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Underachievement: Some possible explanations and potential solutions

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Underachievement: Some possible explanations and potential solutions

Abstract

Underachievement is a major threat to the excellence movement in American education. Underachievers are students who demonstrate good verbal skills in class discussions and may score well on standardized IQ tests, but do poorly on written assignments and teacher-made tests. They are identified as underachievers by splits of more than 20 points between verbal and nonverbal scores.

Underachievement is due to a variety of factors: low self-esteem, poor expectations from teachers and parents, peer pressure, and learning disabilities. These factors prevent students from learning the skills they need to succeed in school. Skills that are important for them to learn include test-taking, effective use of textbooks, mnemonics, and story mapping . Teachers need to model these skills before students can learn their use.

UNDERACHIEVEMENT: SOME POSSIBLE EXPLANATIONS
AND POTENTIAL SOLUTIONS

A Research Paper

Submitted to the Faculty of the Graduate School
of the University of Northern Iowa

by

Clen A. Lincoln

in Partial Fullfilment of the Requirements

for the Degree of

Master of Arts/Educational Psychology

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POTENTIAL SOLUTIONS

has been approved as meeting the research paper requirement for the
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ABSTRACT

Underachievement is a major threat to the excellence movement in American education. Underachievers are students who demonstrate good verbal skills in class discussions and may score well on standardized IQ tests, but do poorly on written assignments and teacher-made tests. They are identified as underachievers by splits of more than 20 points between verbal and nonverbal scores. Underachievement is due to a variety of factors: low self-esteem, poor expectations from teachers and parents, peer pressure, and learning disabilities. These factors prevent students from learning the skills they need to succeed in school. Skills that are important for them to learn include test-taking, effective use of textbooks, mnemonics, and story mapping. Teachers need to model these skills before students can learn their use.

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Chapter 1

INTRODUCTION

Introduction

Horatio Alger set the pace for each of us when he "proved" that all of us can succeed if we have positive thoughts, work hard, and never give up. Many educators believe in the American Dream, yet in many classrooms there are students who can not fulfill their academic dreams.

The term "underachiever" has been used by educators for quite some time. The term describes those students who are unable to achieve as well in school as they are expected. The Nation at Risk (1983) report contended that many of the students in our schools are underachieving. The report then listed areas of concern (e.g., math, science, critical thinking, and basic literacy). The Nation at Risk report argued that the main reason there are underachievers in school is that the schools are deficient. The Report decried the fact that American schools are: 1) lacking in the teaching of basic facts, 2) failing to encourage higher order thinking, and 3) not spending sufficient time on academic tasks.

The Nation at Risk report also asserted that the American educational system is the reason that

potentially bright students don't achieve as well as they should. For students to maximize their abilities, basic skills need to be taught with more intensity. The report also calls for the deletion of all subjects and teaching strategies that do not directly teach these basics.

Sigurdson (1981) offered another view as to why some students don't perform to their maximum potential.

He identified underachievers as those students who lack the study skills needed to succeed in school. Sigurdson disagreed with the idea that the lack of basics is the cause of underachievement. Instead of concentrating on the teaching of basic skills, Sigurdson believed schools need to concentrate on teaching study skills. In essence, schools need to identify characteristics of underachievers and provide them with skills that will enable them to overcome these deficiencies. This change in focus will enable underachieving students to gain greater measures of academic success.

Statement of the problem

The purpose of this paper is to review the related literature and provide answers to the following questions: 1) What is the nature of underachievement? Many students appear to understand content during class

discussion. They answer questions and ask pertinent questions, yet they are unable to perform adequately when they are required to complete written assignments or take tests.

2) How can underachievers be identified? Teachers can tell when students are underachieving because the differences between verbal and written performance is obvious. IQ tests can verify a teacher's perception of underachievement. If the difference between verbal and nonverbal scores is more than 20 points, underachievement may be the reason.

3) What causes underachievement? Underachievers are students with average to over-average intelligence. They are able to discuss concepts that are taught in class but can not write down answers to the same questions. The lack of motivation for doing well on written assignments needs to be examined. Teacher and parental criticism may also be a reason for underachievement. Boredom with school may be a factor in explaining why gifted students underachieve.

4) What strategies help underachieving students? Lack of skills is a major reason for students not achieving. Teachers need to understand which skills are needed for underachievers to succeed and what methods teachers need to use in order for students to learn and to use these skills.

Significance of the Study

PL 94-142 (1975) demanded appropriate educational opportunities for all handicapped students. Educators must also face up to the fact that other, "non-handicapped" students are also experiencing serious problems in their pursuit of quality education. This study intends to identify groups of such students and give practical suggestions as to how to design classes to assure academic success.

Definition of Terms

Gifted Child. A child whose mental age is considerably higher than his actual age when compared with children in the general population. (Good 1973) The Fort Dodge standard is a verbal score of 130 on a WISC-R and a comprehensive score above the 90th percentile on the ITBS

Learning Disabilities (LD). Learning problems are caused by central nervous system dysfunctions. These problems are genetic and difficult to diagnose. Most LD students have problems reading and completing written work but do better at other subjects whenever reading and writing deficiencies don't interfere with the student's ability to understand the content.

National Joint Council for Learning Disabilities
(NJCLD). A coalition of seven (7) councils that
have merged in order to better meet the needs of LD
students. (Hammill, Leigh, McNutt, & Larsen 1981)
PL 94-142. The education for all Handicapped
Children Act of 1975.

Slow Learner. A child whose IQ is on the boarder
between low-normal and retarded. This IQ range is
from 75-89.

Underachiever. Students who demonstrate
intelligence by scoring well on IQ tests or by
their knowledgeable participation in class
discussions, yet hand in poorly written assignments
and score poorly on tests.

Procedures in Obtaining Literature

Three methods were used to gather data for this
study. Initially a computer (ERIC) search was done
utilizing key terms such as underachieving,
middle-school students, identified strategies, and
academic performance. Documents identified during the
search were scanned for relevancy and journal articles
found in the relevant documents' bibliographies were
located. Education Index and the card catalog were
utilized and topics such as underachievers, student
achievement, self-perception, and motivation were

reviewed.

The review was difficult because much of the research conducted on this topic was made prior to 1975. The computer search dealt with articles written from 1978-1988, so much needed information wasn't available in the computer search. Education Index provided an abundant supply of articles from 1971-1974 and bibliographies from those journals provided additional sources from previous years.

Chapter 2

REVIEW OF THE RELATED LITERATURE

Introduction

This search was conducted in order to discover causes for underachievement and possible teaching strategies that would result in academic success for underachievers. Unlike the slow learner, the underachiever is capable of succeeding in school at a higher level of performance. The LD student, the gifted underachiever, and the child with low self-esteem are described.

Identification is made by comparing verbal and nonverbal scores received on the WISC-R. High nonverbal and low verbal scores indicate a student who may be underachieving. Poor self-concept, fostered by uncaring educators, angry parents, or peers, promotes underachievement. Frustration or anger, when directed at the school, is another cause of underachievement.

Underachievers are poor test-takers and users of texts. Instruction in these areas will allow underachievers to demonstrate their abilities. Instruction in mnemonics help students memorize facts, and teaching story mapping skills will enable students to better understand stories because they can visualize the whole story at one time. Finally, teaching broad

strategies, instead of many skills, will allow the students to relate skills and concepts together. The whole business of helping underachievers is partly a process of telling them that they are intelligent and worthwhile. This attitude is essential if the underachiever is to succeed.

What is the Nature of Underachievement?

Underachievers are puzzles to many dedicated educators. These students appear bright and interested during class but are failures whenever written work is assigned. They verbalize well-conceived answers to questions that indicate knowledge but then fail the tests

that cover these same concepts. This type of student is perceived by many teachers as being a slow learner, yet has an IQ that is measured as normal.

Weider (1973) stated on page 19 that "Underachievers are not born, they are made!" The students described in this study have IQ's over 90. One of the current debates in American education is whether or not there is really a class of students called learning disabled.

Some researchers believe that these students are really slow learners.

The problem with this appraisal is that slow learners can not score within the normal range (90-110)

on an intelligence test. In addition, they can not effectively participate in class discussion or produce other forms of higher-order thinking on class assignments. Slow learners experience learning problems because they are unable to understand concepts or are not likely to produce the kinds of thinking skills that lead to learning at a high level of mastery.

The NJCLD's definition of LD students shows why some researchers believe these students are slow learners. The reason stated for their disability is a nervous system dysfunction. Utilizing this definition, no precise cause can be provided for the lack of learning in these students. The fact remains that these students score within the normal range and they are able to produce good discussion with demonstrations of original thinking. Their lack of reading and language skills don't allow them to be good students because of the emphasis that is placed on reading and writing competence whenever teachers assign daily work and tests.

The tragedy of underachievement is that potentially able students are categorized as being slow or retarded. LD students are only one type of student that underachieves. A second group belongs to the most

capable students in the school process, the gifted student. These students demonstrate exceptional ability to discuss, to think of ideas or solutions to problems that other students can not, and a superior working-knowledge of the English language. They are able to complete assignments correctly and very quickly. However, many of these students receive grades of C and below. Many of these students also become discipline problems and openly defy educators who try to teach them.

A third group of underachievers is really nondescript. They sit in class, put out very little effort, and never seem to have any interest or desire to become involved. Like the LD student, they appear to be slow or retarded learners. As teachers look into the records of these students, they find a history of academic failure. They may find indications of parental or school disapproval of the student. They may find that the student has been referred to counseling because of rebellion against the school or because of poor self-concept. Whatever the reason, the facts remain that that the student has scored well on previous IQ tests but is not putting forth enough effort to receive the grades which the intelligence test indicates they should receive.

Schools contain students who have difficulty learning at times. If teachers or parents overreact, the result may be that the student gets a self-perception of failure. If this self-perception is not reversed, the self-imposed expectation will severely limit the student's academic performance.

How can Underachievers be Identified?

This paper has defined underachievement as the difference between the ability a student demonstrates during class discussion and the inability to produce well-written assignments or score well on tests. Teacher perceptions are the most accurate indicators of when students underachieve. These perceptions can be verified by examining the results of IQ tests. Students who score at least 20 points better on the nonverbal test than on the verbal test may be classified as underachievers.

Asbury's (1974) key word was discrepancy. His study on over- and underachievement eventuated in several definitions of underachievement. All of Asbury's definitions examined the difference between pairs of factors (e.g., IQ and grades or achievement <ITBS> score and reading level) and what effect these differences have on student achievement in school. Thorndike (1963) studied the differences between

aptitude and achievement. Tieglund, Winkler, Munger, and Kranzler (1966) compared the verbal portion of the WISC-R to the student's grade point average. These authors concluded that students whose grade points were more than .8 standard error of estimate below their predicted grade level were considered underachievers. Perkins (1965) and Hummel and Sprinthall (1965) conducted separate research projects that used similar methods to identify underachievers. Asbury discussed methodological weaknesses in each of the above studies, but concluded that these discrepancies are viable indicators of underachievement. However, the most reliable indication of underachievement was the relationship between the teacher's judgement of the student's ability and the student's actual academic achievement.

Kim (1968) and Hummel and Sprinthall (1965) conducted studies comparing maturity and ego with achievement. Each study agreed that students with poor ego functioning and lacking in maturity were likely to be underachievers. Gunderson and Feldt (1960) studied the achievement of students whose verbal and nonverbal quotients had a spread of at least 24 points. This study found that the students with superior verbal scores performed much better than those with superior

nonverbal scores. Henderson and Garcia (1973) as well as Martin (1970) performed studies on exploring the effect student-directed questions had on achievement. Both studies concluded that students who don't ask questions in class are likely to be underachievers.

These studies also focused on the disadvantaged student. While this entire social class can not be written off as being underachievers, disadvantaged students are more likely to become underachievers. Many of these students have developed poor self-esteem due to their economic status. They are also faced with a host of negative feelings regarding the value of succeeding in school. Regardless of social or economic status, students who are immature, have poor self-esteem, and experience a history of academic failure become underachievers. Educators who are perceptive to these students can identify those who are underachieving and act to help them achieve success.

What Causes Underachievement?

Students are adept at picking up attitudes adults have about them. If students perceive that teachers feel they are unable to achieve, students will act as though they are not able to achieve. Gifted students underachieve for a number of reasons. Because they can learn faster than most students, the gifted tend to

become bored with the slow pace of the classroom. This boredom can lead to off-task behaviors unless schools are able to adapt the curriculum to their special needs.

Peer pressure also affects the gifted. Peer groups possess attitudes about school which are embraced by all members of the group. If the peer group holds little value for education, all members of that group tend to endorse this attitude.

Asbury (1973) concluded from his research on the disadvantaged that four main factors caused their underachievement:

1. The student's perception of getting even with his parents due to the student's feeling of parental rejection.
2. The parents' low degree of aspiration for the student.
3. Poor self-concept resulting from poor family relationships.
4. Peer pressure that "puts down" the value of a good education.

Three of these four causative factors are directed at the home. Anger against parents and parents' lack of appreciation or support of the student's education are causes of underachievement regardless of the

economic or social status of the student.

Peer pressure has been identified as a major cause for teenage delinquency and drug addiction in American society. Damico (1975) examined the effects of cliques on academic achievement. She concluded that many students join cliques that include students from a variety of academic abilities. Membership in a clique could affect grades in a positive or a negative way depending on the attitude of the clique about grades.

Damico stressed the harmful effect of negative clique pressure on achievement but did not offer any suggestions to the classroom teacher for reversing the effects of this pressure. She believed that guidance counselors should use group counseling to alter the negative attitudes of cliques and use peer tutoring for the underachiever. Positive peer influences of this nature may encourage this student improve his academic efforts.

Educators also have to bear some of the responsibility for student underachievement. If the teacher sees potential in a poor student, that may spark the underachiever to function at a higher level of academic competence. On the other hand, a teacher who sees no potential in a normally-intelligent student can start the process in motion that will eventuate in

another underachiever. Brophy and Good (1971) discussed the self-fulfilling prophecy. They believed that a teacher could create an atmosphere in which a student would be expected to achieve and, therefore, do better.

Good (1981) argued that educators reinforce the belief that certain students have about themselves as poor learners. Educators do this in a variety of ways: they are overly-critical of students' poor behavior or academic achievement; they ignore good behaviors and achievement; and they write these students off as failures. This is done when they expect less work from them than they expect from students perceived as being brighter.

Braun (1973) reminded us that students are quite capable of reading cues we emit regarding their academic abilities. When an underachiever has experienced many years of being academically devalued, he will function at a level commensurate with this expectation. Underachievement may become a defense mechanism to protect the self against more devaluation.

Lack of effort and failure to live up to teacher expectations is a resultant condition. After years of this reinforced self-perception, it becomes extremely difficult to alter the student's view of himself as

being academically incompetent.

Bell and Roach (1987) examined gifted underachievers. The basis of their underachievement centered around their strength, superior intelligence. Being rapid learners of facts and processes, the gifted becomes easily bored with the slow pace of many classrooms. If there is not an extra academic incentive provided for the bored student, he or she will begin to engage in off-task behaviors. If the school chooses to retaliate against the improper behavior (instead of trying to provide more academic stimulation), the student may use his or her creativeness to produce more intense inappropriate behavior.

Some gifted students develop a poor self-concept. They behave in the same way as students with normal intelligence who possess a lack of self-esteem. They isolate themselves by hiding their giftedness through deliberate underachievement. Being identified as gifted is often a cause for peer ridicule. Underachieving is a way to resolve this conflict.

Schools also contribute to underachievement by the type of curriculum and teaching methods they offer to students. Current Commission Reports stress the idea that the problem with our schools is the fact that they

don't dispense enough facts. The belief is that if schools were to stress greater memorization, students would perform better. However, schools that stress memorization and remedial curricula perpetuate underachievement.

Underachievement is caused by perceptions of self-worthlessness and the lack of desire to succeed in the classroom. These thoughts of worthlessness are implanted by parents, peers, and educators. Children believe adults. If an adult tells a child repeatedly that he is incapable and worthless, the child will eventually believe this must be so. Teacher behaviors that accent the shortcomings in children and ignore strengths further enhance feelings of worthlessness. This in turn causes the child to expend less effort, thus bringing about the condition of underachievement.

What Strategies Help Underachieving Students?

Remediation that entails large amounts of paper-and-pencil assignments and constant drill discourages underachievers. Discussion is the strength of most underachievers. Thus, activities that emphasize verbalization will be more effective. Underachievers should be encouraged to explain their ideas and ask questions that pertain to the ongoing

classroom discussion. Teachers need to expect their students will be able to verbally explain what they are doing and why they are doing it. Teachers need to model the study skills (e.g., using a glossary in a text) and learning strategies (e.g., mnemonics) for the class and encourage dialogue from students during the modeling process.

Test-taking and the effective use of texts are important skills for students to master because these skills are major factors in determining the student's performance which directly influences the teacher's attitude about his/her talents. School success depends on reading fluently. Story mapping, mnemonics, and verbal rehearsal are strategies that effectively teach students how to read and to remember what they've read.

Piaget (Ginsburg and Opper 1979) believed that middle school aged students are developing the capability of comprehending higher-order thought processes. Assuming underachievers have average intelligence, they should be able to use higher-order thinking skills. Therefore, teachers need to teach these skills to the underachievers. The reaction many teachers have to underachievers is to remediate, remediate, and remediate! Some remediation is needed, but that type of repetitive and uninteresting

instruction soon creates rebellion. Also, in schools where students are grouped or tracked, students compare notes and soon know which classes are for the less capable. Students perceive differences in the way different classes are instructed. If underachievers see their classes being taught solely with remedial methods and other classes taught using more interesting techniques, they will react to this situation by either withdrawing into more apathy or rebelling with acting-out behaviors.

Cognitive research offers strategies which are effective in teaching underachievers. Tarver (1986) reviewed studies on cognitive behavior modification with LD students. LD students have trouble staying on task. Many times they just sit in class when they should be working on an assignment. They claim they don't know what they are suppose to be doing. Tarver (1986) encouraged teachers to use Meichenbaum and Goodman's (1971) method of helping students work through this attention-deficit problem. He would ask the student questions about the task he's supposed to be performing (e.g., What is the problem. How are you solving your problem?) The student is to verbalize answers to these questions. In this way, the student demonstrates that he is aware of

the task and his attention is focused on that task.

The metacognitive approach to the problem of hyperdistractibility in students is not always successful. Students can not answer task-related questions if they don't have the skills necessary to successfully complete the assignment. Shouldn't we be teaching underachievers skills as fast as possible to alleviate this deficiency? Tarver (1986) criticized Alley and Deshler (1979) for developing a program that seemed to put emphasis on teaching large numbers of skills. The concern with this approach is that students interpret this to mean that each skill that is taught is isolated from all other skills. Students need to understand that individual skills work together in ways that help the learner solve his academic problems.

Duffy and Roehler (1987) believed that reading skills are better taught as strategies rather than individual skills. They further assert that all reading skills can be categorized as either prereading or repair strategies. Prereading strategies include the ability to predict the author's purpose, knowledge of the topic being presented, and the type of story being read. Understanding prereading strategies allows the reader to anticipate what the story will say and

derive meaning from the story. The other set of strategies allows the reader to repair flaws in his reading. Repair strategies include using context for word meaning and the ability to overcome problems that block your understanding of the story.

One difficulty underachievers possess is their inability to transfer knowledge/skills from one situation to another. Instruction in transferring skills to new situations is necessary if the student will ever be able to use these skills. Underachievers especially need instruction in transferring skills because they are unable to make such transfers in their minds. Normally-achieving students can apply skills to new and unique situations without encouragement. Duffy and Roehler (1987) described the skills teaching process the teacher needs to follow if the instruction is to be successful. First, the teacher needs to model the skill. (There will be no transfer if the skill is not learned.) Next, the teacher models alternative uses of that skill. (e.g., In what situations will that skill work? When won't that skill work?) Third, the teacher models the thinking process that enters into applying the skill. Tarver (1986) believed that having students verbalize answers to questions allowed the teacher to understand what the

student is thinking. This third step can be used to model, for the underachiever, the process he should follow when verbally answering the teacher's questions.

Finally, the teacher needs to interact with the students so that he knows that the students understand the process.

Cognitive theory teaches that learning is an active process. Interaction enhances the process. Many underachievers are passive readers. They don't possess the repair strategies that would enable them to read fluently. Bristow (1985) listed the underachiever's unwillingness to correct miscues in their reading as well as their inability to pick out flaws in the author's argument as examples of lack of repair strategies. Underachievers have been "taught" that they will not understand anything that is written. Since there is no meaning in the writing, why should they waste time figuring it out? Reading can have meaning for underachievers if they learn strategies that will enable them to get meaning from the story.

Cognitive psychologists believe that the goal of education is to teach the learner how to learn. If educators are successful in accomplishing this mission, learners will leave school as independent learners. Brown (1978) addressed the problem of independent study

habits. Her plan for making independent students is similar to Duffy and Roehler's (1987) plan to create independent readers. Teach skills as strategies! Brown starts her process by watching and recording the study behaviors of her students. Next, she has the students respond to a questionnaire about their study habits. (Baseline data about the students actual study habits is a check on their truthfulness.) Third, the teacher discusses with the students the results of the questionnaire. The teacher is also looking at student homework and behaviors in the classroom that students use to accomplish their homework. This interaction concludes with a discussion of what the student can do and is compared with an analysis of what the student is expected to do and actually can't. The teacher can explain or model any behaviors that are effective in making good study habits. This last step also enables the teacher to eliminate instruction that the students honestly can not accomplish.

As did Duffy and Roehler, Brown (1978) is proposing a procedure where the teacher is actively participating with the students in the teaching of study skills. Brown also stated that becoming an effective student requires much practice. By the sixth grade, underachievers have spent years learning bad habits.

The process of learning good habits to replace the bad ones will also take considerable time. The teacher occasionally needs to model and reteach correct study habits so the student won't forget.

Palincsar and Brown (1987) suggested that metacognition is a valuable problem-solving process that consists of five steps: 1) carefully analyze the task at hand; 2) identify what strategies are needed to successfully complete the task; 3) explicitly teach the strategies and the applications of the strategy; 4) provide opportunities for student feedback regarding the success and usefulness of that strategy; and 5) give instruction as to the general uses of the strategy. Palincsar and Brown (1987) stated that teaching this process to underachievers will improve their memory skills, text comprehension, written expression, and math performance.

This section of the study has dealt with how to teach skills. The balance of this section will consider the skills that underachievers need to master in order to succeed in school. Students lacking skills in test-taking and textbook useage are labelled as poor students.

Students are labelled as early as the first grade. All students take standardized reading tests as part of

the reading curriculum. Students who score high are considered capable students and those who do poorly on the test are considered poor students. A potentially bright student can fail a first-grade reading test and not be given the opportunity to prove in some other way that he is a good reader.

Stewart and Green (1983) discussed the teaching of test-taking skills. Learning how to take tests will improve test scores. Improved scores will enable the teacher to place the student in an appropriate reading level and prevent the brighter students from being mislabeled as slow learners. Mislabeled encourages underachievement due to self-fulfilling prophecy.

One major problem with standardized tests is that the format is different from the testing format used in the regular school setting. It is recommended that students practice taking sample tests well in advance in order to be familiar with the format. While these practice sessions are intended to teach the format of standardized tests, they are not for the purpose of teaching directly to the test. Teachers need to prepare many examples, from a variety of contents, in order for the students to experience enough practice and be able to transfer the format to the variety of content that will be examined. Practice sessions

should simulate (with seating patterns) the quietness required, and the pretest directions of the actual test.

Practice is practice! Students can't be pressured to "pass" the practice. It is important for teachers to have dialogue with the class after each practice. These sessions will bring out any problems experienced with the practice format so these problems can be resolved before the real test.

The multiple-choice format used on standardized tests is similar to the format used on most tests teachers give classes throughout the year. Stewart and Green (1983) listed skills that would apply to any multiple-choice exam. The authors were concerned with the student reading questions carefully and using the clues in the questions to help arrive at the correct answer. Alley and Deshler's text (1979) listed many particular skills that will assist students when taking tests.

Another stumbling block to underachievers succeeding in school is their inability to understand the information found on the text. This is not a reading problem, although teachers assume that poor reading is the reason. Underachievers may not understand how the glossary or atlas can help them

answer questions. Underachievers may not be aware that headings and words in bold print are designed to help them understand the content.

Alvermann (1983) believed that one reason underachievers don't learn to use textbooks is because their teachers have decided that they are incapable of learning how to properly use the texts. This results in teachers substituting films or reading the text to the underachievers or pushing a lot of memorizing work on them instead of forcing them to use their texts. Alvermann agreed that underachievers can not use texts as well as normally-achieving students. However, with some adaptations, the texts will benefit them. Underachievers have learned that they can not learn from books so any book assignment that requires extensive effort and time will be ignored. Alvermann suggests the use of graphic organizers instead of outlining. Graphics require less time to complete and they are easier for the student to use when retrieving information.

The first exposure to graphic organizers requires that the teacher fill in portions of the graph. After the students have proven that they understand the concept, the teacher can permit the students to design and fill in their own graphics.

Brown, Campione, and Day (1981) suggested two additional ways of teaching the use of a text so it will be more beneficial. Textbooks are all designed differently. Before a student can understand the text, he needs to understand the organization of the text. Time needs to be spent at the introduction of a new text teaching the organization that will generally be found in that text. Periodically these patterns need to be reviewed so the student will be reminded of how to use that text more effectively.

The other point in the Brown et al. article stressed that any new learning the new text introduces needs to be dovetailed with previous knowledge the student already possesses. Underachievers "know" that books can not be understood. Securing knowledge from class members and showing how the information in the text will fit into what is already known will instill a feeling that texts can be comprehended.

Test-taking and text-understanding are two important skills areas underachievers need to master if they are to succeed in school. However, if they can not read, these other skills will not produce all the possible academic benefits these students could enjoy. Underachievers with average or above-average intelligence scores can learn to read. Several teaching

methods have been developed that enhance the learning of necessary reading skills.

Vocabulary development is crucial to the learning of reading. Many underachievers have little idea as to how to learn the needed vocabulary. Mnemonic devices are becoming popular methods of teaching students how to memorize facts they need to know in order to perform well on tests and classroom assignments. Mnemonics are a whole set of different devices that students can learn that will allow them to memorize. Mnemonics work by creating mental images and connecting the image with the vocabulary or the facts to be memorized. These images could be pictures or anagrams or any other device that a person can imagine that will enable him to memorize the needed information. Mnemonics also enables students to memorize sets of facts in a particular order (e.g., names of the presidents). Bellezza (1986) provided specific examples of how mnemonics were used effectively.

Rose, Cundick, and Higbee (1983) recommended verbal rehearsal as another strategy for assisting students who appear unable to remember. Verbal rehearsal literally demands that learner recite facts on cue. He is not given time to think about the answer because he is to have the information memorized. (Timed addition

or subtractions tests are good examples of verbal rehearsal.) Rose et al. concluded that training in verbal rehearsal and mnemonics improved the memory of LD students.

Tarver, Hallahan, Kauffman, and Ball (1976) also concluded that students trained in the use of verbal rehearsal were able to recall far better than they could before the training. These underachievers were diagnosed as having attention deficits, but with proper training in memorizing strategies, these students were able to overcome this learning problem.

Story mapping is a strategy that helps a learner understand the plot of a story. This strategy combines the use of graphics with a generic set of comprehension questions that would apply to any fiction a student might read. Idol and Croll (1987) theorized that the ease of using graphics allows the student to visualize the relationships between the various story elements (e.g., setting, plot, characters, story problem, and the resolution of the story's problem.). By recalling a set of predetermined questions, the student will learn to look for certain kinds of information whenever he reads. (Duffy and Roehler (1987) called this prereading strategies.) Story mapping is a way of teaching prereading strategies. These strategies will

enable the underachiever to find information in a story. The underachiever is also unwilling to exert much effort when he feels there is no gain. Graphics are a quick and easy way to answer questions about a story. This strategy appears to be a way to ease the underachiever into the willingness to think and write out responses to stories he is required to read. Many bright children underachieve because they haven't learned how to succeed and because they have the idea that they are unable to succeed.

This portion of the study has examined several cognitive strategies for teaching the underachiever. These strategies will enable the student to learn how to learn, allowing the student to continue learning long after he has finished his formal education. This study concludes that underachievers need skills in test-taking, textbook useage, and reading in order be successful in school.

Chapter 3

ANALYSIS OF THE LITERATURE

Introduction

Underachievement causes a terrible waste of human potential and is a source of frustration for teachers. This paper's intent is to identify the nature of underachievement, provide reasons why students underachieve, and then to suggest instructional tools for countering the damaging effects of student underachievement.

Sixteen years of experience in the classroom has provided many examples of underachievement. The incentive for doing this research is to provide explanations for past failures in teaching underachievers and to suggest ways for more effective instruction.

What is the Nature of Underachievement?

This author has spent his entire career teaching students that have been labeled as underachievers. Many students have been placed in fourth grade reading texts and score well the below 50th percentile on the ITBS. The obvious question asked was, "Why do all these students perform so poorly?" The usual response was, "That's the way they are."

This response does not provide an adequate

explanation. The underachiever is best described as a student who can discuss any topic, is on-task with comments and questions, but does not produce quality written work or score well on teacher-made tests. This student is a leader during class discussion but is unproductive when faced with any paper-and-pencil task.

The gifted underachiever is the most frustrating. Twice, within the past two years, creative students were denied placement in the Fort Dodge middle school's talented and gifted (TAG) program because their comprehensive scores were well below the 70th percentile on the ITBS. One of these students consistently receives B's and C's because he does not complete his work. His class discussion was superb and his general knowledge was remarkable. He was subsequently placed in the TAG program and is one of the best achievers in that class. He still does not produce consistently in his other classes.

Mildly handicapped LD students could become excellent social studies and science students, however they are generally failures because their lack of reading and written language skills prevents their success. A former LD student was transferred from a full-time LD room into the author's regular class. He discussed the information well, he understood the

vocabulary that was presented, and he maintained a B average that year. This student could not read and his written answers were unintelligible, but his thoughts were correct. An aide helped with his writing, but he read the test questions himself. He was allowed to ask for help reading test questions but did so only rarely.

The ignored, belittled, and abused underachievers are the hardest to identify. They function as though they were retarded. Generally they appear to be confused about the content. They cannot find out what they are supposed to be doing and written answers are incorrect. However, the underachiever will reveal his nature: Occasionally he will respond correctly to questions and will show interest and competence in the subject being presented.

How can Underachievers be Identified?

Two main factors determine how educators identify underachievers. The previous paragraph spoke of students who are inconsistent in their responses to different classes and different material. Slow learners are incapable of displaying sudden bursts of insight and creativity. Classroom performance and patterns of scores on IQ subtests are consistently low.

Therefore, when a student does well for a while, then suddenly does poorly, then achieves again, etc., that

student is underachieving. The "true" underachiever has the ability to perform well in class but has not chosen to or is prevented from doing so.

Teachers who feel that a certain student may be an underachiever can look at previous IQ test results. Anytime there is more than 20 points difference between the verbal and nonverbal scores, underachievement may be present. Gunderson and Feldt (1960) studied students with discrepancies of more than 24 points. Even if there is no identifiable learning disability, underachievement may be the reason the verbal score is that far below the nonverbal.

Asbury (1973) spoke of the discrepancy between measured potential and actual performance in class. This discrepancy between what the teacher sees as unproductiveness and the potential as seen in high IQ results or high scores on performance tests should cause the teacher to suspect she has an underachiever in class.

What Causes Underachievement?

Occasionally a student will enter sixth grade assigned to a fourth grade reading text but with a verbal IQ of 115-120. Why? Usually teachers will attribute this to a sudden burst of maturity or laziness in class or his having a good day the test was

given. This author concludes that the student is an underachiever who showed her true ability. This student will immediately be placed in a sixth grade text. (Reading series generally teach the same skills in each succeeding level, so the student would not miss any skill instruction by skipping one or two levels.)

Much student underachievement is created by the lack of teacher confidence in the abilities of the student. In recent years, many parents have become concerned that their child has been labeled as a slow learner and will not be able to overcome that label. The reviewed articles agreed that teacher disinterest in the students and the avoidance of them are significant factors in the turning of average-ability students into underachievers.

Parental influences are also factors in causing student underachievement. Many parents were themselves underachievers or dropouts. Their experiences in school were generally negative and very likely these attitudes were transmitted to their children. Whenever there is a large concentration of such negative attitudes within a neighborhood, schools become objects of ridicule. Students are especially susceptible to such talk because they see there is very little hope. Schools motivate students with the hope that present

learning will create future opportunities. With the perception that schools can not be of any help and that failure is all they can expect from school, underachievement and rebellion are all these students will produce.

This constant feed of negativism is also present in peer groups that are found in schools from every social and economic class. Peer pressure harms students because this pressure encourages the underachiever to fail. Students succumb to this pressure in order to gain popularity. The second TAG student mentioned earlier failed to enter the TAG program because of peer pressure. On the WISC-R, she scored 137 on the nonverbal. Even with a full-scale of 130, the selection committee decided she did not qualify. (She felt that she had been rejected by the committee.) The psychologist successfully argued that the girl deserved another chance and she was scheduled to take the Stanford-Binet. During the two weeks between tests, she was lobbied by her closest friend not to try her best on the next test so she would not qualify. Her verbal score was 111 and she was rejected. Perceived teacher rejection and successful peer pressure reinforced her underachievement.

Consistent underachievement is not caused by a

single incident. It develops over the years and is evolved through many incidents. Peer pressure, parental displeasure with schools, and the inability of teachers to properly evaluate these students are the main causes of underachievement.

What Strategies Help Underachieving Students?

Schools encourage underachievement in several ways.

They insist on paper-and-pencil as well as reading tasks for the bulk of their assignments. Many capable students are unable to succeed with the reading and writing. Underachievement is the result. Because these students are labeled as having low ability, teachers try to "protect" them from having to use texts. Without practice using textbooks, these students will be unable to become successful users of texts. Students in readers below grade level are generally subjected to classes with heavy remediation of reading skills. This process sours students on reading and does not allow them to develop strategies to become good readers.

The ability to read is critical if a student is to succeed in school. The literature suggested that teaching broad strategies would enable students to anticipate the storyline, comprehend, and make corrections when the story doesn't say what they

anticipated it would. The repetitive drudgery of over teaching each skill as an independent entity does not permit the student to see reading as a process. The student gets bogged down in learning a series of skills that are seen as having no relationship to each other.

Story mapping is one way of allowing students to answer questions about a story but in a way in which they actually see the relationships between the various elements of the story (e.g., plot, setting, etc.). The format of mapping is generic. By using this type of format, the student learns what kinds of information he needs to look for whenever he reads a story. This anticipation will make him a better reader and will encourage him to read more.

Vocabulary is a major chore for underachievers. While knowing vocabulary is necessary for students to understand stories, the ability to memorize the meanings of the words is difficult. Mnemonics are strategies for memorizing word meanings. Mnemonics work by teaching the student to create mental connections between the words and their meanings. The connections may be in the form of anagrams or mental pictures. Recalling these mental pictures will enable the student to memorize the meanings of the words for tests. Mnemonics can also be used to learn lists of

information that need to be memorized in a particular order.

Even if a student masters these skills, he won't be viewed as an able student unless he can prove himself on a standardized test. Test-taking instruction is meant to allow the student to understand the format of the standardized test so the format will not cause the student to do poorly. Effective instruction basically means giving the student practice taking look-alike tests. The question-and-answer forms will look like the real testing material. The classroom will be structured to give the class the feel and the look the room will have when the real test is taken. This is not an attempt to teach the questions that appear on the test, but to teach the students the format of the test.

Underachievers are unable to take tests of any form. Alley and Deshler's (1979) text includes a chapter on test-taking. Teaching test-taking skills at the beginning of each school year and reviewing them before the tests are distributed each time, will give underachievers the confidence they need to perform well on the test.

Textbooks are also a necessary part of our educational system. To succeed in school, students

need to use texts effectively. Using texts is a necessary first step. Students need to be encouraged to use them. They also need to be instructed in effective ways to use them. The material in science and social studies books are generally presented in the same way throughout the book. If the teacher is able to underline the format, then students will be able to anticipate and locate information easier.

Texts usually possess glossaries, indexes, and other aids that can provide needed information for students. These portions need to be identified and explained to the students. Underachieving students will need occasional reviews of the book so they can continue to be productive.

Occasional, brief reviews will keep students on track without burdening them with drill. The same concept applies to the daily monitoring of student work. Asking students to tell you what they are doing and why they are doing it will enable the teacher to follow the student's train of thought. It encourages the student to think about what he is doing. Teacher questioning combined with verbal responses from the students is a strategy teachers can use to keep students on-task. It also gives the teacher feedback as to the ability of the students to accomplish the

assigned work.

Students can not respond to these cognitive cues if they can not perform the work. Strategies described above are ways teachers have of teaching skills needed for success. The key to the learning of these skills is the approach the teacher takes during instruction.

Learning is an active process. There needs to be dialogue, not a sermon. If the students are to learn the skills, the teacher has to model the skills for the students during instruction. To do this, the teacher thinks aloud the process one goes through in performing the skill. Finally, various situations are described in which the skill can be used. During this procedure, students and teacher are talking. Students also suggest examples of using that skill or how the skill can be used to solve a problem.

The fluent use of learned skills is unknown to the underachiever. Cognitive teaching stresses the use of strategies to solve learning problems. The most important part of the learning of skills is knowing when to use them. If the teacher were to overteach or overdrill, it would be proper in the stressing of the various uses of the skills being learned.

The underachiever is too often a prisoner of his background. He may not have been given the opportunity

to succeed. He might have been influenced by family or friends not to attempt success. It is possible that he has failed to learn some necessary information or skills at an early age and that failure has caused his academic problems. Whatever the cause, the middle school teacher can assist the underachiever by giving him the opportunity and the skills necessary for success.

Chapter 4

Summary, Implications and Conclusions

Introduction

The Nation at Risk report has stirred renewed interest in education. Students that are perceived as normally-achieving will benefit from the recommendations concerning more concentration on the learning of facts. Students who are educated in programs for the severely handicapped can not learn many of these facts and are not affected favorably by this report. On the other hand, underachievers will be harmed if the recommendations are applied to them. Direct instruction, the teaching style encouraged by the report, is one reason many of these students became underachievers. Why is this so?

Summary

Underachievement occurs whenever an able student achieves less than what is expected of him. This is usually indicated by poor test results or poorly written assignments. LD students are considered underachievers because their disability interferes with the ability to read and write effectively. Other students have lost interest in performing well in school and do not exert the effort needed to achieve.

Underachievers can be identified by examining the

results of subtest scores on an IQ test. If the nonverbal score is more than 20 points above the verbal score, underachievement is indicated. This difference in scores indicates that the student is capable of understanding but has difficulty with reading and with written language instruction. The classroom teacher can also observe this difference by comparing how well a student discusses material in class with the quality of their written work and the results on teacher-written tests. A student who is able to discuss the material well, but is a poor written performer, is an underachiever.

Underachievement is fostered by a variety of factors. LD students underachieve because of specific disabilities. Gifted students sometimes demonstrate rebellion against parents or teachers by deliberately underachieving. Boredom with the material, lack of self-confidence, or perceived dislike from adults will cause this rebellion. Teachers sometimes cause underachievement by not recognizing talents in students and allowing these students to be labeled as slow. Parents and peers sometimes create the impression that schooling has no value. Student underachievement is a reaction to these attitudes.

The harmful effects of underachievement can be (at

least partially) corrected. The first step for the teacher is to have the attitude that these students are worthwhile. The teacher needs to promote areas of competence in verbal ability. Reading ability is strengthened by teaching mnemonics, using story mapping, and using generic questions to discuss stories. Mapping and the use of generic questions enable students to learn to anticipate what information is pertinent to an assignment. Skills instruction needs to be done in a way that teaches students the relationships between the individual skills which are being taught.

Skills need to be modeled by the teacher. Active dialogue between teacher and student will ensure the teacher that the student understands the skill and that the student is on task. Skills taught in isolation will either be forgotten or the skill will not be applied to new situations. Teachers need to model how to transfer skills just as they need to model the initial teaching of these skills.

Students also need to be skillful in the use of textbooks. Poor use of texts will prevent the student from receiving all the information available from the text. Students need to be encouraged to use their texts. By altering activities to "protect"

underachievers from using their texts, teachers are not allowing students to learn how to be skillful users. Teaching underachievers how to take tests will improve their grades and also show them that they are capable of learning. Teaching test-taking skills prior to the first test will give students confidence and remove a huge barrier to their success.

Why would Nation at Risk be harmful to the underachiever's success? That report emphasizes quantity of learning. It promotes the notion that to educate better teachers need to pack more content into the day. Underachievers need nurturing. Nurturing takes time. Underachievers need time to gain confidence in their own abilities and trust in the teacher, to participate in the modeling process, and to learn to transfer skills to new problems. Though time consuming, these are the activities that are essential to the nurturing of underachievers. This nurturing will produce confident learners instead of perpetuating underachievement.

Implications for research

Two assumptions are made in this study that have little backing in current literature. Combining LD students with disinterested students to form the category of underachiever was not found in any article

reviewed. This assumption was made as a result of the observation that various authors are using the same traits to describe members of the various groups discussed. Research should be conducted to test the basis of this assumption.

Similarly, the strategies discussed in this study were primarily aimed at helping the LD student overcome the learning problems caused by the central nervous system dysfunction. If these strategies are aimed at overcoming neurological problems, will they work with students who do not have these problems? Literature suggests that these strategies are also applicable to those students who need motivation but no research has been applied to this particular issue. During the literature review, the question of peer counseling was mentioned. Nowhere in the previous discussion of strategies was anything mentioned about counseling techniques. The literature reviewed spoke of trained counselors but nothing of teachers in this respect. Research on this point will assist teachers as they deal with students' feelings of frustration with the learning process.

The author's stated process of identifying underachievers is shallow. Research needs to identify which specific student behaviors are predictors of

academic ability. This study used classroom discussion as its only criteria for predicting success. This indicator may be incorrect or there may be other variables that will better predict success.

Finally, more research needs to be done to study the long-term effects that these strategies have on the academic success of students. Experimental research studies usually describe the results of a treatment that is administered over a period of a few weeks. Results from these experiments can not evaluate the effects the treatment has on the student's long-term ability to learn.

Implications for the Classroom

A major cause of underachievement is the feeling of worthlessness in these students. While this feeling may start in the home, schools can intensify it. Educators need to discover the strengths of their students and feed the message of value and worth to them. This attitude does not mean weakening the curriculum so the students can not fail, but it does suggest providing activities that students can succeed in if they are willing to exert more effort.

Verbal skills are the strengths of these students. Activities that allow them to discuss and ask questions will allow them chances of success and will build their

confidence so written assignments will seem less threatening. Remedial exercises are the other type of activities that would give underachievers greater opportunity for success, but the drudgery of continual remediation will not improve their underachievement.

Skills must be taught. In fact, the major task of the instructor is to teach the student skills he should have mastered years before.

The key to teaching these skills is the modeling process. This process stresses interaction between teacher and class. Students are encouraged to question and interject thoughts into the process.

Two factors determine the effect of skills training in most classes. Skills are not isolated bits of information. They must be taught in context with other skills and with content. Uninvolved students can not see the connective links between information and skills taught in different lessons. Every lesson seems to be an independent entity. Teachers need to take the time to make the connections between lessons and between the various skills so the student will learn the skills better and so they will understand the purpose of each skill. Transferring skills to new situations is the other necessity of skills training. Part of the modeling process is to model the transfer of skills to

new situations. Teaching skills in different situations helps students learn the skills and teaches them when and where each skill is applicable.

Teaching students how to learn is the goal of cognitive theorists. Teaching students skills that will enable them to learn new information after they leave school will be more beneficial than teaching large amounts of facts. Mnemonics, story mapping, verbal rehearsal, and modeling the process for solving problems are strategies teachers can impart to students that will enable them to learn needed information.

Conclusion

The study has confirmed the author's belief that class discussion is a legitimate method of evaluating students. Comparing verbal ability with written performance can alert the teacher to potential underachievement. Discussion also establishes in the student the idea that the teacher is interested in him as a person. In addition to class discussion, the teacher needs to tell the student directly that he/she is a worthwhile member of the class.

The cognitive theory of learning suggests strategies that enable students to become better learners. Mapping skills enable the learner to visualize relationships through writing down ideas in a

diagram. Cognitive theory teaches that learning is the ability to connect a new bit of knowledge with something already learned. Mnemonics provide mental pictures that are useful in learning meanings of vocabulary and lists of information that need to be memorized in a certain order. The teacher also needs to make connections between new and old information in order to help students see how the parts are integrated into the whole. Part of the cognitive process is learning new skills. They each need to be mastered before success can be achieved. Specific reading skills, test-taking skills, and skill in using texts are necessary if one expects to have the tools with which to learn.

With the current emphasis on skills, materials are available that guide teachers on teaching these skills.

College texts are available that indicate which skills, and in what order, they should be taught. Finally, this study concludes that there is hope for these students. Underachievement is a learned behavior. Success is also a learned behavior. Success can take the place of underachievement. Horatio Alger's characters could not have succeeded without confidence in themselves. At times they needed help from others in overcoming problems. They also needed

encouragement when defeat seemed assured. Teachers can give their students the same encouragement and help.

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