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Student questions: Can they lead to more active involvement in the learning process?

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Abstract

The need for children to be actively involved in learning has become more obvious and prevalent in the elementary school. The difficulty seen in my inner city school of 650 students in pre-school through sixth grade is that while there is, indeed, a lot of activity occurring in classrooms, the most needy students are not the ones who are actively involved. While most students are actively learning, some students purposely try to disengage themselves from learning (Vacca & Padak, 1990). At the same time teachers are trying to engage them in the learning process so that they will understand and comprehend the material presented.

Student Questions: Can They Lead to More Active Involvement in the Learning Process?

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The need for children to be actively involved in learning has become more obvious and prevalent in the elementary school. The difficulty seen in my inner city school of 650 students in pre-school through sixth grade is that while there is, indeed, a lot of activity occurring in classrooms, the most needy students are not the ones who are actively involved. While most students are actively learning, some students purposely try to disengage themselves from learning (Vacca & Padak, 1990). At the same time teachers are trying to engage them in the learning process so that they will understand and comprehend the material presented.

As a teacher of Title I-identified students focusing on the language arts, I have the opportunity to be in many classrooms throughout the day. What I notice agrees with the current literature about at-risk students. The very students teachers are attempting to reach with especially meaningful activities are the ones who are apprehensive about investing anything of themselves in the learning process (Vacca & Padak,

1990). These are the students who keep themselves aloof from the plans and goals of the classroom teacher because they do not have the same goals as the teacher (Fosnot, 1989). Until we manage to persuade such students that school is their place, we will have students on the fringes of learning.

There is a challenge in working with these uninvolved students in a small group setting for reading instruction. The students are all capable of learning but do not see themselves as learners. They see reading in the content areas as being beyond their grasp. Reading is difficult for them and they are so mired in word calling that they do not comprehend the material they are required to read by the classroom teacher.

Title I staff development meetings often find teachers discussing their observations of the uninvolved student. They feel some students fear a small group situation because someone may discover they do not perform as well as the other students do. They feel anxious because of the expectations being made of them.

The evidence that many students are not involved becomes more pronounced each year. Report cards, parent conferences and standardized test results all indicate failure. Eventually, these students become passive--resistant to involvement and commitment (Deci & Ryan, 1981; Good, Slavings, Harelik & Emerson, 1987).

Students need to become more actively involved in learning (Good et al, 1987; Hunkins, 1976; Bybee & Sund, 1982). A school's teaching staff is constantly searching for learning and teaching strategies to assist students in becoming learners who understand their world and the expectations being made of them.

Purpose

The purpose of this review of the literature is to analyze the research data directly related to the hypothesis that uninvolved, at-risk students who learn to generate their own questions become more involved in learning and improve their test scores.

The teaching staff at Bloomer School includes 22 classroom teachers, seven special education teachers and two in Title I reading. The advent of including special education students in the regular classroom has made the teaching staff more cognizant of the need for

strategies that will include and involve all students in learning.

One team of classroom teachers is trying desperately to teach to the needs of their students. As an educational team, they feel the responsibility to research viable alternative methods of instruction and to share what they learn with one another so that the students will have more opportunities to reach their potential.

Justification of Method

A review of the literature is an appropriate investigative strategy for exploring this problem. Scholarly endeavors relating to student-generated questioning and student involvement have previously been explored as separate topics. Empirical studies have broached the subject of student-generated questioning and student achievement. The research has not, however, looked specifically at student-generated questioning as a factor in student involvement and participation. It is mandatory that one pay attention to the research that has been done, the methodologies employed and the documentation of results. The research analyzed for this paper focuses specifically

on teaching elementary students to generate questions. Only research that was specifically directed toward the teaching of questioning strategies for students was used. Only those studies which looked directly at student involvement through the generation of more questions or the improvement of comprehension on a post test was deemed applicable to the hypothesis. Scholars build upon the scholarly work of those before by analyzing and scrutinizing the information. This is how educators make informed decisions regarding teaching practices.

Problem

The problem regarding disadvantaged students is that they are sitting in classrooms in a disengaged mode not participating in the events that would help them learn about themselves and their world. At-risk students cannot be left to their own devices to learn. They must be taught. Some of the best advice given to beginning teachers is, *Never take anything for-granted.* This includes not taking for granted that students know how to ask questions.

When the thematic approach to instruction is used by the classroom teacher, the uninvolved student will

find it easy to avoid those activities which demand using metacognitive abilities. The disadvantaged student will do all of the concrete activities such as cutting and pasting, dressing-up, listening to cassette players, playing computer games, or making snacks. These boys and girls seem, however, to avoid direct instruction. Martin (1984) reminds us, however, that learning is not a spectator sport. Teachers cannot allow students to stay in the shadow of the footlights of learning. Learners desperately need the full spotlight; they need to soak up all that is involved in the excitement and thrill of learning.

Statement of the problem.

Does teaching students to generate their own questions make them more active learners and learning participants and help them become successful students?

The questions concerning student-generated questioning flow full circle from the student who learns how to generate questions on to the student who remains disengaged and disenchanted with the goals of education. There is a need for the disadvantaged student to be more involved in the learning process

(Wells, 1992). To investigate the problem, the following sub questions will be addressed:

1. How can teachers understand and facilitate learning for the uninvolved, non-questioning student?

2. Can students be taught to be better questioners?

3. What instructional strategies can teachers use to teach students to generate their own questions?

Definitions

The terms used in this study are defined in the following ways:

Active learner: a student who is actively engaged in the learning tasks to increase his/her level of understanding..

Amotivated learner: a student who is passive and non-responsive.

At-risk student: a student whose educational progress is in jeopordy due to economic, cultural, physical, social or emotional deprivation.

Disadvantaged student: students who do not have the essential prior knowledge in place for successful attempts at learning.

Learned helplessness: This term was coined by Seligman (1975) to describe a condition of those students who do not have the necessary skills in place to deal with and to cope with failure. The condition exemplifies itself in students who do not try because they do not feel they will be successful (Richardson & Morgan, 1994).

Learning strategies: Strategies students have developed for dealing with educational challenges.

Passive behavior: The behavior exhibited by a student who is accepting and unresisting, and does not engage actively in classroom activities. The student is acted upon by others, but does not become involved.

Questioning strategies: Techniques students use to learn new information in the content areas.

Scaffolding: A constructivist term which describes what teachers do when they aid students in building on prior knowledge while developing new understandings.

Student-generated questioning: A question a student asks about the activity or material in order to better understand the expected task or concept.

Thematic method of instruction: A method of instruction based upon classroom units of work centered around a particular topic or theme. A theme can be selected

which cuts across the various areas of the curriculum.

Methodology

In this review, (a) student-generated questioning and (b) participation and active involvement in learning were viewed as the basic educational components being researched.

An ERIC search was made based upon the following descriptors researched: (a) questioning, (b) student-generated questioning, (c) elementary learning strategies, (d) discovery learning, (e) inquiry learning, (f) at-risk students, (g) passive learners, (h) learned helplessness, (i) participation and combinations thereof.

Abstracts, journal selections, texts, dissertations and research articles were consulted at the University of Nebraska--Omaha library. Additional sources of works cited by other authors were used when it seemed necessary to consult the primary source. It was also found to be helpful to review notes taken and literature used in previous graduate classes.

True research studies were consulted first and notes taken as to the nature of the research. The authors, date of study, hypotheses, subjects,

methodology and results were charted so that similarities and differences could more easily be seen when making comparisons.

Strategies for students to learn how to generate their own questions were sought especially from the actual research studies. The strategies reported in this review are those supported by research findings. There are many teaching strategies to be shared in this paper's section called "Teaching students strategies for asking questions."

The descriptor, questioning, drew numerous references, but when the descriptor was narrowed to student-generated questioning the topic was limited greatly. Questions asked by the teacher are evidently considered to be of more value in the classroom than the questions asked by the students if the volume of reference material is used as the indicator.

Only the literature found to be specifically related to this paper's purpose was used throughout. While there is a wealth of interesting and worthwhile pedagogy reported in the literature, only those papers and studies directly related to the problem statement were selected for review; the following scale was used:

Does it relate to students generating their own questions and does the strategy lead to more active involvement in the learning process?

Analysis and Discussion

Teaching the uninvolved student

The majority of students in a classroom are successful learners, but the ones who demand the most of the teacher are the students who remain passive or amotivated. What has happened to this student? Why is there no longer excitement when it is time for school to begin? Bruner (1961) believes that for students to want to use their minds and be knowledgeable, they must have "had success in doing this many times" (p. 226). Students are more likely to find intrinsic reward in doing a learning activity, when, because of past experience, they know they will be successful. What if the teacher seldom calls on them? What if they are viewed as failures or view themselves as failures? A common survival strategy is to remain passive (Good, Slavings, Harel and Emerson, 1987).

Good et al. (1987) observed that teachers may be contributing to the passivity of students by the way they treat students in school. Their reasoning is that

disadvantaged, at-risk students having a difficult time with reading and content area materials are not dealt with in a consistent manner. Teachers often try one teaching technique after another, searching for something that might help the student make progress. These students may also encounter Title I teachers, resource teachers, speech clinicians, or counselors all of whom try different strategies. Some teachers minimize their interaction with the passive student while other teachers "seek them out frequently giving a great deal of encouragement and support" (p. 183). Some teachers call on the low achieving, non-questioning student many times so that they will participate and some teachers call on them not at all. The problem for these students is that they are receiving different treatment from a variety of different teachers and are confronted with many different expectations. Student passivity can result from the mixed messages the students are receiving. When students are not motivated they tend to be passive and non-responsive (Deci & Ryan, 1981).

A research study asked the question, "Does the question asking behavior of low-achieving students in

K-12 classes reflect an increasing intellectual passivity?" (Good et al., p.185). These researchers fear a message is emerging and it is that while low-achieving students may ask questions in their early schooling, eventually they learn not to ask questions. It is conjecture on the part of these investigators that it is the classroom messages received from both teachers and peers that has made the disadvantaged student become passive over time (Deci & Ryan, 1981; Good et al., 1987).

It has been determined that some students cannot handle the repercussions of failure even though they are motivated and are capable of succeeding (Dweck, 1975). Dweck found students who were passive and uninvolved were less responsible for their successes and failures. Whatever the outcome of their task, the students attributed the outcome to ability rather than effort. The term Seligman first used to describe the passive student in 1975 was "learned helplessness" (p. 106). Bristow referred to it as a "psychological phenomenon" (1975, p. 320).

This is not to suggest students should not have failures (Dweck, 1975). It is suggested that failures

should be a part of the student's experience, but that there should be many more successes than failures. In Dweck's study of twelve students with severe reactions to failure, it was determined that while failure cannot be completely removed from life, "errors should be capitalized upon as vehicles for teaching the child how to handle them" (p. 684).

Turning around the effects of learned helplessness may not be an easy task (Bristow, 1975). Seligman (1975) first experimented with dogs as victims of learned helplessness. The dogs had to dragged back and forth across an area where shocks had been given before they learned they were no longer helpless. The longer the learned helplessness is in place with a student, the more difficult it is to alleviate (Good et al., 1987).

Students need to find a sense of pride and self-worth through a combination of successes and failures. Too much of either one will be harmful to the student. The right combination of both, however, will build strong, self-confident students who have a bright future filled with promise. Teachers can help the uninvolved student overcome passivity. Five potential

solutions are presented by Bristow: (a) "place children in instructional level materials", (b) "focus students on sense-making, stressing comprehension as the foremost goal in reading", (c) develop children's background of experience", (d) "directly teach comprehension strategies which involve active reading", and (e) "help students overcome learned helplessness", (pp. 321-323).

Teaching students to be better questioners

Teachers (Beyer, 1991) must engage students in thoughtful inquiry if they are to become thinkers. The ability to think may be one of the skills teachers take for granted and the primary purpose of questioning is to promote thinking (Fairbairn, 1987). Student questions are thought to play a significant role in student learning, yet students at all levels ask very few questions (Dillon, 1982). But if a child has not been engaged in thoughtful dialogue during daily experiences does thinking occur as a matter of course? Questioning by the student is valuable because children may pay more attention to their own questions and the answers to those questions because their inquiries are

an extension of their own curiosity (Graesser & Black, 1985).

Too many teachers believe that thinking just happens and, if it doesn't happen, something is wrong with the student (Beyer, 1991). But the teacher who provides for an infusion of thinking skills in their classroom creates a sense of inquiry by getting students to generate questions (Willis, 1992). Swicegood & Parsons say disadvantaged students are "lacking in motivation, are passive in the educational setting and deficient in organizational and study skills. What is needed . . . is instruction designed to increase active thinking and questioning skills" (1989, p.4).

Classroom teachers are given in-service training in how to teach thinking skills to their students with the teacher being the generator of the questioning process (Supon & Wolf, 1993), but many students are never taught the skills for generating their own questions and many teachers are not taught how to help students to become better questioners. Learners need to know there are ways to learn how to ask better questions; the teacher's goal is not to be the center

of the classroom, but to have the primary performers be the students through active involvement (Hunkins, 1976). The students who are taught to question are given the means by which they may become independent thinkers and life-long learners.

The classroom that does not encourage inquiry emphasizes student passivity by allowing the teacher to be the giver of knowledge, thus allowing the student to become passive (Hunkins, 1976). Students are too often considered to be receptacles into which knowledge is poured (Hunkins, 1976). However, students learn more when they are actively engaged. Psychologists have known for years that the more the individual is involved in the learning process, the more they come to know (Bybee & Sund, 1982).

Isidor Rabi, a Nobel prize-winning physicist, says his mother made him a scientist by asking him every day, "Did you ask a good question today?" rather than the typical, "What did you learn in school today?" (Schulman, 1993). Both parents and teachers can help the student into the world of inquiry by encouraging self-generated questioning (Schulman, 1993). "A child's education should provide the opportunities

necessary for each individual student to realize his or her full potential" (Wells, 1992, p.4).

Teaching students strategies for asking questions

"How come?" "Why did you do that?" "What's that for?" Listening to the unending litany of the young child is delightful and taxing; one is in awe of the curious nature they display (Dewey, 1933; Hunkins, 1987, 1989). Educators want curious children in their classrooms because an atmosphere dominated by student generated questions is the most stimulating learning environment (Martin, 1984). Too often teachers are faced with a classroom of students who do not want to be involved with the learning process. The students hold themselves apart from the happenings of the classroom not wanting to take a risk and certainly not committed to learning.

Students in the elementary school learn quickly that asking questions is the teacher's forte and is not included in the students' expectations (Supon & Wolf, 1993). Asking questions becomes a sign of "not getting it", of being "dumb" and of standing out in the class as different. Students are much more likely to make

the blanket statement, "I don't get it," rather than ask a question which may help clarify a concept.

There is a need for students to feel that it is acceptable to ask questions, that these questions will be met with respect, and that the student will discover the answer in some manner (MacDonald, 1984). "Students need to feel able to express their ideas and ask tentative questions without being ridiculed or negatively evaluated by either peers or teachers" (Wells, 1994 p. 14). The teacher does not always need to answer a question. Teachers can ask *why* to student-posed yes and no questions (Swicegood & Parsons, 1989). They may need to listen closely to what the student is asking (Fairbairn, 1987; Hunkins, 1976; MacDonald, 1984). Students may want a literal answer. They may also want to answer their own question to reaffirm their understanding.

When student questions are not taken seriously by the teacher or when the atmosphere of the classroom is not conducive to inquiry, students will hold themselves apart from participating (Fosnot, 1989). But teachers must remember that "the essential scheme of pedagogy is

to devise action in favor of students' asking of questions in the first place" (Dillon, 1988, p. 23).

Teachers who desire students to engage in learning will help them to become competent, confident learners (MacDonald, 1984). Questioning that is self-generated shows evidence of involvement. Questioning can be thought of as thinking and the questioning mind is the mind that grows (Patri, 1931).

"Teachers need to provide the kind of classroom atmosphere in which questions are likely to come forth" (Fraenkel, 1973, p. 174). Teachers must provide for student questions by "ceasing our own questioning so that we make room for student questions" (Dillon, 1988, p.23). When the teacher is talking, the student cannot. "The student is to be the prime actor in the classroom" (Hunkins, 1989, p. 255). Another important aspect in inviting students to ask questions is to welcome that question as if we meant it, because the first question that is asked will be the opening or closing of the door for other questions. The students will soon realize whether or not this classroom is one for asking or for merely listening (Dillon, 1988).

Students must be placed in appropriate materials so that success may be assured (Graesser & Black, 1985). A student will develop trust in the teacher and together they can build successful learning experiences. Bristow (1985) recommends that students realize they are to make sense out of what they are doing; too often students are handed a book, paper and pencil and told to do a task that has no meaning to them. It is also of importance to the student that the teacher help in enriching their background of experience. The uninvolved, passive student may need more background than what we provide ((Bristow,1985). Students need to be confident of their surroundings, have the hooks in place on which to hang new knowledge so that questions will take on meaning in their lives (Fosnot, 1989).

Other aspects of student-generated questioning to consider are the strategies employed by researchers as they work with subjects in a study. The research clearly demonstrates that teaching students to raise questions while reading helps them to be more involved with their learning. They perform better on a post test (Wong, 1985); student involvement and better test

scores are viewed as synonymous here. Students can show improvement by being taught to question while reading a text portion and then being asked questions regarding the passage (Legenza, 1978; Manzo, 1976; Wong, 1985). The important aspect of the studies by Legenza, Manzo and Wong is that students of all ages were included. There were students from the elementary grades to college, ages seven to 26. Legenza found that seventh graders who were taught questioning skills scored significantly higher on the post test which included a vocabulary test and an attitude scale. Wong (1985) reviewed 27 studies of the effects of student self-questioning and found that fourteen succeeded in increasing students' comprehension. The studies Wong reviewed described situations in which students were actively taught a strategy through direct teaching techniques, and those students showed improvement.

With positive results like these, teachers must believe their students are capable of learning and certainly deserve the benefits of instruction (MacDonald, 1985).

An important strategy for students to be taught is reciprocal questioning (Helfeldt & Lalik, 1976; Hutson,

Shub & Greenbaum, 1975). The prescribed method of teaching reciprocal questioning is set forth as follows:

1. The teacher initiates one or two questions to motivate reading.
2. The students read the article in order to answer the motivating questions.
3. The students respond to the motivating questions and the appropriateness of their responses discussed. In reciprocal questioning the student responding correctly has the option of initiating a question or choosing another member of the group to do so.
4. A more lengthy question-answer period completes the lesson. (Helfeldt & Lalik, 1976, p. 284)

Students benefit from modeling and practice (Hunter, 1982). The disengaged student may be willing to participate in an activity such as reciprocal questioning because it is laid out, monitored and reenforced by the teacher.

The most powerful message the research brings to us is that students do need to be taught (Frase &

Schwartz, 1974; Legenza, 1978; MacDonald, 1986; Manzo, 1976; McFeely, 1984) The positive, questioning environment helps the student learn ". . . how to question through direct instruction" (Hunkins, 1989, p. 159). Teachers are always asking students if they have any questions. They would probably be surprised if a student actually raised a question other than: *When's lunch? or What time is P.E.?* Teaching does not normally meet the needs of each student, especially the hesitant, reluctant student.

The majority of studies reviewed had a common thread running throughout: The questions students were to generate were focused on specific material. The students were not given the general direction to think up a question. The focus of the question asking was generally on a reading selection similar to what one would use for a comprehension activity. If students were able to use self-questioning it often ensured that comprehension was taking place, thus involvement in one's learning (Bristow, 1985).

The ReQuest Procedure (Manzo, 1969) has been "tested and found to be an effective method for improving reading comprehension and improving student

questioning behaviors" (p. 123). In this procedure, the teacher and the student take turns asking questions regarding a particular reading passage. The student is reminded to ask the kind of questions a teacher might ask (Manzo, 1969).

The strategies presented by Raphael (1982, 1986) on QARs (Question-Answer Relationships) are clear tools for teachers because the procedures are mapped out specifically. Raphael's plan clarifies how students can approach the reading of content material by answering questions pertaining to the text material (Raphael, 1986). The teacher should serve as a model for asking questions and carefully guide the students so they understand how the questioning and text work together (Swicegood & Parsons, 1989).

A form of Jeopardy is suggested as a motivating method for encouraging students to self-generate questions (Hutson et al. 1975). Students are given answers and they are told to make up questions to fit those answers. The kinds of questions are categorized by the typical question words: Who, what, when, where, why and how (Hutson et al, p. 6).

Pictures, photographs, illustrations, cartoons and objects can be used to stimulate the students' self-generated questioning strategies. The students can also be encouraged to ask questions about the visual aids (Perez, 1986).

Oral reading can be incorporated into a teaching strategy to help students generate their own questions. In radio reading the readers read and the listeners listen (Richardson & Morgan, 1994). Student-generated questioning is added when the reader initiates discussion by asking questions of the audience.

Mock Press Conferences involve students who can work individually or in small groups. Some students assume the role of reporters and ask questions about a topic. Questions can also be generated by simulating the visit of a famous person. Historical figures and children's authors come alive through the generation of questions (Swicegood & Parsons, 1989).

In giving students strategies for asking questions and practice in understanding how questions and answers work together, the teacher is providing scaffolding which assists students in constructing meaning (Richardson & Morgan, 1994). The teacher who is

knowledgeable about how learning takes place is assisting the student in making assimilations and accommodations as they make sense of their world (Fosnot, 1989).

Conclusions

How can teachers understand and facilitate learning for the uninvolved, non-questioning student? It is important for children to experience more successes than failures (Dweck, 1975). The teacher should capitalize on the mistakes made by the uninvolved student and use them for individualizing the instruction (Dweck). Classroom teachers and support staff need to confer regarding the uninvolved student and set up a plan of attack; all the teachers working with the student should be using similar strategies. Teachers need to attack the symptoms of learned helplessness as soon as possible (Good et al., 1987).

Can students be taught to be better questioners? The research has proven that direct instruction in teaching students to generate questions is a valuable learning strategy (Legenza, 1978; Manzo, 1976, Wong, 1985; MacDonald, 1986; Hutson et al., 1975; Dweck, 1975). Teaching students to generate questions has

been successful in actively involving students in the learning process. Students can learn to generate questions if they are taught how to do it.

What instructional strategies can teachers use to teach students to generate their own questions? The classroom atmosphere must be conducive to students generating questions (Fraenkel, 1973). The students' questions must be taken seriously by the teacher and treated with respect (Dillon, 1988). Appropriate materials are necessary for students' success to be assured (Graesser & Black, 1985). Students benefit from experience in self-generating questions; they become more proficient with practice (Hutson et al., 1975; Swicegood & Parsons, 1989).

Recommendations

Educators need to become teachers who know how to teach students how to generate questions as well as how to answer a question. The at-risk, uninvolved student cannot remain disengaged when learning how to ask questions. Teachers must present strategies for student-generated questioning through modeling, direct instruction, reciprocal questioning and student-generated questioning activities. Students, especially

the amotivated student, will become more self assured with practice at questioning. They will no longer be able to depend on a simple, *I need help, or I don't get it.* If the expectation of the instructor is to generate questions, student energy must be expended to meet this expectation.

Team meetings are a crucial step in the process of developing a plan to help uninvolved students. All professional staff and support personnel must use the same techniques in dealing with at-risk students. Students will become more confused if teachers use opposing strategies. This means the classroom teacher, Title I teacher, resource teacher, speech clinician, counselor, music, art, physical education teachers and teacher associates must all be involved in the decision making process. These people may be offering multiple strategies to the student and causing her/him to become more and more bewildered. Consistency in teaching techniques will aid the student in becoming an involved learner.

> Educators who make certain students are introduced to learning in situations where they experience more successes than failures are helping students

believe in themselves as learners. The early messages one receives are the most meaningful and last a lifetime. We must make certain the message is positive and powerful.

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