An Exploration of Attributions Towards Success in Secondary Students with Disabilities

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With the emergence of No Child Left Behind, the emphasis is on scientific-based research to provide evidence for certain practices and approaches to learning and remediation. While no one would deny that developing basic skills of reading, writing and mathematics are essential foundations for our youth, but, are they sufficient? A major topic of conversation across the nation is that American schools are failing in closing the achievement gap, particularly in reading and mathematics. While a variety of reading and mathematics programs have emerged, a number of professionals purport that more strategic solutions are needed to improve achievement. Moreover, when considering that school populations are becoming more diverse, teachers are challenged to meet the needs of each student, including those with disabilities.

In the twenty-first century, students need more than basic skills; they need to learn how to problem- pose, problem-solve, and develop critical thinking skills. They must be both visually and technologically literate. Technology is not only essential for the 21st century; it is a great tool for use in developing these skills.

Educating a student is more complex than teaching the basics. We must consider other influences that may attribute to a student’s academic success. While there are multiple perspectives, some believe that how a student attributes success can be a key factor in how well he/she learns. That is, does the student attribute success to luck or to effort? As students move towards their secondary education, we would hope that their attributions would become more realistic and students will take ownership for their behaviors. These are reasonable expectations as adolescents become adults.

In addition to attributions towards success, some social psychologists believe that achievement motivation is influenced by a child’s view of his/her own intelligence. Is intelligence fixed and determined at birth or is it malleable? How does a teacher’s behavior influence a student’s achievement motivation, self-esteem and concept of intelligence? How do we document or “prove” that certain teacher behaviors influence a child’s achievement motivation?

Locus Of Control And Learned Helplessness

Locus of control may be viewed as an individual analysis of personal success and failure. In the context of this broader definition of locus of control, academic locus of control would be the way a student views academic success or academic failure. According to Wise (2006) a person has an internal locus of control if events are viewed as a result of personal actions; a person has an external locus of control when events are viewed as being under the control of external factors. That is, the individual did not elicit any action that resulted in the subsequent event; the action is viewed as something that happened by chance or was under someone else’s control. For example, a student with external locus of control may perceive that a poor grade was due to a teacher not liking the student.

There is considerable research on locus of control and achievement. While these personal attributions may or may not be accurate representations of reality, they can influence an individual’s behavior. In
the early seventies, Nowicki and Strickland (1973) cited studies that showed a positive correlation between internal locus of control and increased achievement. Other studies indicated that students give up, resulting in a pattern of failure when they perceive that lack of achievement is due to external factors. This pattern is sometimes referred to as learned helplessness. In addition, Diener and Dweck (1980) indicated that when individuals believe that they cannot rise above failure, this belief has a negative impact on performance.

In supporting students who are at risk for academic failure, it is essential to consider whether students with disabilities exhibit higher patterns of learned helplessness than other students. Valas (2001) explored the effects of learned helplessness and psychological adjustment in groups of students who were identified as students with learning disabilities or students who were low achievers (without disabilities). The results of his study indicated that students with disabilities who were receiving special education services had lower expectations for achievement and lower self-esteem. Students with disabilities also exhibited more learned helplessness than other students.

When students exhibit patterns of learned helplessness and attribute their successes or failures to others or chance, there is a question of whether this pattern can be changed. With increasing uses of technology, one wonders whether technology use can help to change this pattern. Louie et al. (1986) found that there was a shift towards internal locus of control for a group of students participating in an afterschool computer-learning laboratory.

Self-Esteem

Harter (1983) describes self-esteem as the assignment of value or personal worthiness. Self-esteem is not a simple concept. It may be viewed as multi-dimensional. In Harter’s model, there is a general or global self-esteem. In addition to global self-esteem, there are four dimensions: competence, power/control, acceptance, and moral worth. An individual may have different feelings regarding different domains. That is, self-assessment is not a global dimension.

Students with disabilities may have attributions that interfere with the development of positive self-esteem. By definition, accomplishing achievement tasks will be more challenging for a student with a disability. This might impact the way a student attributes success or failure and affect self-esteem. In a study by Canino (1981), there is some evidence that students with learning disabilities with negative attributions may become less motivated and may suffer from lower self-esteem. Maladaptive attributions interfere with achievement; learners fail to engage in behaviors that could help them in improving their learning. According to Canino (1981) maladaptive behaviors may include both attributions towards failure and success. For failure situations, it includes a belief that failure is inevitable because of a lack of ability. In success situations, the student may simply attribute success to the task being very easy or having good luck.

In addition, there are studies researching the effect of increasing self-esteem as a way to increase achievement through technology use. For example, Tyler and Vasu (1995) reported positive increases in self-esteem in children using simulation software. In a more recent study, Page (2002) reported that technology-enriched classrooms help in increasing the self-esteem of elementary students who are from lower socioeconomic backgrounds. In this study, teachers of the experimental group classrooms were trained in using classroom technologies and were supported through a variety of training methods to continue learning about innovative ways of integrating technology. With an emphasis on language
arts, mathematics, and science, teachers used innovative teaching methods and other strategies to integrate technology.

**Achievement Motivation**

Dweck's (1986) social-cognitive approach to motivation provides one perspective of achievement motivation. Achievement motivation involves two types of goals, competence and performance. Competence goals focus on helping an individual to learn or master new skills or understandings and lead towards increased competence. These goals are frequently referred to as learning goals. Performance goals imply judgment and may be related to the individual's attempt to avoid negative judgments from others, such as looking incompetent, foolish, etc. So, when students are more performance goal oriented, they develop patterns of behavior that prevent them from pursuing valued goals. In some cases, they avoid goals that would be reasonable for them to pursue. That is, their behavior patterns are maladaptive and interfere with increasing achievement.

Dweck (2006) has further developed her theory, which is described as fixed and growth mindsets. Fixed mindset individuals believe that situations are permanent. That is, personal action does not influence the outcomes. These individuals spend time in convincing others of their value and that they are competent individuals. They may often show patterns of low effort because effort is viewed as worthless; it will not change the situation. In addition, if one has to put forth a great deal of effort, it might indicate that the person is not smart. A growth mindset is one where qualities, skills, etc. may be developed through effort. While everyone may not have the same talents or abilities, everyone can improve through effort. From a teacher's perspective, we would want to see students have a growth mindset. We may all not have the ability to become a professional athlete but we can improve, if we try.

Dweck's theory has direct implications for educators and their interaction with students. Helping students to develop a growth mindset can lead towards academic achievement motivation where students are more likely to put forth effort. In a wire side chat with *Education World* Editor-in-Chief Gary Hopkins (2005), Dweck encourages teachers to praise effort and strategy development rather than intelligence. In providing directed feedback, educators should alert students to what they did wrong and what they could do to improve their work. That is, the feedback should be directed specifically to student work. Dweck believes that sustained effort is what increases student achievement. So, teacher efforts should be to facilitate student effort.

While teacher behavior and student goal orientation influence achievement motivation, we must consider other environmental factors. In addition to teachers and peers, research indicates that parents play a major role in influencing their children. Maya (2001) developed a theory that parent characteristics, parental influence, school climate, and teacher expectations impact achievement motivation. Maya looked at parents' levels of education, their expectations, support, and involvement with the child. Maya's results indicated that students' perceived parental and teacher expectations and support influenced adolescent achievement motivation. In addition, the results indicated that parental education level did not influence achievement motivation.

**Constructivism, Technology Integration, And Teacher Behavior**

There are numerous approaches to the use of technology in the K-12 setting. Successful
implementation of technology requires leadership, a good plan, and significant professional development (Byrom and Bingham, 2001). For technology to be successful, we know that teachers must fundamentally change the types of strategies they use. Technology must become an integral part of the day-to-day process for technology integration to be successful.

Technology is an essential tool of the twenty-first century; the appropriate use of technology integrated into a classroom can be a powerful vehicle. This model proposes that the teacher must use a different set of strategies to engage students in the teaching and learning process. Teachers should consider integrating technology throughout all curricula areas. Students need the opportunity to pose questions, solve problems, and collaborate with others. Students working in small groups and independently can use technology to make meaning of their learning.

One approach to learning that requires changes in teaching strategies is the constructivist approach. This approach is a learner-centered approach. Problems and projects are created that involve authentic learning. The teacher serves as a guide and facilitates the process for students to make meaning of their learning. Many activities are project-based and problem-based; students are actively engaged in the learning process. When students use technology they learn collaboration skills, coaching skills, and tend to be more on task (Wetzel, Zambo, and Padgett, 2001). They feel like they are in control of their learning.

In addition to classroom activities, teachers need to be more aware of their “teacher talk” and the effect it may have. Students, who have a growth mindset, tend to focus on their effort and the task rather than trying to prove how intelligent they are (Dweck, 2006). Having a growth mindset usually predicts that the student will focus more effort in learning, when first attempts are not successful. As Dweck (2006) proposed in her Wire Side Chat, teachers should focus on a student’s effort and the work product. That is, teachers should avoid praising a student for his/her intelligence. A more appropriate attribution might be to praise the quality of the student’s work and the effort involved in completing it.

The Study

The essential question for this study was to address whether students with disabilities have negative attributions towards their achievement. Do they attribute their grades to effort, luck, or other external factors? A secondary question is whether students with disabilities have similar attributions towards achievement as their peers without disabilities. The survey was conducted in a high school setting in three sections of Biology I. This course was chosen because it is a graduation requirement and would include students with varied abilities. The three sections of biology were taught by the same teacher who is a nationally board certified science teacher with over twenty-five years of classroom experience. This teacher facilitates instruction using multiple strategies, including constructivism. Although students receive some direct instruction (lecture), they are involved in individual and group projects, individual and group assessments, and are supported with a variety of media to better access the curriculum. These include digital stories and podcasts. For some projects, students are given choices in how they present their information.

A survey was conducted during the second semester in the Biology I classes. The survey was conducted during a regular classroom session. While the focus of this research was students with disabilities, all students completed the survey. Students were asked to report on (1) their access to technology, (2) to predict the grade they felt they would earn in the class, and (3) to report why they felt
they would receive the predicted grade.

**Results**

Students were asked whether they owned or had access to computers and iPods outside of school. There were a total of 72 respondents for this question. Of the survey respondents, only six students were identified as students with disabilities.

![Figure 1. Access to Technology](image)

Of the students responding, 96 percent had both iPod and computer access outside of school; 100 percent of the students with disabilities had outside access.

Students were asked to predict what grade they expected to receive in biology. Of the 72 students responding, 58 percent of all classes expected grades of A with only 17 percent of students with disabilities expected a grade of A. 18 percent of all classes expected a B and 6 percent expected an A or B; while 33 percent of students with special needs expected a grade of B and 17 percent expected a grade of A or B. Only 7 percent of students expected a grade of C; none were students with special needs. 5 percent of all classes expected a grade of D or F; 34 percent of students with special needs expected a D or F grade.

![Figure 2. Grade Prediction](image)
Students were asked to attribute their grades to effort, luck, or other. Of the students responding, 82 percent attributed their grades to effort, 5 percent to luck, 8 percent to luck and effort, and 6 percent to other. For students with disabilities, 50 percent attributed their grade to effort, 17 percent for luck, luck and effort, or other.

**Figure 3. Attributions Towards Success**

Discussion

Research suggests that locus of control can change when students use and have access to technology. Some models of achievement motivation include elements of locus of control or student attributions towards success and failure. There is some suggestion that negative attributions in
students with learning disabilities can lead to decreases in self-esteem and may even inhibit a student’s problem solving ability and intellectual development (Canino, 1981).

Students were surveyed to determine their access to technology. This was to ensure that there was equitable access. From student reports, there was no major difference in access to technology out of school. Most students had access to both ipods and computers outside of class. Learning occurs in a variety of ways, which may include outside of the classroom. Continued access affords students the opportunity to continue their learning, if they choose.

Expectations can impact one’s behavior. A higher percentage of students without disabilities anticipated grades of A or B while a higher percentage of students with disabilities reported expectations of D or F. The grade is less important than the attribution of the reason a student receives a certain grade. In considering achievement motivation, the author believes that it is essential for students to have accurate attributions. To encourage and facilitate growth, students should work hard; success should be attributed to their efforts rather than luck or the teacher liking them. When students fail and they didn’t study or complete assignments, then they should attribute their grades to a lack of effort rather than bad luck or a teacher not liking them.

Students with disabilities exhibit a general pattern of lower achievement than their peers without disabilities. The students with disabilities surveyed were in general education classes and had individualized education plans. These plans included accommodations to provide better access to the general curriculum. Even with supports, some students may not be as successful as those without disabilities. Students with disabilities may put forth effort and be successful or not. What type of attribution would a student have if the student put forth effort but was unsuccessful? This variable needs to be explored. Individual interviews with teachers and students could assist in determining what students with disabilities do when they put forth effort and are unsuccessful. Will these students give up or try harder? These questions should be explored in order to assist in finding better ways to support students with disabilities.

Two issues were not addressed: (1) were student grade expectations accurate? (2) what about attributions for students with disabilities who put forth effort but were unsuccessful? For a future study, surveys should be conducted multiple times during the year. The first survey should be conducted at the beginning of the school year. Students should be asked to report grade expectations for all subjects. The survey could then be conducted at the middle and at the end of the year. Grades could be collected from the middle and the end of the year. Student expectations can be compared with the actual grades they received to determine the extent of accuracy.

**Implications For Practice**

This study explored the issues of achievement motivation as it relates to attributions towards success (or failure). In order to meet the needs of all learners in our increasingly more diverse classrooms, general education teachers are being challenged to differentiate instruction even at the secondary level. Research suggests that how students view themselves as learners can have a profound effect on academic achievement. This is of special concern for students with disabilities who may experience feelings of learned helplessness. In classrooms where instruction is differentiated, teaching practice is influenced by constructivism, feedback is focused on learning behavior, and students are provided choices, early indications are that students attribute their achievement to their efforts. That is, they
recognize that lack of effort is the result of poor grades. This was true for students with disabilities, though to a lesser extent.

Teachers need to create learning environments to facilitate students’ growth mindsets. Based on research and this exploratory study, this author believes that teachers should help their students develop self-assessment skills. Students need to see a connection between the quality of their work and their grades. One strategy that can facilitate the understanding of work quality is through the use of rubrics. Explaining a rubric and showing samples of work at different levels can assist students in learning what quality work is. Students should begin to write self-reflections and self-assess using the same rubric. The teacher and student confer and share how they each assessed the work product. As the teacher builds a trusting relationship with the student, a healthy dialogue and honest assessment can help the student develop a growth mindset and decrease feelings of learned helplessness.

What can teachers do to help students with disabilities and other students who may be at-risk for academic failure? Three suggestions may be helpful; (1) be aware of teacher talk (2) integrate technology and collaborative activities and (3) provide choices. Teacher talk is not just the lecture or content of the classroom. It includes both verbal and nonverbal interactions with the students. To reinforce realistic attributions, focus on the student work or the student behavior; let students know what they need to do in order to improve. Technology and collaborative activities provide opportunities for students to work together and learn from each other. If teachers also provide choices, this helps students to feel more in control of their learning environment.

All of these suggestions may be viewed as part of universal design for learning guidelines (UDL). In UDL, learning environments are created using multiple means of representation, multiple means of expression and action, and multiple means of engagement (Rose & Meyer, 2002). Providing a variety of activities and providing choices are examples of multiple means of expression and action and engagement. Creating classrooms using these guidelines can help to meet diverse learners by recognizing that multiple strategies are essential for a diverse student population.

References


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