

High Expectations and Student Success

Prepared for Springfield R-XII Public Schools

November 2012



In the following report, Hanover Research examines the role of expectations, both those of teachers and of students, on academic outcomes of student learning. We examine the research of John Hattie, Carol Dweck, and others in conversation with Springfield's own Learning Model regarding goals, success criteria, and person-centered relationships.

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Expectations of student achievement in the classroom and the subsequent effects of such expectations is a topic that has received acute attention for several decades. Many factors play a role in shaping how teachers form expectations of students and how students form expectations of themselves and their potential. Further, research has examined how such expectations should be framed and communicated in order to maximize achievement and drive each student, no matter the caliber of his or her starting point, to achieve beyond where he or she began.

This brief report highlights the role that expectations play in student learning, achievement, and goal-setting, with an emphasis on the work of John Hattie and Carol Dweck. Where relevant, we incorporate aspects of the Springfield Public Schools Learning Model and note where its principles are reinforced by the findings of Hattie and Dweck's research on student expectations, fostering mindsets for growth and achievement, and the outcomes of such work.

The following key findings are enumerated upon in subsequent sections of this brief.

KEY FINDINGS

- Various studies have resulted in a range of conclusions about the role of expectations on student achievement. One primary trend seen across decades of research is that students are more likely to meet expectations than not, regardless of whether these expectations are good, bad, correct, or misguided. Understanding the factors that contribute to how both teachers and student form expectations is crucial for ensuring that their influence on student learning is positive and motivating, rather than a factor that hinders success.
- Hattie's synthesis of several analyses has found that four primary factor groups affect the formation of teacher expectations. In descending order, these include: input factors, such as gender, age, or ethnicity; output factors such as student behavior; climate; and feedback (praise or criticism). Many of these factors play a larger role when teachers lack more relevant information from which to form expectations, such a student's previous academic performance. Upon learning such information, factors such as ethnicity and social class become less relevant to the expectations that are formed.
- Studies suggest that not only do students tend to increase or decrease their efforts to match the expectations laid out for them, but also that students are "reasonably accurate" in perceiving the extent to which their teachers favor some students over others by placing different expectations on them. This issue is related but notably distinct from differentiated education, which should place the same high

expectations on all students regardless of their varying starting points and subsequent end goals.

- Studies conducted in the 1980s and 1990s demonstrate a relationship between teacher expectations and their effect on establishing self-efficacy within students, making students more likely to feel equipped to set goals and work toward attaining them. The findings concluded that teachers' expectations have the potential to influence student achievement both directly and indirectly by affecting the amount of material that the student learns as well as their motivation to try to learn.
- Teachers should explicitly outline learning intentions, or goals and expectations for students. Hattie argues that goals should be articulated to students and embedded in instructional activities, so that students understand these goals and their position on the trajectory to achieve them. Further, teachers should design challenges to enhance the learning goals of individual students at specific times. The development and explanation of both goals and challenges are included in the "Clear Goals & Success Criteria" component of the Springfield Public Schools Learning Model, and are considered by Hattie to be essential for effective teachers.
- Carol Dweck's studies of the power of mindsets in shaping and motivating achievement demonstrate that fostering a 'growth mindset' in students has more positive effects than a 'fixed mindset.' The 'growth mindset' encourages students to understand that intelligence and success can be developed and is crucial to maximizing success, especially in at-risk groups who might otherwise feel destined to be less successful. This move away from a 'fixed mindset' approach, which teaches that intelligence is predetermined, must be implemented by teachers so that the expectations of all students consider the potential for growth, improvement, and success, no matter the starting point.
- Differentiated learning, or tailoring curriculum and instruction to each student's level, learning style, and pace, is a major tenet of fostering person-centered relationships in the classroom and expressing support for each student's ability to improve and achieve goals. Studies demonstrate that students must be given access to exploration and application of key concepts, frequent interpretation, and active learning. Further, differentiated instruction should be focused on those students who have made least progress from their individual starting points. These ideas build upon the Springfield Public Schools Learning Model's emphasis on person-centered relationships, which argues that connecting with students individually—hearing their concerns, empathizing, and communicating openly—is more likely to foster a safe, supportive, and productive learning environment.

EXPECTATIONS, MINDSETS, AND MOTIVATING HIGH ACHIEVEMENT

EXPECTATION FORMATION

While the fervor surrounding the study of expectations and their influence on student learning outcomes has lessened somewhat in recent decades, several past and recent studies underline the importance of expectations on student learning. The prevailing trend from this research demonstrates that **students are more likely to meet expectations than not**, whether or not those expectations are good, bad, correct, or misguided.¹ In a 2001 report from the Association of American Colleges and Universities, Ross Miller cites the findings of a 1999 study by Karl and Karen Schilling, which found that **expectations of students' abilities to succeed were "vital" to their education**:

...the literature on motivation and school performance in younger school children suggests that expectations shape the learning experience very powerfully. For example, classic studies in the psychology literature have found that merely stating an expectation results in enhanced performance, that higher expectations result in higher performance, and that persons with high expectations perform at a higher level than those with low expectations, even though their measured abilities are equal.²

In "Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement," John Hattie reinforces the validity of this concept. He contends that the question is not, "do teachers have expectations?" but rather, "do they have false and misleading expectations that lead to decrements in learning or learning gains?" and if so, for which students?³

A 1985 study summarized by Hattie examined 135 separate investigations of the effects of teachers' expectations on students' "various behaviors." The study concluded that the following **four factors influence the "transmission of expectancies"** in descending order:

- Input factors (such as students' gender, age, ethnicity);
- Student output (whether or not the student asks questions, interacts frequently with teachers, etc.);
- Climate; and
- Feedback (praise or criticism).

¹ Hattie, J. "Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement." Routledge. 2009. P. 122.

² Miller, R. "Greater Expectations to Improve Student Learning." Association of American Colleges and Universities. November 2001. http://www.greaterexpectations.org/briefing_papers/ImproveStudentLearning.html

³ "Visible Learning." Op cit., p. 121.

These findings suggest that such expectations are, in effect, self-fulfilling prophecies, where teachers are “more likely to have their students reach their ‘expected’ outcomes, regardless of the veracity of the expectations.”⁴ Hattie further found that expectation effects were larger for young students in grades 1 and 2 than older students in grades 3 and 4. Additionally, prior teacher-student contact of at least two weeks was found to reduce the formation of negative expectations.⁵

Other studies suggest that **students exhibiting particular characteristics are affected differently by teacher expectations**. Figure 1.1 below lists the factors found to be significantly and positively related to teacher expectations, as well as those found to be unrelated to teachers’ formations of expectations. However, research has also found that when teachers are provided with more pertinent information, such as students’ academic information, factors such as social class became less important to teachers’ creations of expectations.⁶

Figure 1.1: Factors Affecting Expectation Formation

POSITIVE, SIGNIFICANT FACTORS TO TEACHER EXPECTATIONS	FACTORS UNRELATED TO TEACHER EXPECTATIONS
<ul style="list-style-type: none"> ▪ Attractiveness ▪ Prior conduct in class ▪ Cumulative folder information ▪ Social class (high and middle vs. low) 	<ul style="list-style-type: none"> ▪ Number of parents at home ▪ Gender ▪ Previously-taught siblings ▪ Name stereotypes ▪ Student ethnicity

Hattie’s research also found that students associated with having “learning difficulties” were given lower expectations from their teachers than those that were not associated with the label:

A [2002 study] found 79 studies that compared students with lower reading achievement with those labeled as having learning difficulties. The effect [appeared to be that] the reading scores of 73 percent of low achievers without the label were above the average reading score of low achievers with the label—clearly, labeling leads to differential performance and it is difficult to understand why this is so when there was no evidence that these labeled students have a qualitatively different set of learner characteristics than those not so labeled.⁷

In addition to the different factors influencing teachers’ expectations of students’ capabilities, Hattie also explores the extent to which students know that they are treated differently. In “Visible Learning for Teachers,” he notes that students are “reasonably accurate in informing on when teachers favor some students over others” by placing higher expectations on a certain subset within a class. While differentiated instruction, or tailoring teaching approaches to students’ individual needs, is paramount to high achievement, administrators should **distinguish between differentiating teaching approaches and**

⁴ Ibid, p. 122.

⁵ Ibid.

⁶ Ibid, p. 123.

⁷ Ibid.

establishing expectations, ensuring that all students are challenged equally, even if the desired outcomes for each one may vary significantly.

Sources other than Hattie also laud the power of high expectations in closing achievement gaps, and note that surveys of students, in addition to teachers, reveal that students believe that standards should not be lessened for students with perceived disadvantages. For example, 84 percent of students say “schools should set the same standards for students from inner-city areas as they do for middle class students.”⁸

These findings underline the fact that **not only do student achievement outcomes support the idea of establishing high expectations for all students, but the learners themselves appreciate the effectiveness of setting equal, high expectations for both themselves and their peers.** A report from *Teaching as Leadership* goes on to elaborate upon the tactics of successful teachers in ‘at-risk’ areas when it comes to setting standards for student achievement and establishing expectations:

(1) Establish an ambitious academic goal for what their students will accomplish that some may believe to be unreasonable. In establishing those goals, *teachers must look beyond traditional expectations of their students and instead benchmark their students’ learning against the achievement of students in the most successful classrooms in the most successful schools in the country.* Given [the] students’ potential to achieve, why should they be deprived of learning at the rate and level of students in affluent communities?

(2) Invest students in achieving the ambitious academic goal. *This investment process involves convincing students that those big goals are possible.* As discussed below, in doing so [the teacher] harnesses the amazing power of the “self-fulfilling prophecy” of high expectations—students work harder and achieve more, simply because they believe they can and are expected to.

(3) Work purposefully and relentlessly to achieve [the students’] goals overcoming all obstacles. As an effective teacher, *assume full responsibility for moving students forward to meet their ambitious academic goals.* Given the many unique obstacles [these] students may face, whether because of inequitable school resources or the challenges of poverty, determination to ensure students fulfill their true potential requires an unusual level of purposefulness and determination.

(4) Deliberately and continually improve [student] performance over time through a constant process of self-evaluation and learning. *As part of teachers’ ongoing reflection process, they must work hard to combat the constant negative influences of messages of lowered expectations* that eat away at their and their students’ visions of academic achievement.⁹

Also worth noting is the relationship between school leadership and the establishment of high expectations that are more likely to affect positive change regarding student achievement. New Leaders for New Schools, a nonprofit organization focused on

⁸ “Chapter Two: The Power of High Expectations: Closing the Gap in Your Classroom.” *Teaching as Leadership*, p. 35. http://teachingasleadership.org/sites/default/files/Related-Readings/DCA_Ch2_2011.pdf

⁹ *Ibid*, pp. 29-30. Emphases added.

educational reform, notes that at efficacious institutions, **the establishment of high expectations begins at the top:**

[We have] learned a great deal about the specific actions a principal can take to build a culture where adults demand that students have high aspirations for themselves and support them in realizing those aspirations. In these schools, *highly effective principals take the lead*: every message they send to students, parents, or teachers connects their high expectations for student academic achievement to success in college and beyond. These messages always include some variant of “You [or “our kids”] can do this,” “I believe in you,” and “We will support you in reaching your goals.”¹⁰

EFFECTS OF TEACHER BEHAVIORS ON EXPECTATIONS

The ways in which teachers develop, manage, and act upon expectations can have a significant influence on the students with whom they are interacting. For example, a 1987 synthesis report of 112 previous studies examined the effects of a variety of teacher expectations on students, with expectations ranging in topic from classroom achievement to athletic performance. The study found the following four main effects:

- Teacher expectation effects are most likely to occur in subject areas that allow the greatest variation in instructional styles.
- Some instructional behaviors are more likely to produce expectation effects than others.
- Severe self-fulfilling prophecies rarely exist in the classrooms, but “mild” self-fulfilling prophecies and sustaining expectation effects are matter for concern.
- The actual ability and motivation levels of students primarily determine teacher expectations.¹¹

For the most part, these effects align quite closely with Hattie’s findings, though distinctions are made here for instructional behaviors. These findings saw variety in whether expectations set by educators were self-fulfilling prophecies. Also of concern is the relationship between teachers’ expectations of students and those students’ own feelings of self-efficacy, or their own “judgments of their capabilities” regarding execution of actions required to attain certain outcomes.¹²

According to a 2000 essay from Miami University of Ohio investigating teacher expectation research, performance in the academic space synthesizes these two ideas as students “maintain self-efficacy judgments of their capabilities, skills, and knowledge to master school-related tasks...these teacher expectations have the potential for affecting student

¹⁰ Fenton, B. “New Leaders for New Schools: Building a Culture of High Aspirations.” ASCD. Emphasis added. <http://www.ascd.org/ascd-express/vol5/506-fenton.aspx>

¹¹ Bulleted points taken verbatim from: Bruns, C., et.al. “Great Expectations? An Investigation of Teacher Expectation Research.” Miami University of Ohio. December 6, 2000. http://www.users.muohio.edu/shermalw/edp603_group2-f00.html

¹² Ibid.

achievement both directly, by affecting the amount of material that the student learns, and indirectly, by affecting the motivation to try to learn at all.”¹³

Hattie argues for the importance of goals in defining expectations, which may also be referred to as learning intentions. He explains that “good learning intentions are those that **make clear to the students the type or level of performance that they need to attain**, so that they are positioned along the trajectory towards successful learning.”¹⁴ Teachers identify learning intentions, and then plan situations that allow students to achieve appropriately challenging goals. These goals should be communicated to students and embedded into instructional activities, so that students would be capable of articulating and understanding the learning intentions.¹⁵ These learning intentions are a critical component of the “Clear Goals & Success Criteria” of the Springfield Public Schools Learning Model.

FIXED AND GROWTH MINDSETS, SELF-REPORTING GRADES, AND OTHER FACTORS AFFECTING ACHIEVEMENT OUTCOMES

FIXED AND GROWTH MINDSETS

As an academic psychologist studying individual potential, motivation, and expectations, Dweck’s studies have found that the key to success is not ability, but rather “it’s whether you look at ability as something inherent that needs to be demonstrated or as something that can be developed.” Dweck has found that people can learn to adopt the latter belief—that success can and often must be developed—and can thus make “dramatic strides in performance.”¹⁶ This research helped put attribution theory to “practical use,” explaining why the manner in which goals are framed for students dictates how they perceive challenges placed before them, and, more importantly, react after setbacks:

Common sense suggests that ability inspires self-confidence. And it does for a while—so long as the going is easy. But setbacks change everything. Dweck realized—and, with colleague Elaine Elliott soon demonstrated—that *the difference lay in the kids’ goals*. “The mastery-oriented children are really hell-bent on learning something,” Dweck says, and “learning goals” inspire a different chain of thoughts and behaviors than “performance goals.”

Students for whom performance is paramount want to look smart even if it means not learning a thing in the process. For them, each task is a challenge to their self-image, and each setback becomes a personal threat. So they pursue only activities at which they’re sure to shine—and avoid the sorts of experiences necessary to grow and flourish in any endeavor. Students with learning goals, on the other hand, take necessary risks and *don’t worry about failure because each mistake becomes a chance to learn*. Dweck’s insight launched a new field of educational psychology—**achievement goal theory**.¹⁷

¹³ Ibid.

¹⁴ Hattie, J. “Visible Learning for Teachers: Maximizing Impact on Learning.” Routledge, 2012. P. 47.

¹⁵ Ibid., p. 143.

¹⁶ Krakovsky, M. “The Effort Effect.” *Stanford Magazine*. March/April 2007.
http://alumni.stanford.edu/get/page/magazine/article/?article_id=32124

¹⁷ Ibid.

From here, Dweck developed her theory on fixed versus growth mindsets: fixed mindsets correspond to those who perceive intelligence as fixed from birth, while **those with learning goals have a “growth mind-set about intelligence,” believing it can be enhanced and developed over time.** The latter of the two is essential for students and teachers alike to foster growth and improvement among students, particularly those who are considered “at-risk” or having “special needs.” As a *New York Times* article highlighting Dweck’s work puts it, “in this case, nurture wins out over nature just about every time.”¹⁸

The following paragraphs are excerpts from a video interview Dweck delivered in December, 2010 that elaborates upon her definitions and subsequent ‘mindsets’ of fixed intelligence and growth intelligence students.¹⁹ On fixed mindsets regarding intelligence and achievement:

[Regarding fixed intelligence], some students have a fixed mindset—they believe that their basic intelligence is just a fixed trait. It makes them very concerned with how much they have—before a task, they think, “will I look smart?” and they base their activities on whether their intelligence will be shown to an advantage [when engaging in such activities].

Regarding growth mindsets:

Other [students] think, “*my intelligence is something I can develop, through passion and studying and education.*” What if we taught students the growth mindset? To test the efficacy of this, we conducted an eight-session workshop of study skills in a growth mindset. The study skills were great, but they did no good whatsoever [to improve student performance] because [students] lacked the motivation to put them into practice. Those students’ grades continued to decline. Those that got the growth mindset lesson—[which reinforced that] your brain is like a muscle, your brain makes new physical connections each time they learn something—heated, animated discussion resulted and they were taught how to apply this to their schoolwork. At the end of the semester, *they showed significant rebound in their grades.* [Notably], **teachers could pick out the growth mindset students after their workshop [based on their performance,** as compared with those students whose performance reflected that they had not been taught to alter their approach to learning].

STUDENT SELF-REPORTING

Applying these ideas to other aspects of study regarding student learning expectations can be useful when establishing to the amount of focus to place on achievements and outcomes rather than learning processes. **Student self-reporting of prior achievements—generally in previous academic years—is a method of measuring a student’s chances of success** according to Hattie. He cites the findings of a 2005 report, which found that “high school students had very accurate understandings of their achievement levels.” However, minority students diverged from this trend: in addition to receiving grades that were lower than

¹⁸ Rae-Dupree, J. “If You’re Open to Growth, You Tend to Grow.” *The New York Times*. July 6, 2008. <http://www.nytimes.com/2008/07/06/business/06unbox.html>

¹⁹ “Carol Dweck: Mindset Interview.” Youtube. <http://www.youtube.com/watch?v=ICILzbB1Obg>

those of non-minority students overall, they were “more likely to be less accurate in their self-estimates or self-understanding of their achievements.”²⁰

Hattie does not examine whether or not these students with less accurate understandings under- or over-estimated their abilities. However, he does note that relying too heavily on self-reported grades and achievement risks placing expectations too low, since students will occasionally do the same with their own reflections on past achievement. This, he states, “may become a barrier for some students as they may only perform to whatever expectations they already have of their ability.”²¹

In “Visible Learning for Teachers,” Hattie elaborates on this concept by noting that **“emphasizing accurate calibration [of students’ abilities and performance] is more effective than rewarding improved performance.”** Further, **having teachers educate students to have “high, challenging, appropriate expectations is among the most powerful influence in enhancing student achievement.”**²² Helping students to make their own perceptions of previous performance more precise is an important first step to establishing a metric from which to set future goals. This is an essential component of establishing learning intentions and defining expectations for students as outlined in the “Clear Goals & Success Criteria” component of the Springfield Public Schools Learning Model.

CHALLENGES AND PERCEIVED TEACHER DIFFERENTIATION OF EXPECTATIONS

CHALLENGES

Dweck’s work on fostering growth mindsets that view challenges as opportunities, rather than threats to current or future perceptions of a student’s intelligence or abilities, are supported by other research studies and findings. Hattie notes that the experience of a challenge is often accompanied by dissonance, disequilibrium, and doubt.²³ However, this description is consistent with that of challenges as perceived by Dweck’s “fixed mindset” learners, who do not perceive the opportunity for growth as positive but rather as a danger to their current standing and others’ perception of their intelligence.

Based on his analyses, Hattie concludes that “shifting the focus [of a challenge] from the self to the task at hand, to the nature of the error, and to the strategies to use the error are the skills of teaching.” This is perhaps less instructive than Dweck’s emphasis on fostering a “growth mindset,” focusing on the costs of setting challenges rather than the opportunities they present. **Therefore, studying both concepts in conversation with one another yields more meaningful findings that appreciate the risks and opportunities of presenting students with tasks unlike those they have faced in the past.**

²⁰ “Visible Learning.” Op cit, p. 43.

²¹ Ibid, p. 44.

²² “Visible Learning for Teachers.” Op cit, p. 54.

²³ Ibid, p. 52.

Hattie notes that challenges should be designed for the specific learning goals of individual students at certain times. Citing Carol Tomlinson (2005), he explains that “ensuring challenge is calibrated to the particular needs of a learner at a particular time is one of the most essential roles of the teacher and appears non-negotiable for student growth.”²⁴ This importance of designing appropriate challenges is listed by Hattie as one of five components of learning intentions and success criteria found in the “Clear Goals & Success Criteria” component of the Springfield Public Schools Learning Model.

DIFFERENTIATED EXPECTATIONS

An emphasis on differentiated learning, mentioned briefly in earlier sections of this brief, has also been cited as a means of affecting high achievement and positive change within a diverse group of students. This method places an especially large responsibility on teachers, who, Hattie states, “need to know, for each student, where that student begins and where he or she is in his or her journey toward meeting the success criteria of the lesson.”²⁵ A combination of a 1995 study and Hattie’s own findings demonstrate that the following five characteristics, which address modes of flexibility, encouragement, and assessment of progress, are essential for **effective differentiated instruction**:

1. The first is that all students need to have the opportunity to explore and apply the key concepts of the subject being studied and then to achieve success.
2. Frequent formative interpretation is needed to monitor the students’ path to success in the learning intention. This, more than most other activities, will help to generate the highest probability of successful teaching and learning.
3. Flexibly grouping students so that they can work alone, together, or as a whole class, as appropriate, makes it possible to make the most of the opportunities created by difference and commonality.
4. As much as possible, we should engage students in an active manner to explore and reach the success targets.
5. Those who gain more may need different instruction than those who gain less...[schools should frame differential learning] in terms of those who have gained or not gained, [since] those who have not gained (irrespective of starting point) are more likely to need differentiated instruction.²⁶

Differentiated learning practices and the flexibility and dynamism of teaching styles they encourage are reflected in the Springfield Public Schools Learning Model. The “Person-Centered Relationships” segment encourages bonding with students, demonstrating trust in them, and empathizing with their individual needs and situations. These approaches are all related to differentiated learning, which fundamentally argues that educators must approach each learner as a separate entity in order to yield the most effective results in their achievement.

²⁴ Ibid.

²⁵ Ibid., p. 98.

²⁶ Bulleted points taken verbatim from: Ibid.

PROJECT EVALUATION FORM

Hanover Research is committed to providing a work product that meets or exceeds member expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.

<http://www.hanoverresearch.com/evaluation/index.php>

CAVEAT

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties which extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every member. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Members requiring such services are advised to consult an appropriate professional.



1750 H Street NW, 2nd Floor
Washington, DC 20006

P 202.756.2971 F 866.808.6585
www.hanoverresearch.com