Chapter 6

Summary, Conclusion, Implication, Limitations And Suggestions For Future Research
CHAPTER 6
SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONS AND SUGGESTION FOR FUTURE RESEARCH

As inclusive education continue to gain strength and momentum for students with diverse needs and abilities, it is important to understand how educators perceive the academic outcomes of these students. Students with learning disabilities (LD) form the largest group of students with diverse needs and abilities in inclusive classrooms (Clark, 1997; Clark & Artiles, 2000). There is strong evidence that individuals with learning disabilities (LD) experience more social, emotional, and motivational difficulties than those without LD (e.g., Ayres, Cooley, & Dunn, 1990; Chapman, 1988; Sridhar & Vaughn, 2001; Vaughn, Zaragoza, Hogan, & Walker, 1993). Adolescents with LD experience the same physical, educational, and social transitions as their peers, but with the added challenge of significant learning deficits in specific domains. In school, students with LD have academic difficulties coupled with lower academic self-concepts (Chapman, 1988; Gans, Kenny, & Ghany, 2003; Tabassam & Grainger, 2002) and lower self-perceptions and self-esteem (e.g., Grolnick & Ryan, 1990; Rosenthal, 1973). According to motivation researchers, failure and poor performance lead to doubts about general intellectual abilities, which in turn lead to reduced effort, further failure, and poor academic outcomes (Licht & Kirstner, 1986). Thus, the way in which educators perceive the achievement of students with LD in comparison to those without LD is of great significance.

THE PRESENT RESEARCH

Research on the relationship between teacher’s perceptions of children’s school performance and their subsequent responses to high-and low-achieving students may offer the basis for predicting how primary school teachers will respond to the instructional outcomes of their students with learning disabilities. This work has as its foundation the attributional approach to achievement motivation (Weiner,
Teacher attribution research is supported by a wealth of empirical evidence, most of which has been generated in the United States (Clark, 2000). This knowledge base suggests that teachers, as naive scientists, seek to explain the negative or unexpected achievement outcomes of their students by intuitively examining such potential causes as students’ prior achievement, difficulty of the task assigned, or effort expended to predict the cause of an outcome (Weiner, 1986).

**CONCEPTUAL FRAMEWORK**

Attribution theorists study perceptions of causality in motivation and achievement. They argue that individuals engage in causal analyses after experiencing successes or failures, attempting to answer the question “why did I succeed or fail?” in finding a probable cause for his level of performance, one attributes his success or failure to that characteristic of himself, the task, or the situation. Attribution theorists further argue that the attributions people make can be classified into categories based on a number of salient characteristics.

Weiner (1986) gives a comprehensive overview of several classification systems for attributions in the contexts of motivation and achievement. His own system, like many of the others he discusses includes the dimensions of internality and stability. Internality refers to whether the cause within the actor (internal) or outside the actor (external). Stability refers to whether the cause is an enduring (stable) trait, which will likely affect the actor in a similar way in the future or is transient (unstable) and will not necessarily continue to affect the actor in the same way throughout the future. Ability is an example of an internal and stable attribution while effort is an example of an internal but unstable attribution. Attributional theorists believe making different attributions for success and failure can lead to a variety of affective, motivational, and behavioral results.

According to Weiner (1986) attributing success to ability (Internal stable) increase one’s expectation of future success on a given task. Since, in this case, the actor considers the cause of his success to be a characteristic that will continue to affect his
performance in the same way, his confidence in future task is high. For similar reasons, attributing failure to lack of ability lowers one’s confidence and expectations for success, since one then expects the failure – inducing cause to continue to have negative effects in future situations. Alternatively, he argues that attributing success to effort (internal unstable) does not increase one’s expectations for future successes. In this case, the actor considers the cause of his success to be a transient quality that may or may not affect him in the same way, i.e. that he will only do well in the future if puts enough effort into the task again. Similarly, attributing failure to lack of effort, does not lower one’s confidence or expectations for future success, since the cause of the negative results is not highly likely to present again in future situations. Consequently, Weiner argues that ability attributions for success generally increase task motivation and ability attributions for failure generally decrease task motivation but effort attributions for either success or failure have minimal motivational effects overall.

**Theoretical Rationale**

Teacher attribution research is supported by a wealth of empirical evidence, most of which has been generated in the United States. This knowledge base suggests that teachers, as naive scientists, seek to explain the negative or unexpected achievement outcomes of their students by intuitively examining such potential causes as students’ prior achievement, difficulty of the task assigned, or effort expended to predict the cause of an outcome (Weiner, 1986). These causal factors possess three underlying psychological properties, namely locus (whether the cause originates within the person or the environment), stability (whether the cause is stable or unstable), and controllability (whether the cause is under the volitional control of the person). Moreover, controllability is linked to responsibility. A controllable cause results in the perception that the student is responsible for the outcome; likewise uncontrollable cause leads to the perception of no responsibility. Once teachers ascribe an outcome to a cause, social emotions (anger and pity) follow, which are shaped by the properties of that cause (Hunter & Barker, 1987; Rolison & Medway, 1985; Weiner, 1979, 1986).
These teacher emotions result in such behaviors as providing evaluative feedback (rewards or punishment), giving or withholding help, or offering praise or blame (Graham, 1990, 1991; Weiner, 1985, 1986). In a seminal study, Weiner and Kukla (1970) found that student ability and effort have causal properties that shape teacher affective responses and feedback to student outcomes. Weiner and Kukla found that psychology students acting as teachers rated as greatest their anger at high-ability students expending low effort, assigning them the greatest punishment, and their pity as greatest for low-ability students expending high effort, assigning them the greatest rewards following negative achievement outcomes.

Teachers’ emotional and behavioral reactions to their students’ academic outcomes have a direct impact on the behavior of their students, influencing children’s future actions and self-perceptions (Graham, 1990). For example, the pity felt by a teacher might prompt his or her offering of a reward or unsolicited help, even when a student is engaged in an easy task. These teacher reactions might send low-ability cues to the student, which may result in the child forming a negative view of his or her own competence as a student. Conversely, teacher anger and subsequent punishment following a negative outcome may be interpreted by the child as cues that he or she is in control of the academic outcome and, thereby, a competent student.

ACADEMIC AND SOCIAL RELEVANCE

In Iran, although a significant percentage of students in special education programs have a learning disability (LD) label, and general education teachers are asked increasingly to teach students with LD, little research has been conducted on teacher attributional responses to this group of students. Interestingly, there is evidence that LD may have causal properties (Clark, 1997, 1998). Clark (1997) found that general education teachers (a) tended to reward boys with LD more than their non-LD peers following failure, (b) expressed less anger and more pity toward the boys with LD, and (c) held higher expectations that boys with LD will fail in the future. Student effort mediated this pattern of responses (i.e., students with and without LD expending high effort were evaluated more highly than their low-effort peers).
Moreover, on a rating scales task, teachers rated LD as internal to the child, stable, and uncontrollable (Clark, 1998). Note that the dimensions of LD are consistent with a medical (disease) view of disability and the same as the properties of student ability.

In sum, research conducted in the United States suggests that (a) teachers make attributions based on the locus, stability, and controllability of perceived causes of an outcome; (b) student ability, effort, and LD designation seem to have causal properties; and (c) perceived causal factors influence teacher emotional and behavioral responses to student performance, and these responses may have an effect on future student behaviors and self-perceptions. Many researchers have assumed that these attributional principles and the linkage between perceived stability of causes and the formation of expectancies are consistent across cultures (i.e., if a cause is perceived as stable, it is expected the outcome will be stable; Betancourt & Weiner, 1982; Fletcher & Ward, 1988; Weiner, 1985). However, despite a scarcity of cross-cultural work, evidence is emerging that questions the universality assumption.

The present research has academic as well as social relevance. In the researcher’s experience as a lecturer in the area of learning disability, on her various visits to regular as well as special schools, she has observed that learning disability is a big problem for parents and teachers alike. Most of them do not know the specific problems of their children or the students or what’s their duty or responsibility is for such children. It is important to note that a child with learning disability is not necessarily a special child. Other than the difficulties in learning, children with LD are just like their peers without LD. These students write ‘bread’ instead of ‘milk’ or if someone makes a noise they cannot concentrate (Panda, 1997). For this reason, it becomes difficult for the teachers to identify the difference between a normal student and a learning disabled student. It is important for teachers to make inference at the right time and give special care. Teachers usually are not able to identify these problems and because of the difference between the normal and the LD students, the students are neglected in the class. This is one of the reasons why the students with LD live alone, think alone and learn alone in the classroom and everywhere. The
students comprehend their disability status by the teachers action. Sandra Graham (1990) says that praise and blame from teachers send counter – intuitive ability messages to students. School children also gain information about personal competence, in part from classroom cues. Most of the time they base their attributions for success and failure on those cues (Clark, 1997).

Such a student continues studying as long as he/she can comprehend and then becomes a drop out. They become more shy and isolated as they go to the middle school and have to struggle in a school system where language competence is strongly related to academic success (Hatzichristou & Hopf, 1993). It is sad to note that nobody ask the students who dropped out about their reason for leaving studies, rather, almost everybody easily presume that perhaps they do not have the ability. Everything starts and ends in this presumption. The student then comes to self-acceptance rather than to the (social) acceptance of a person with a condition by others (Klass, 1981). Acceptance of learning disability comes to a student when he/she refers to himself as learning disabled. This is also known as “learned helplessness.” These students as compared to the normal students are denied rights and privileges through stigmatization by the larger culture (Higgins, 1980). School children gain information about personal competence in part; from classroom cues and they often base their attributions for success and failure on those cues (Graham 1990).

As the movement toward more inclusive settings for children with disabilities gains strength, it becomes increasingly important to understand how general education teachers perceive the academic outcomes of these children. Teachers’ perceptions of the properties of their students academic outcomes result in emotions, such as anger and pity (Weiner, 1996; Graham & Weiner 1986) which in turn lead to action such as reward or punishment and expectation of future failure (Clark, 1997). The purpose of the present study was to test basic attributional principles as applied to children with learning disabilities.
Chapter 6

Objectives

To study as to what degree teachers’ knowledge of the presence or absence of a learning disability would influence:

(a) The level of feedback (reward or punishment) they gave to a hypothetical student based on his/her ability and effort expended;

(b) The level of anger felt by teachers toward the hypothetical student based on his/her ability and effort expended;

(c) The level of pity felt by teachers toward the hypothetical student based on his/her ability and effort expended;

(d) The expectations the teachers held for the student’s future failure based on his/her ability and effort expended.

Hypotheses

(a) Teachers will assign significantly greater reward to students with learning disabilities than to nondisabled students.

(b) Teachers will assign significantly less punishment to students with learning disabilities than to nondisabled students.

(c) Teachers will feel significantly less anger towards students with learning disabilities than towards nondisabled students.

(d) Teachers will feel significantly greater pity towards students with learning disabilities than towards nondisabled students.

(e) Teachers will hold significantly higher expectations for future failure for students with learning disabilities than for nondisabled students.
METHOD

Design

In the present research, the differences between the teachers’ responses, namely, feedback (reward/punishment), anger, pity, and expectancy of future failure to the students with learning disabilities and those to their nondisabled counterparts were studied. Since the research involved a single group, hence a single group design with repeated measures was used where the teachers’ responses, i.e., the feedback (reward/punishment), anger, pity, and expectation of future failure toward students with and without learning disabilities were the within-group factors.

Participants

The final sample included 188 teachers (female = 94 & male = 94) from government run middle schools in Iran who participated in the present study. All the participants were at least 30 years of age, had a minimum qualification of Post Diploma (i.e., 12+2) according to the Iranian Education System with Psychology and Education as their qualifying subjects, were trained to deal with exceptional children, had a minimum teaching experience of ten years, and were currently employed in the Government run middle schools.

Materials

1) Proforma to collect demographic information about participants

2) Vignettes: Eight vignettes describing the following:
   - High Ability-High Effort LD student
   - High Ability-Low Effort LD student
   - Low Ability-High Effort LD student
   - Low Ability-Low Effort LD student
High Ability-High Effort NLD student

High Ability-Low Effort NLD student

Low Ability-High Effort NLD student

Low Ability-Low Effort NLD student

Procedure

The present study was conducted in two stages, first a pilot study was carried out that was followed by the main study. In the present study, the researcher sought to explore to what degree teachers’ knowledge of the presence or absence of a learning disability would influence (a) the level of reward or punishment they gave a hypothetical student based on his/her ability and effort expended, (b) the pity and anger the teachers felt, and (c) the expectations the teachers held for the student’s future failure. In order to measure, teachers’ attributional style toward students with and without learning disabilities, vignettes were used. These vignettes were in line with the ones used by Clark (1997, 2000) in her studies. Since the present research was carried out in Iran, the first step was to translate Clark’s (1997, 2000) text into Persian language. Then pilot study was conducted.

For the pilot study, permission was acquired from the Ministry of Science to conduct the research in Government run middle schools in Tehran. The Ministry of Science forwarded the request to the Ministry of Education with whom all the 21 educational zones of Tehran are affiliated. Consequently, an application seeking the permission to carry out the study was sent to the Director of Education of Area 8 of Tehran, who then sanctioned an introductory letter mentioning the purpose of research and other related details for the reference of principals of the Government run Middle Schools in the Area 8. Nine schools in the Area 8 participated in the pilot study. During the pilot, participants were asked to comment on the clarity of the vignettes, any problems they encountered, and changes they would make. They were invited to include any thoughts or ideas that they believed were helpful. Following completion of the
instrument, participants were asked to identify what types of children were addressed by the vignettes. Oral and written comments indicated that all the participants perceived the four students who were served by the Resource Specialist as having learning disabilities, with no evidence of confusion with other areas of disability.

Following completion of the pilot study, all the 35 Government run Middle schools (including the nine schools that participated in the pilot study) in the Area 8 located in Central Tehran were contacted. Since the permission had been granted by the Ministry of Education, hence all the schools agreed to participate in the study. Over the next few days, the researcher met the principals of all the 35 schools individually, explained the purpose of the study and fixed a day and time convenient to the teachers for an initial meeting with the researcher.

In Tehran a faculty meeting is held every fortnight, during which almost all the teachers are present, hence the researcher decided to meet the teachers of the various schools during the faculty meetings. During the meeting, the researcher addressed the teachers and explained about the purpose of her visit. Once the rapport was established, the teachers were asked to provide brief information about themselves, such as age, educational qualification, teaching experience, and whether they had training to deal with exceptional children. The necessity of such information was explained to them as on the basis of this information, teachers could be selected who fulfilled the above mentioned inclusion criteria, further, anonymity and confidentiality was guaranteed.

Each of the 35 schools had to be visited for an average of four times, starting with the appointment with the principal through meeting with the participants of a particular school as due to their prior engagements all the participants were not available at a specific time. While some of the participants had to be met during the lunch break, some others preferred to complete the instrument after their classes got over, whereas the rest wanted to participate in the study after the faculty meeting was held. Utmost care was taken to follow the preferences of the participants to ensure that they had a relaxed and comfortable state of mind while answering without any compulsion or restraints.
Data were collected during the appointed timings in one 1-hour session in all the participating schools. Prior to beginning the instrument, participants were briefed on the purpose of the study but not informed of the specific hypotheses. During the briefing, participants were told that the purpose of the study was to study their responses to a group of students who had just failed a test, and that the study would examine their feedback, affective responses, and expectations based on the information provided in the vignettes. The vignettes were described as containing information on student ability based on typical school indicators, classroom effort, and other relevant information. Keeping in mind that in Tehran, the schools are segregated for gender, where female teachers provide teaching instruction to girls and male teachers to boys, hence, vignettes describing hypothetical girls with and without learning disability were given to female participants and those describing the hypothetical boys with and without learning disability were given to male participants. Written directions for completing the instrument were provided to each teacher. Directions included a brief overview of the study, a statement of its purpose, and procedures for completing the instrument. Participants were invited to add any written comments to the instrument they might wish to. While participants completed the instrument, the researcher circulated, answering any questions that arose. A debriefing of participants was conducted immediately following completion of the instrument and data survey. The independent variables, including the hypothesized results, were discussed fully and any questions answered at this time. Finally the participants were thanked for their cooperation.

RESULTS

The objective of the present study was to test basic attributional principles as applied to children with learning disabilities. The researcher sought to explore to what degree teachers’ knowledge of the presence or absence of a learning disability would influence (a) the feedback, i.e., the level of reward or punishment they gave a hypothetical student based on his/her ability and effort extended, (b) the anger, and (c) the pity the teacher felt, and (d) the expectations the teacher held
for the student’s future failure. For this purpose 188 teachers (males = 94 and females = 94) were taken and their responses were recorded with the help of eight vignettes each describing a hypothetical boy/girl who had just taken a typical classroom test and failed. Three types of information were provided in each vignette in the instrument: a statement of student ability, the typical pattern of effort expended by the student in the classroom, and additional information on academic performance identifying four of the students as learning disabled and four as nondisabled. The students were described as having ability (high or low), expended effort (high or low), and were with learning disabilities or were nondisabled (LD/NLD), creating eight Ability x Effort x LD/NLD cells. It should be noted that the vignettes did not specify the reason for the hypothetical student’s failures, so as to stimulate causal thinking on the part of the participants.

The preliminary investigation revealed no significant differences between attributional responses given by male and female teachers hence the data from male and female teachers was collapsed into a single group for statistical analyses. Firstly, multivariate analysis of variance for repeated measures was conducted. Then, a 2 (Ability) x 2 (Effort) x 2 (Disability Status) analysis of variance with repeated measures was conducted for each dependent measure (reward/punishment, anger, pity, and expectancy of future failure). Of particular interest were the differences between the responses to the four students with learning disabilities and those to their nondisabled counterparts on each dependent measure. Planned comparisons using paired t tests were performed to assess these differences.

**Feedback (Reward/Punishment)**

Teacher’s knowledge of a child’s learning disability can be seen to influence both the decision to reward or punish as well as the amount of reward given, with the students with learning disabilities receiving moderate levels of reward/ punishment in all cases. While, the greatest punishment was assigned to the high-ability/low-effort nondisabled student, the least punishment was given to the high-ability /low effort student with learning disabilities. Further, in comparison to the nondisabled student
with low-ability/low effort who received punishment, the student with learning disabilities who had low-ability /low-effort received reward instead of punishment.

**Anger**

The level of ability of a student with learning disabilities’ can have some influence on a teacher’s anger toward him/her, with teachers rating their anger somewhat lower for the low-ability than the high-ability students. Effort expended seems to be highly influential as students expending high effort elicited far less anger than their low-effort peers. Rated anger indicated that students with learning disabilities, in most cases, elicited less anger than did their nondisabled peers, when matched by ability and effort, i.e., high-ability/low-effort students with LD were shown far lesser anger than their NLD counterparts. Similarly, low-ability/low-effort students with LD elicited far lesser anger than their NLD counterparts.

**Pity**

Greater pity was felt toward high-ability/low-effort students with LD than their NLD counterparts. Similarly, greater pity was felt toward low-ability/low-effort students with LD than their NLD counterparts.

**Expectation of Future Failure**

Teachers rated the student with learning disabilities as more likely to fail in all the four instances. Thus, the teachers held a higher expectation of future failure for high-ability/high-effort; high-ability/low-effort; low-ability/high-effort; and low-ability/low-effort students with LD than for their NLD counterparts.

**DISCUSSION**

This study aimed to explore and deepen the understanding of teachers’ attributions toward students with LD. The study examined teachers’ responses to student failure, considering students’ ability, effort, and LD status. Since the focus of the vignettes was on failure rather than success, so, it is important to understand the respective roles
of students’ effort (a controllable cause) and ability (an uncontrollable cause) in teachers’ attributions. Thus, if a student fails due to expending low effort, this can be seen as an understandable reason for failing (as it is a controllable cause). However, if a student fails while expending high effort, this cannot be seen as a valid reason for failing (therefore, the cause must be due to other unknown reasons). Further, if a student fails due to low ability, this can be seen as an understandable reason for failing (as it is an uncontrollable cause). However, if a student fails while having high ability, this cannot be seen as a valid reason for failing (thus, the cause must be due to other unknown reasons).

**Feedback (Reward/Punishment)**

Teachers generally expressed more positive and less negative feedback about students with LD. The only exception to this was related to students who were of a low ability and expended high effort. Students of low ability (uncontrollable reason for failure) who expended high effort (unknown reason for failure) received very similar amounts of feedback. Thus, LD and low ability can be seen as the same cause (uncontrollable). Further, while the greatest punishment was given to high ability/low effort NLD students, the least punishment was given to high ability/low effort LD students. Here it could be suggested that low effort was seen as the cause (controllable) of failure for NLD students, yet ‘LD’ was seen as the cause (uncontrollable) for students with LD, thus, it warranted least negative feedback (punishment).

**Anger**

Teachers felt less anger towards high ability/low effort students with LD than their NLD counterparts. Thus teachers may have viewed NLD students who expended low effort as failing due to a controllable cause and thus felt greater anger than they did towards LD students, where they may have viewed ‘LD’ (uncontrollable cause) and not low effort as the reason for failure. Moreover, teachers felt similar levels of anger towards students with LD and their NLD peers when students expended high effort. Thus, teachers may have viewed NLD students who expended high effort as failing
for unknown reasons, whereas students with LD may have been viewed as failing due to their ‘LD’ status.

**Pity**

Teachers felt greater pity towards high ability/low effort students with LD than towards their NLD counterparts. The levels of pity felt were similar for low ability/high effort NLD students and students with LD. Conversely, the greatest difference in the level of pity felt towards students with LD and their NLD counterparts was towards those who were of high ability (uncontrollable cause) who expended low effort (controllable cause), where far greater pity was felt towards students with LD. Thus, although the cause of failure by NLD students was seen as controllable (low effort), for students with LD, it could be suggested that it was once again the ‘LD’ (uncontrollable cause) that was the cause of the failure. Hence the discrepancy in levels of pity felt towards students.

**Expectation of Future Failure**

Teachers generally held greater expectation of future failure for students with LD than for NLD students. Even in case of low ability/high effort, the expectation of future failure was far greater for the LD students than their NLD counterparts. Although the cause for NLD students as well as for students with LD was seen as uncontrollable, however, while the NLD students were expected to overcome their low ability by expending high effort, the LD students were not expected to overcome their low ability despite expending high effort, due to their ‘LD’ status. Thus, along with low ability, ‘LD’ was also seen as an uncontrollable cause and since it would be difficult for LD students to overcome two uncontrollable causes, hence teachers held higher expectations of future failure for them than their NLD counterparts.

The moderating effect of learning disability on ability and effort attributions can be seen throughout the results of the present study. The findings were consistent with past research (Weiner, Graham, & Chandler, 1982; Weiner & Kukla, 1970) showing that learning disability does influence teachers’ responses to a student’s test failure.
Further, these data support the predicted association between reward/punishment and anger or pity toward failing students: Teachers generally reward students with learning disabilities more than their nondisabled peers, and feel less anger and more pity following test failure. This may be due to what Weiner (1986) called a “norm to be kind” to those having limitations, such as disabilities. Expectations of future failure are higher for children with learning disabilities, as well. These findings lend some support to the view of learning disability as internal, stable, and uncontrollable, which Weiner, Graham, and Chandler found was the combination of dimensions that elicited the greatest pity and the least anger.

The work of Weiner and Kukla (1970) indicated that high-ability, low effort boys with learning disabilities would be punished for their test failure, like their nondisabled matches, should learning disability have no influence on teachers’ rewards and punishment. The cause of failure, i.e., effort is seen as largely under the volitional control of the child and thereby merits punishment. Yet, teachers in the present research tend to reward these children with learning disabilities at a very low level. This would seem to suggest that teachers see learning disability as a significant, uncontrollable cause of failure. Whereas controllable causes, particularly unstable ones, are maximally punished, stable and uncontrollable causes are maximally rewarded. However, it appears that controllable effort still influences uncontrollable learning disability, thus resulting in the low levels of rewards given to these students. It may be that teachers are unwilling to punish the failures of children with learning disabilities so as to preserve their students’ self-esteem, yet do not wish to reward low effort; thus, a token reward is given, perhaps to encourage greater effort in the future or prevent even lower levels of effort.

Greater anger, less pity, and greater punishment were assigned to the high-ability, low-effort nondisabled student as compared to the student with learning disabilities. Clearly, teachers perceived his/her failures as within his/her personal control and held him/her responsible for them. However, the fact that the cause of his/her failure—a lack of sufficient effort—was unstable, coupled with his/her high ability, caused
teachers to hold lower expectations that he/she would fail again as compared to his/her counterpart with learning disabilities. Further, less anger, greater pity, and no punishment were given to the low-ability, low-effort student with learning disabilities than his/her nondisabled counterpart. In that case, rather than the lack of sufficient effort (unstable and controllable cause), the stable causes (low ability and a learning disability) were seen as causes of failure and thus failure was seen as out of the student’s control. Teachers clearly held high expectations that their students with LD would fail again. Further, expectation of future failure was higher in case of students with learning disabilities than their nondisabled counterparts in case of high ability/low effort, and low ability/high effort. Thus, ability and effort expended by the boys with learning disabilities had little impact on the teachers’ expectations.

Teachers in the present study tend to respond to the failure of students without LD through what Jacobson, Lowery, and DuCette (1986) termed a ‘normal self-esteem attribution’. This is where failure is seen to be due to an external uncontrollable cause such as bad luck or internal controllable cause such as effort. Thus behavioural responses towards the students indirectly inform these students that expectations are high and that they have the potential to achieve in the future. However, as the findings of this study also show, teachers tend to respond to the failure of students with LD through what Waheeda and Grainger (2002) termed a ‘negative attribution style’. This is where failure is believed to be due to an internal and uncontrollable cause such as ability. Thus behavioural responses towards students indirectly inform the students that expectations are low and that they do not have the potential to achieve in the future. Sadly, this often reduces self-esteem, decreases motivation and creates a haven for future expectations of failure.

CONCLUSION

It can be concluded that the moderating effect of learning disability on ability and effort attributions can be seen throughout the results of the study. The findings revealed that teachers generally gave greater rewards and less punishment to the students with LD than their NLD peers. Also, they felt less anger and more pity toward LD students than their
NLD peers following test failure. Expectations of future failure were higher for students with learning disabilities, as well. The present findings regarding attributions supports previous research in that the attributional message that teachers transmit to students with LD is that they are less competent than their peers without LD, and should expect to achieve less as a result (Clark, 1997; Tournaki, 2003).

**IMPLICATIONS**

- Schoolchildren receive a constant flow of information about their personal competence as students throughout the school day. Clearly, the teacher is a crucial source of this information. Although teachers no doubt wish to build children's self-esteem and imbue in them a sense of personal competence, they may unknowingly do the opposite via the attributional messages they send to their students with learning disabilities.

- These findings suggest that teachers make causal attributions and subsequently respond to children with learning disabilities on the basis of, at least in part, the belief that (a) these students will fail more, (b) they are deserving of more pity and less anger, and (c) they should be provided more reward and less punishment than their nondisabled peers for an equivalent outcome, perhaps to maintain or encourage motivation to perform. These three phenomena send a clear message to children with learning disabilities: They are less competent than their nondisabled peers and should expect to accomplish less as a result. When students use attributional information to make inferences about their own ability and effort, these inferences are manifest in the students’ self-esteem, expectations for their own future successes and failures, and their classroom performance.

- By exploring the attributions that teachers make for their students’ failures, this study sought to enhance our understanding of the underlying beliefs teachers hold about learning disability. There is little doubt that the impact of attributional information is both significant and long-lasting, and it may play a role in continuing to reinforce children with learning disabilities’ beliefs that
they are less competent students than their nondisabled peers (Kistner, Osborne, & Le Verrier, 1988; Licht, 1983). With this work, we begin to understand how the nature of the indirect messages teachers send to students with learning disabilities through the attributional process differs from those they send to nondisabled students.

- It illustrates the need to more fully explore the way in which children with learning disabilities interpret attributional messages. This study provides teachers with information that allows them to (a) examine the indirect cues sent to students with learning disabilities, and (b) thus potentially serve to more positively affect the way in which these children perceive themselves and their level of personal competence.

- The aim of this study was to apply established attributional principles to learning disability as a cause for failure, using established research paradigms. Although the findings suggest differences in the way teachers respond attributionally to the failure of students with learning disabilities, the results should be interpreted cautiously, considering several limitations.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

- School district policies that required teachers’ participation in research projects to be limited to faculty groups did not allow for random selection of participants in this study.

- Participants were drawn from a limited geographic area.

- Furthermore, the use of hypothetical vignettes with self-reported data did not allow the study to capture the dynamics of the classroom, and some variation in responses might be expected to occur as a function of the ecology of individual classrooms.
• The study used a nonspecific situation in which the hypothetical students failed, and it can be expected that responses might vary somewhat with type of test and subject area.

• Feedback (reward/punishment), anger, pity, and expectancies can all be expected to vary as a reflection of the on-going relationship between the student and the teacher.

• Conclusions are based on the assumption that teachers interpret ability and effort (as described in the vignettes) in essentially the same way, regardless of a student’s disability status. However, it is possible that some teachers’ understanding of what is meant by low ability or low effort will differ if a boy/girl has a learning disability, compared with his/her nondisabled peers. The present data cannot rule out such differences and the impact they may have on these teachers’ judgments.

• This work demonstrates that middle-school classroom teachers respond differentially to hypothetical students with learning disabilities based in part on attributional information, but it also raises intriguing questions that invite further investigation. For example, this study has limited itself to the middle-school classroom, which represents the majority of children placed in learning disability programs. Further, replication with secondary school teachers, as well as a systematic examination of differences among teachers at differing grade levels, will expand the findings of this study and allow us to more fully understand the nature of teachers’ attributional messages to schoolchildren with learning disabilities.

• What teacher characteristics might influence these findings? A replication of this study with special education teachers serving children with learning disabilities, including comparisons between general and special education teachers, might allow us to understand commonalities and differences in the two groups’ perceptions of children with learning disabilities, and potentially add to
the knowledge base on which consultative relationships are built. Similarly, replications might examine such factors as teachers’ years of experience, years in higher education, and experience with mainstreamed students with learning disabilities, or exposure to in-service education on teaching children with learning disabilities.