical events. Sixteen questions pertain to each of the three dimensions; half of the questions refer to good events and half refer to bad events.

Children as young as eight years are capable of completing the CASQ, especially when someone reads the items aloud as the child reads along. The CASQ has been used primarily in studies of depression, but it may be useful in studies of achievement motivation, self-esteem, and to understand the cognitive basis of certain conduct disorders (Peterson et al., 1982).

The CASQ is scored by assigning a 1 to each internal, stable, or global response, and a 0 to each external, unstable, or specific response. Scores for each of the dimensions range from 0 to 8. A composite attributional style for positive events (CP) is calculated by adding the scores from each of the three dimensions for the positive events. A composite attributional style for negative events (CN) is calculated by summing the scores from each of the three domains for the negative events. The overall attributional style is figured by taking CP minus CN.

Results from the Seligman et al. (1984) study indicated internal consistency reliabilities, estimated by Cronbach's (1951) alpha, ranging from .31 to .55 with globality for bad events being the lowest and stability for good events being the highest. More satisfactory reliabilities were obtained by combining the subscales (separately for good events and for bad events) and obtaining composite scores. The alpha for the good events composite was .66, and for the bad events was .50. The CASQ scores were consistent and did not change significantly over a six month interval. The stability of scores shows attributional style to be a somewhat stable trait among children, just as it is among adults.

There is no standardization sample available for the CASQ. This lack of norming prohibits the clinical use of the instrument.

Survey of Achievement Responsibility (SOAR)

The Survey of Achievement Responsibility (SOAR) by Ryckman, Peckham, Mizokawa, and Sprague (1990) is a group-administered, multiple choice questionnaire based upon Weiner's attributional model. The SOAR is not a commercially available instrument. It was designed to assess students' causal attributions of success and failure in school-related situations. It differs from other measures of locus of control and attributions in that it simultaneously distinguishes among the three broad subject areas of math/science, language arts/social studies, and physical education and between the two possible outcomes of success and failure.

The test consists of 40 items: 20 success outcome items and 20 "mirror" failure outcome items. It has eight success and eight failure items for both language arts and math/science and four success and four failure items for physical education. Each item on the SOAR presents a school-related situation for which the respondent must choose one of four possible causal options: effort, ability, task difficulty, and luck (see Appendix C for a copy of the instrument). The respondent's choice represents the individual's best explanation for the success or failure outcome presented in the item. The order of presentation of the four attributional choices was randomized by item.

Psychometric property information was obtained from three studies. Subjects in the first study were 84 students from an upper middle-class suburban high school. In the second study, subjects were 325 students in grades 4 through 12 who were drawn randomly from classrooms from a large metropolitan school district. The 930 subjects in study three were from the same metropolitan school district as sample two and were randomly drawn from a database of over 20,000 students in grades 4 through 11. Median internal consistency alpha coefficients based on the three studies were figured for each of

the subscales. The median reliability estimates ranged from a low of .27 for the 4-item Physical Education Failure-Task subscale to .75 for the 8-item Language Arts/Social Studies Failure-Effort subscale.

Test-retest reliability data were obtained from 74 of the 84 suburban high school students with approximately two months between trials for each of the subscales and for various combinations of subscales. The test-retest reliability estimates ranged from .17 for the Physical Education Success-Luck subscale to .77 for the Math/Science Failure-Ability subscale. All correlation coefficients were significant beyond the .01 significance level except for the 4 item Physical Education Success-Luck subscale.

Content validity analysis indicated a strong agreement among 17 judges and the developers of the instrument on the intended attribution of each response. All judges agreed on the classification of the responses for 28 of the 40 items. Most of the differences occurred in confusions between the ability and task classifications.

The SOAR appears to be a very good instrument for assessment of school-related attributions. Its psychometric properties are within acceptable ranges, except for the Physical Education Scale. This may be an indication that students attribute success and failure differently in Physical Education than they do in more academic settings. Results from the research with SOAR are consistent with attributional theory and allow for precise application to educational settings. The SOAR is seen as a valuable and useful instrument and further research utilizing it is promising.

Summary of Attribution Instruments

Several attribution instruments were described in detail to provide a knowledge base for choosing the best instrument. The following information was presented for each of the instruments: psychometric properties, empirical data, indication of theory base or not, and the relationship to academic success and failure. The instruments, presented in chronological order included: IAR, NSLCS, ASQ, CASQ, and SOAR. None of the

attribution instruments presented here are commercially available. The SOAR instrument appears to be the best instrument to use to assess attributions of success and failure. It has good psychometric properties, supportive empirical data is available, it is theory based, and it is related to academic success and failure.

It appears that attribution assessment is still in a pioneering development stage. Thus, it is unlikely that school psychology practice has been impacted by the developments of attribution assessment.

Review of School Psychology Textbooks

A review of 11 major school psychology training textbooks (see Table 1) located 61 pages devoted to attribution text out of a total of 6685 pages (less than 1% overall). On this basis, it is likely that little instructional time is devoted to attribution theory, assessment, and intervention in school psychology degree programs. The implications of this are that school psychologists, both those practicing and in training, may have little knowledge and/or skills in this area.

If little instruction occurs, school psychologists may be missing a valuable piece of the assessment and intervention puzzle. A knowledge of attribution theory may assist school psychologists in choosing an appropriate attribution assessment instrument. Also, a knowledge of attribution theory and assessment could assist school psychologists in designing effective interventions based on the student's attributional style. A meta-analytic review of the relation of self-efficacy beliefs to academic outcomes (Multon et al., 1991) indicated stronger observed relationships when effect sizes were estimated from posttreatment (.58) than from pretreatment or strictly correlational data (.32). This indicates that the self-efficacy-enhancing manipulations used in the experimental studies (e.g., guided mastery, modeling, and feedback) may be related to changes in efficacy beliefs and may also enhance self-efficacy-performance relationships.

Insert Table 1 about here

In order to determine implications, it is necessary to examine school psychologists' knowledge base. Therefore, research focusing on the knowledge of attribution assessment and intervention practices of school psychologists may be helpful. Research could focus on surveying school psychologists' knowledge and understanding of attribution theory, assessment instruments, and interventions.

Conclusion/Summary

The importance for school psychologists to have a knowledge base in attribution theory, assessment instruments, and interventions has been explained in this paper. Attribution was defined as the term used to signify a person's beliefs about why he/she succeeded or failed at a task. For example, a person can attribute a job well done to either ability, effort, or knowledge (internal attributes) or to luck, help from others, mood, and task difficulty (external attributes). When a student has developed a maladaptive pattern of attribution it can be changed with assistance from teachers, school psychologists, and parents who each provide attribution retraining (Dweck, 1975, 1986). Attribution retraining involves teaching the student to attribute their failures in school or social situations directly to effort or strategy instead of to ability (Dweck, 1975, 1986).

The history and theories of attribution were discussed, beginning with Heider in 1958. The major attribution theories were described in chronological order and each theory's explanation of student academic success and failure was examined. The theories discussed in this paper included: Atkinson's Achievement Motivation Theory, Rotter's Social Learning Theory, Weiner's Attribution Theory, and Covington's Self-Worth Theory. Learned helplessness and the relationship of self-efficacy to academic

performance was also described. Empirical evidence for Weiner's theory was focused upon because his theory has provided the foundation for an attribution measurement instrument with the best psychometric properties: Survey of Achievement Responsibility.

The various instruments used to measure attributions, their psychometric properties, and standardization procedures were described in chronological order. These instruments included: Intellectual Achievement Responsibility Questionnaire (IAR), Nowicki-Strickland Locus of Control Scale (NSLCS), Attributional Style Questionnaire (ASQ), Children's Attributional Style Questionnaire (CASQ), and Survey of Achievement Responsibility Questionnaire (SOAR). Of these instruments it is the opinion of this author that the SOAR is the best attribution assessment instrument available. It has good psychometric properties, is well researched, and it appears to measure attribution related to academic success and failure. In addition to these qualities, studies using the SOAR provide research support for Weiner's theory of attribution. The limitations of the instrument include: lack of use for individual diagnostic decisions, and inadequate psychometric properties for the Physical Education Scale. The inadquate psychometric properties for the Physcial Education Scale may be an indication that students attribute success and failure differently in Physical Education than they do in more academic settings.

A review of assessment textbooks used in school psychology training programs and the number of pages devoted to discussion of attribution theory, assessment, and intervention were provided. Based on the findings, one could conclude that school psychologists, both those practicing and in training, may have little knowledge and/or skills in the area of attribution.

Further research focusing on the knowledge of attribution assessment and intervention practices of school psychologists is deemed necessary. One possible direction of research is a survey of school psychologists, both those practicing and in training, of

their knowledge and understanding of attribution theory, assessment instruments, and interventions. Another possible direction of research is single subject designs. The first step would be to assess the attributions of students and select students with maladaptive attributional patterns. The second step would involve using attribution retraining techniques to change his/her maladaptive pattern into one that is more effective. Finally, research could focus on developing normative groups for the SOAR at the local or statewide level.

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Table 1

Major School Psychology Texts: Number of Pages Devoted to Attribution

Text	Pages of attribution	Total Pages
1[a]	0	673
2[b]	49	469
3[c]	8	1056
4[d]	0	530
5[e]	0	532
6[f]	0	975
7[g]	3	605
8[h]	0	262
9[i]	0	641
10[j]	0	484
11[k]	0	458

a = Children's Needs: Psychological Perspectives (Thomas & Grimes, 1987)

b = School Psychology: A Social Psychological Perspective (Medway & Cafferty, 1992)

c = Handbook of School Psychology (Gutkin & Reynolds, 1990)

d = Best Practices of School Psychology vol. II (Thomas & Grimes, 1990)

e = Best Practices in Assessment for School and Clinical Settings (Vance, 1993)

f = Assessment of Children, 3rd Edition (Sattler, 1992)

(table continues)

g = Handbook of Psychological and Educational Assessment of Children: Personality, Behavior, and Context (Reynolds & Kamphaus, 1990)

h = Assessment of Behavioral, Social, and Emotional Problems: Direct and Objective Methods for Use With Children and Adolescents (Merrell, 1994)

i = The Assessment of Child and Adolescent Personality (Knoff, 1986)

j = Assessment of Children: Fundamental Methods and Practices (Witt et al., 1994)

k = The Practice of Child Therapy, 2nd Edition (Kratochwill & Morris, 1991)

ATTRIBUTIONAL STYLE QUESTIONNAIRE

DIRECTIONS

1) Read each situation and vividly imagine it happening to you.
2) Decide what you believe would be the one major cause of the situation if it happened to you.
3) Write this cause in the blank provided.
4) Answer three questions about the cause by circling one number per question. Do not circle the words.
5) Go on to the next situation.

SITUATIONS

YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.

1) Write down the one major cause: _____

_____

2) Is the cause of your friend's compliment due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

3) In the future when you are with your friend, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

4) Is the cause something that just affects interacting with friends, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME.

5) Write down the one major cause: _____

_____

6) Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

7) In the future when you look for a job, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

8) Is the cause something that just influences looking for a job, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU BECOME VERY RICH.

9) Write down the one major cause: _____

_____

10) Is the cause of your becoming rich due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

11) In your financial future, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

12) Is the cause something that just affects obtaining money, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP HIM/HER.

13) Write down the one major cause: _____

_____

14) Is the cause of your not helping your friend due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

15) In the future when a friend comes to you with a problem, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

16) Is the cause something that just affects what happens when a friend comes to you with a problem, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY.

17) Write down the <u>one</u> major cause: _____

_____

18) Is the cause of the audience's negative reaction due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

19) In the future when you give talks, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

20) Is the cause something that just influences giving talks, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situtations in my life

YOU DO A PROJECT WHICH IS HIGHLY PRAISED.

21) Write down the <u>one</u> major cause: _____

_____

22) Is the cause of your being praised due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

23) In the future when you do a project, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

24) Is the cause something that just affects doing projects, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU MEET A FRIEND WHO ACTS HOSTILELY TOWARDS YOU.

25) Write down the one major cause: _____

_____

26) Is the cause of your friend acting hostile due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

27) In the future when interacting with friends, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

28) Is the cause something that just influences interacting with friends, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU.

29) Write down the one major cause: _____

_____

30) Is the cause of your not getting the work done due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

31) In the future when doing work that others expect, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

32) Is the cause something that just affects doing work that others expect of you, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) HAS BEEN TREATING YOU MORE LOVINGLY.

33) Write down the <u>one</u> major cause:_____

_____

34) Is the cause of your spouse (boyfriend/girlfriend) treating you more lovingly due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

35) In future interactions with your spouse (boyfriend/girlfriend), will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

36) Is the cause something that just affects how your spouse (boyfriend/girlfriend) treats you, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (E.G., IMPORTANT JOB, GRADUATE SCHOOL ADMISSION, ETC.) AND YOU GET IT.

37) Write down the <u>one</u> major cause: _____

_____

38) Is the cause of your getting the position due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

39) In the future when you apply for a position, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

40) Is the cause something that just influences applying for a position, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU GO OUT ON A DATE AND IT GOES BADLY.

41) Write down the one major cause: _____

_____

42) Is the cause of the date going badly due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

43) In the future when you are dating, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

44) Is the cause something that just influences dating, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

YOU GET A RAISE.

45) Write down the one major cause: _____

_____

46) Is the cause of your getting a raise due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

47) In the future on your job, will this cause again be present?

Will never again be present 1 2 3 4 5 6 7 Will always be present

48) Is this cause something that just affects getting a raise, or does it also influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

CASQ

1. YOU GET AN "A" ON A TEST.

   A. I AM SMART.
   B. I AM GOOD IN THE SUBJECT THAT THE TEST WAS IN.

2. YOU PLAY A GAME WITH SOME FRIENDS AND YOU WIN.

   A. THE PEOPLE THAT I PLAYED WITH DID NOT PLAY THE GAME WELL.
   B. I PLAYED THAT GAME WELL.

3. YOU SPEND A NIGHT AT A FRIEND'S HOUSE AND YOU HAVE A GOOD TIME.

   A. MY FRIEND WAS IN A FRIENDLY MOOD THAT NIGHT.
   B. EVERYONE IN MY FRIEND'S FAMILY WAS IN A FRIENDLY MOOD THAT NIGH

4. YOU GO ON A VACATION WITH A GROUP OF PEOPLE AND YOU HAVE FUN.

   A. I WAS IN A GOOD MOOD.
   B. THE PEOPLE I WAS WITH WERE IN GOOD MOODS.

5. ALL OF YOUR FRIENDS CATCH A COLD EXCEPT YOU.

   A. I HAVE BEEN A HEALTHY PERSON LATELY.
   B. I AM A HEALTHY PERSON.

6. YOUR PET GETS RUN OVER BY A CAR.

   A. I DON'T TAKE GOOD CARE OF MY PETS.
   B. DRIVERS ARE NOT CAUTIOUS ENOUGH.

7. SOME KIDS THAT YOU KNOW SAY THAT THEY DO NOT LIKE YOU.

   A. ONCE IN A WHILE PEOPLE ARE MEAN TO ME.
   B. ONCE IN A WHILE I AM MEAN TO OTHER PEOPLE.

8. YOU GET VERY GOOD GRADES.

   A. SCHOOL WORK IS SIMPLE.
   B. I AM A HARD WORKER.

9. YOU MEET A FRIEND AND YOUR FRIEND TELLS YOU THAT YOU LOOK NICE.

   A. MY FRIEND FELT LIKE PRAISING THE WAY PEOPLE LOOKED THAT DAY.
   B. USUALLY MY FRIEND PRAISES THE WAY PEOPLE LOOK.

10. A GOOD FRIEND TELLS YOU THAT HE HATES YOU.

    A. MY FRIEND WAS IN A BAD MOOD THAT DAY.
    B. I WASN'T NICE TO MY FRIEND THAT DAY.

11. YOU TELL A JOKE AND NO ONE LAUGHS.

    A. I DO NOT TELL JOKES WELL.
    B. THE JOKE IS SO WELL KNOWN THAT IT IS NO LONGER FUNNY.

12. YOUR TEACHER GIVES A LESSON AND YOU DO NOT UNDERSTAND IT.

A. I DIDN'T PAY ATTENTION TO ANYTHING THAT DAY.
B. I DIDN'T PAY ATTENTION WHEN MY TEACHER WAS TALKING.

13. YOU FAIL A TEST.

A. MY TEACHER MAKES HARD TESTS.
B. THE PAST FEW WEEKS MY TEACHER HAS MADE HARD TESTS.

14. YOU GAIN A LOT OF WEIGHT AND START TO LOOK FAT.

A. THE FOOD THAT I HAVE TO EAT IS FATTENING.
B. I LIKE FATTENING FOODS.

15. A PERSON STEALS FROM YOU.

A. THAT PERSON IS DISHONEST.
B. PEOPLE ARE DISHONEST.

16. YOUR PARENTS PRAISE SOMETHING THAT YOU MAKE.

A. I AM GOOD AT MAKING SOME THINGS.
B. MY PARENTS LIKE SOME THINGS THAT I MAKE.

17. YOU PLAY A GAME AND YOU WIN MONEY.

A. I AM A LUCKY PERSON.
B. I AM LUCKY WHEN I PLAY GAMES.

18. YOU ALMOST DROWN WHEN SWIMMING IN A RIVER.

A. I AM NOT A VERY CAUTIOUS PERSON.
B. SOMEDAYS I AM NOT A CAUTIOUS PERSON.

19. YOU ARE INVITED TO A LOT OF PARTIES.

A. A LOT OF PEOPLE HAVE BEEN ACTING FRIENDLY TOWARD ME LATELY.
B. I HAVE BEEN ACTING FRIENDLY TOWARD A LOT OF PEOPLE LATELY.

20. A GROWNUP YELLS AT YOU.

A. THAT PERSON YELLED AT THE FIRST PERSON HE SAW.
B. THAT PERSON YELLED AT A LOT OF PEOPLE HE SAW THAT DAY.

21. YOU DO A PROJECT WITH A GROUP OF KIDS AND IT TURNS OUT BADLY.

A. I DON'T WORK WELL WITH THE PEOPLE IN THE GROUP.
B. I NEVER WORK WELL WITH A GROUP.

22. YOU MAKE A NEW FRIEND.

A. I AM A NICE PERSON.
B. THE PEOPLE THAT I MEET ARE NICE.

23. YOU HAVE BEEN GETTING ALONG WELL WITH YOUR FAMILY.

A. I AM EASY TO GET ALONG WITH WHEN I AM WITH MY FAMILY.
B. ONCE IN A WHILE I AM EASY TO GET ALONG WITH WHEN I AM WITH MY FAMILY.

24. YOU TRY TO SELL CANDY, BUT NO ONE WILL BUY ANY.

A. LATELY A LOT OF CHILDREN ARE SELLING THINGS, SO PEOPLE DON'T WA TO BUY ANYTHING ELSE FROM CHILDREN.
B. PEOPLE DON'T LIKE TO BUY THINGS FROM CHILDREN.

25. YOU PLAY A GAME AND YOU WIN.

A. SOMETIMES I TRY AS HARD AS I CAN AT GAMES.
B. SOMETIMES I TRY AS HARD AS I CAN.

26. YOU GET A BAD GRADE IN SCHOOL.

A. I AM STUPID.
B. TEACHERS ARE UNFAIR GRADERS.

27. YOU WALK INTO A DOOR AND YOU GET A BLOODY NOSE.

A. I WASN'T LOOKING WHERE I WAS GOING.
B. I HAVE BEEN CARELESS LATELY.

28. YOU MISS THE BALL AND YOUR TEAM LOSES THE GAME.

A. I DIDN'T TRY HARD WHILE PLAYING BALL THAT DAY.
B. I USUALLY DO NOT TRY HARD WHEN I AM PLAYING BALL.

29. YOU TWIST YOUR ANKLE IN GYM CLASS.

A. THE PAST FEW WEEKS THE SPORTS WE PLAYED IN GYM CLASS HAVE BEEN DANGEROUS.
B. THE PAST FEW WEEKS I HAVE BEEN CLUMSY IN GYM CLASS.

30. YOUR PARENTS TAKE YOU TO THE BEACH AND YOU HAVE A GOOD TIME.

A. EVERYTHING AT THE BEACH WAS NICE THAT DAY.
B. THE WEATHER AT THE BEACH WAS NICE THAT DAY.

31. YOU TAKE A TRAIN WHICH ARRIVES SO LATE THAT YOU MISS A MOVIE.

A. THE PAST FEW DAYS THERE HAVE BEEN PROBLEMS WITH THE TRAIN BEING ON TIME.
B. THE TRAINS ARE ALMOST NEVER ON TIME.

32. YOUR MOTHER MAKES YOU YOUR FAVORITE DINNER.

A. THERE ARE A FEW THINGS THAT MY MOTHER WILL DO TO PLEASE ME.
B. MY MOTHER LIKES PLEASING ME.

33. A TEAM THAT YOU ARE ON LOSES A GAME.

A. THE TEAM MEMBERS DON'T PLAY WELL TOGETHER.
B. THAT DAY THE TEAM MEMBERS DIDN'T PLAY WELL TOGETHER.

34. YOU FINISH YOUR HOMEWORK QUICKLY.

A. LATELY I HAVE BEEN DOING EVERYTHING QUICKLY.
B. LATELY I HAVE BEEN DOING SCHOOLWORK QUICKLY.

35. YOUR TEACHER ASKS YOU A QUESTION AND YOU GIVE THE WRONG ANSWER.

A. I GET NERVOUS WHEN I HAVE TO ANSWER QUESTIONS.
B. THAT DAY I GOT NERVOUS WHEN I HAD TO ANSWER QUESTIONS.

36. YOU GET ON THE WRONG BUS AND YOU GET LOST.

A. THAT DAY I WAN'T PAYING ATTENTION TO WHAT WAS GOING ON.
B. I USUALLY DON'T PAY ATTENTION TO WHAT'S GOING ON.

37. YOU GO TO AN AMUSEMENT PARK AND YOU HAVE A GOOD TIME.

A. I USUALLY ENJOY MYSELF AT AMUSEMENT PARKS.
B. I USUALLY ENJOY MYSELF.

38. AN OLDER KID SLAPS YOU IN THE FACE.

A. I TEASED HIS YOUNGER BROTHER.
B. HIS YOUNGER BROTHER TOLD HIM I HAD TEASED HIM.

39. YOU GET ALL THE TOYS YOU WANT ON YOUR BIRTHDAY.

A. PEOPLE ALWAYS GUESS WHAT TOYS TO BUY ME FOR MY BIRTHDAY.
B. THIS BIRTHDAY PEOPLE GUESSED RIGHT AS TO WHAT TOYS I WANTED.

40. YOU TAKE A VACATION IN THE COUNTRY AND YOU HAVE A WONDERFUL TIME.

A. THE COUNTRY IS A BEAUTIFUL PLACE TO BE.
B. THE TIME OF THE YEAR THAT WE WENT WAS BEAUTIFUL.

41. YOUR NEIGHBORS ASK YOU OVER FOR DINNER.

A. SOMETIMES PEOPLE ARE IN KIND MOODS.
B. PEOPLE ARE KIND.

42. YOU HAVE A SUBSTITUTE TEACHER AND SHE LIKES YOU.

A. I WAS WELL BEHAVED IN CLASS THAT DAY.
B. I AM ALMOST ALWAYS WELL BEHAVED DURING CLASS.

43. YOU MAKE YOUR FRIENDS HAPPY.

A. I AM A FUN PERSON TO BE WITH.
B. SOMETIMES I AM A FUN PERSON TO BE WITH.

44. YOU GET A FREE ICE-CREAM CONE.

A. I WAS FRIENDLY TO THE ICE-CREAM MAN THAT DAY.
B. THE ICE-CREAM MAN WAS FEELING FRIENDLY THAT DAY.

45. AT YOUR FRIEND'S PARTY THE MAGICIAN ASKS YOU TO HELP HIM OUT.

A. IT WAS JUST LUCK THAT I GOT PICKED.
B. I LOOKED REALLY INTERESTED IN WHAT WAS GOING ON.

46. YOU TRY TO CONVINCE A KID TO GO TO THE MOVIES WITH YOU, BUT HE WON'T GO.

A. THAT DAY HE DID NOT FEEL LIKE DOING ANYTHING.
B. THAT DAY HE DID NOT FEEL LIKE GOING TO THE MOVIES.

47. YOUR PARENTS GET A DIVORCE.

A. IT IS HARD FOR PEOPLE TO GET ALONG WELL WHEN THEY ARE MARRIED.
B. IT IS HARD FOR MY PARENTS TO GET ALONG WELL WHEN THEY ARE MARRIED

48. YOU HAVE BEEN TRYING TO GET INTO A CLUB AND YOU DON'T GET IN.

A. I DON'T GET ALONG WELL WITH OTHER PEOPLE.
B. I CAN'T GET ALONG WELL WITH THE PEOPLE IN THE CLUB.

Name _____

SOAR

Marking Instructions
- Use a No. 2 pencil only.
- Fill in the circle completely.
- Make no stray marks on this form.

SEX
- (F) FEMALE
- (M) MALE

AGE
(7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24)

GRADE
- (4) 4th
- (5) 5th
- (6) 6th
- (7) 7th
- (8) 8th
- (9) 9th
- (10) 10th
- (11) 11th
- (12) 12th
- (C) College

IDENTIFICATION NUMBER

SCHOOL CODE

Directions: In the following items, imagine that each thing happened to you. Fill in the circle that best fits why you think that might have happened. Fill in the circle next to the statement that best fits how you think you might feel. Please mark only one statement for each situation.

START HERE

1. If you had moved into a higher math class, it would be because
   - I worked hard.
   - the work in the class was very easy.
   - the teacher just happened to see my work on good days.
   - I seem to find math easy for me.

2. You missed many questions on your vocabulary homework assignment. This might happen because
   - I just can't seem to do well on vocabulary.
   - the words were too hard for most people.
   - there were too many things happening that day.
   - I probably didn't work hard enough.

3. In the gym class, you find that you ran 5 seconds faster than what the teacher expected. The faster speed was because
   - the teacher's stopwatch was probably not correct.
   - I am a better runner than the teacher thinks.
   - the teacher doesn't expect much from me.
   - I really pushed myself.

4. You are unable to make a basket in P.E. Why would this be?
   - I had to shoot from center court.
   - it was an off day for me.
   - I can't play basketball.
   - I didn't try.

5. You are told that you should repeat a page of math problems because of all the mistakes. The reason this happened was
   - the problems were meant for more advanced students.
   - I went too fast and didn't check.
   - too many things happened that day to do the work carefully.
   - I am bad in math.

6. On a weekly spelling and vocabulary test, you got a very high score. That might be because
   - I got lucky on that test.
   - I have always been good at spelling.
   - I worked hard on the assignments.
   - it was an easy test.

7. On a science assignment, the teacher says your answers were good. This would be because
   - I am smart in science.
   - anyone could do well on that assignment.
   - I spent many hours on the work.
   - I just happened to put the right answers down.

8. If you got high grades in P.E., it would be because
   - I am the kind of person the teacher likes.
   - everyone gets good P.E. grades.
   - I push myself to do well.
   - I am an overall good athlete.

9. You work on a new kind of problem in math. You find out that you cannot understand how to do it. This is because
   - the problem is too hard for our class.
   - I didn't listen when I should have.
   - it takes a long time for me to understand.
   - it is just one of those things.

10. Suppose in your P.E. class the teacher tells you to show how to make a basket. The teacher tells the class that this is a good example of how to shoot a basket. This probably happened because
    - I was just lucky that day.
    - basketball is one of my better sports.
    - I concentrated very hard on the shot.
    - the teacher let me shoot a very easy shot.

11. If your history map was not accepted by the teacher like most others, the reason that might happen is that
    - I've always had trouble with history things.
    - the assignment was just plain too hard.
    - I didn't work hard enough on the map.
    - I must have done the wrong map.

12. If you did not get chosen for the job of science lab assistant, it might be because
    - it was just one of those things.
    - I didn't do all the class work.
    - the teacher demands a lot of difficult work.
    - I am not very good in science.

13. On a weekly math test, you find that you only got one problem right. This happened because
    - I wasn't very lucky.
    - I am not smart enough in math.
    - I did not try hard.
    - "What a test!"

14. On your writing assignment the teacher made many good comments. This happened because
    - I worked hard on that assignment.
    - the assignment was too easy.
    - the teacher didn't read it carefully.
    - I am a good writer.

15. On your homework assignment for vocabulary, you see that the teacher marked it very good. The likely reason this happened is that
    - it must have been my day.
    - vocabulary work is easy for me.
    - it was so easy, nobody had trouble.
    - I worked a long time on the assignment.

16. On the most important writing assignment, the teacher said your work was poor. This happened because
    - I chose the wrong thing to write about.
    - I didn't try to make myself clear.
    - I can't put my ideas down on paper.

17. You were allowed to do more difficult work in social studies. Would that be because
- I have never had trouble with social studies.
- the assignments were easy.
- I guess it was just my time.
- I put in a lot of time on my assignments.

18. On the year-end science test you find that you received a very high pass. The passing grade was because
- it wasn't a very hard test.
- science comes easy to me.
- I studied a lot for that test.
- I happened to have studied all the right things.

19. You were told to rewrite your story. That would be because
- I got caught on a bad day.
- I can't seem to write.
- the teacher made the assignment too hard.
- I didn't work hard enough on the story.

20. You get a perfect score on a math test. Why?
- I am really good in math.
- The test was simple.
- I took the test on one of my super days.
- I checked all the answers.

21. After the try-outs for a school team, the coach tells you that you made the team. You made it because
- I have top skills for team sports.
- everybody who tried out made it.
- the really good players did not try out.
- I practiced for a long time.

22. Your parents get a letter from your math teacher. It says that your class work is poor. This would happen because
- I usually have trouble in math.
- I didn't finish all my work.
- I missed an assignment and the teacher caught it.
- there is too much to do.

23. The social studies teacher says that your answer to a question in class is very good. A possible reason for that is
- I would work hard on that kind of question.
- I'm usually very good in social studies.
- the teacher asked the one question I studied.
- the question was probably easy.

24. You got back your science work and saw many errors. Why would this be?
- It was a bad time for me.
- I put too little time into it.
- I am dumb in science.
- It was a very difficult assignment.

25. If you got a high grade on your report card in history, it would be because
- I must have been lucky.
- it was an easy class.
- I am good in history.
- I worked hard every day.

26. You were switched to a more basic math class. The reason might be that
- I am not smart in math.
- the teacher expected too much.
- I "goofed off."
- the teacher only saw my bad work.

27. You got a poor grade in P.E. Why? Because
- I didn't do what was asked of me.
- I am not very coordinated in sports.
- the teacher never seems to watch me.
- the teacher was too tough.

28. You face a new math problem and "catch on" very quickly. This would happen because
- the problem probably was not too difficult.
- I listened carefully when the teacher talked about it.
- it was a good day.
- I am very good at math.

29. On your test you see that you got few right on the spelling and vocabulary part. The score might be because
- I did not have any luck on the test.
- the test was just too hard.
- I did not do enough homework.
- I can't spell very well.

30. The math teacher lets you do some extra credit things because of especially good work that day. This might happen because
- I did the homework assignment.
- I just happened to study the right things.
- the math problems were very easy.
- math is easy for me.

31. The teacher said that you ran very slowly in P.E. Why?
- I didn't try to run very fast.
- I stayed up late the night before.
- the teacher had me run too far.
- I am a slow runner.

32. For your big writing assignment for the month the teacher said your ideas were very well developed. This happened because
- I was lucky to get a friend to help.
- all my ideas are well developed.
- the teacher doesn't expect very much.
- I rewrote the paper to make sure I did well.

33. The science teacher picks lab assistants for each class, and you were picked. This might be because
- my name must have been picked out of a hat.
- I know a lot about science.
- I work very hard in the science class.
- the job isn't very hard to do.

34. In your social studies class, you are called on to answer a question. When you finish the teacher tells the class that your answer was very poor. This might have happened because
- I just can't seem to learn social studies.
- it could have been a bad day.
- the question was too hard for anyone to answer.
- I didn't do my homework.

35. You failed history. The reason that happened is that
- there was too much work.
- I was unlucky.
- I didn't do my homework.
- history is beyond me.

36. Suppose the teacher puts your history report on the bulletin board as a good example. This could happen because
- history comes very easy to me.
- I worked on the assignment for a long time.
- it was the one report I finished.
- the information was not difficult to find.

37. Suppose you failed an important science test. This happened because
- no one could have passed that test.
- I have a hard time remembering science information.
- I can't always study the right things.
- I did not study very long for that test.

38. The teacher told you that you needed extra help in history. That might occur because
- I just can't seem to do well in history.
- the teacher expected too much.
- the teacher only looked at part of my work.
- I didn't try hard enough.

39. You find that you did not make a school team. Why would this have happened?
- The coach made me do the hardest things first.
- All the super athletes tried out that day.
- I did not practice.
- I am clumsy.

40. The math teacher sends home a letter to your parents that says you have done outstanding work. This would happen because
- I finished all the assignments.
- math is a strong area for me.
- the teacher must have liked me that day.
- the work was all review.