DOCUMENT RESUME

ED 469 289 EC 309 216

AUTHOR Bulgren, Janis A.; Lenz, B. Keith; Marquis, Janet; Schumaker, Jean B.; Deshler, Donald D.

TITLE The Effects of the Use of the Question Exploration Routine on Student Performance in Secondary Content Classrooms. Research Report.

INSTITUTION Kansas Univ., Lawrence. Inst. for Academic Access.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
REPORT NO RR-10
PUB DATE 2002-00-00
NOTE 20p.
CONTRACT 84.324S
PUB TYPE Reports - Research (143) -- Tests/Questionnaires (160)
EDRS PRICE EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Disabilities; *English Instruction; English Literature; Grade 9; High Schools; *Inclusive Schools; *Learning Strategies; *Questioning Techniques; *Teaching Methods

ABSTRACT

The tenth in a series of studies investigating the educational context and outcomes for high school students with disabilities (SWDs), this study explored the use of a Question Exploration Routine as a means of enhancing the performance of students with disabilities in ninth-grade inclusive content classes. Participants were 134 students, with and without disabilities, recruited from 13 inclusive English classes of six teachers in three schools. Six classes were randomly assigned to the experimental condition; seven classes were randomly assigned to the control condition. Participating teachers and researchers selected two topics (prejudice and impetuous behavior) related to Shakespeare's "Romeo and Juliet" for which they expected students to acquire an understanding of critical main ideas. The experimental teachers presented all key points included in each lesson using the Question Exploration Routine. All students participated in a lesson on each of the two topics. Tests related to each lesson topic were administered to students on the following day. Students (both with and without disabilities) who were instructed using the Question Exploration Routine answered, on average, a higher percentage of multiple-choice questions and short-answer questions correctly than did students who received traditional instruction. (Contains 11 references, 5 figures, and 1 table.) (CR)

Institute for Academic Access

Research Report #10

The effects of the use of the Question Exploration Routine on student performance in secondary content classrooms

Janis A. Bulgren, B. Keith Lenz, Janet Marquis,
Jean B. Schumaker, and Donald D. Deshler

2002

IDEAs that Work
U.S. Office of Special Education Programs

Sponsored by the U.S. Department of Education,
Office of Special Education Programs
Grant # 84.324S

Abstract

The purpose of this study was to explore the use of a Question Exploration Routine as a means of enhancing the performance of students with disabilities in ninth-grade inclusive content classes. Participants were one hundred thirty-four students, with and without disabilities, recruited from thirteen intact general education English classes of six teachers in three schools. Six classes were randomly assigned to the experimental condition; seven classes were randomly assigned to the control condition.

Participating teachers and researchers selected two topics (prejudice and impetuous behavior) related to Shakespeare's *Romeo and Juliet* for which they expected students to acquire an understanding of critical main ideas. Researchers constructed instructional materials and assessments associated with the two topics. The experimental teachers agreed to present all key points included in each lesson using the Question Exploration Routine. Control teachers agreed to present the same key points within the lessons using their typical presentation style. The teachers agreed that the assessments were similar to those they regularly used.

All students participated in a lesson on each of the two topics. Tests related to each lesson topic were administered to students on the next day after the day on which the lesson had been delivered. Students (both those with and without disabilities) who were instructed using the Question Exploration Routine answered, on average, a higher percentage of multiple-choice questions and short-answer questions correctly than did students who received traditional instruction. Students with disabilities in the experimental condition performed, on average, only slightly better than students with disabilities in the control condition on the assessment given after presentation of the first lesson, but earned score that were substantially higher than students in the control condition on the assessment given after the second lesson.

Some authors have supported have the idea that thinking, and by implication, student learning, is driven not by answers but by questions (e.g., Elder & Paul) and that in good instructional lessons, the question being asked must be as clear as the answer (Young, 1995). Various approaches to using questions within instruction include the use of the Socratic questioning method (Casabos & Tanner, 1998), questioning based on higher order thinking (Carlsen, 1991), and asking questions followed by making predictions and generating elaborative answers (Pressley, Wood, Woloshyn, Martin, King, & Menke, 1992).

However, authors have also pointed out that involvement in asking and answering questions may be particularly difficult for students with learning difficulties. For example, these students may have difficulty in the active manipulation or transformation of information (Pressley et al., 1992), especially that promoted by "why" questions, that is, questions that ask for more than facts and details. Pressley et al. (1992) noted that students with learning difficulties may be members of a population that does not benefit from certain types of "why" questions because these students may often attend to irrelevant or remotely relevant information.

In addition, students with learning disabilities also have difficulty transferring knowledge and skills learned in one area to other situations (Wong, 1994). Wong contended that these students might need more time and opportunity to reflect on the process itself in order to be successful. Therefore, students with disabilities and others who do not achieve up to their potential may need extra help to integrate new information with what they already know and use that information in new situations. This may be accomplished by prompts that help them ask and answer questions related to new material, practice in asking and answering questions, and teaching thinking patterns.

An understanding of the questioning process might be particularly important for students and teachers in inclusive secondary content classrooms. As reported by Andrews et al. (2000), more and more students with disabilities have been included in general education content classrooms in recent years. Rea, McLaughlin, and Walther-Thomas (2002) conducted research indicating that students in inclusive classroom do, indeed, benefit from inclusion. In light of the trends toward inclusion, content teachers need instructional methods that they can use to teach a variety of types of content. This may be particularly important in complex areas of instruction such as helping students answer difficult, but important, content questions.

Therefore, the purpose of this study was to explore the use of a Question Exploration Routine as a means of enhancing the performance of students with disabilities in ninth-grade inclusive content classrooms. The Question Exploration Routine involves the development of a Question Exploration Guide, a one-page graphic device designed to help students and teachers explore and answer a critical question through the development of smaller supporting questions

and an exploration of details that provide foundational understandings related to those supporting questions. The routine and device are part of a line of programmatic research, associated with Content Enhancement, focusing on instruction in secondary level subject matter classes that contain students of diverse abilities (Bulgren & Lenz, 1996).

Methods

Participants and Settings

One hundred thirty-four students were recruited from thirteen general education classes of six teachers in three schools in the Midwestern United States. Two of the schools were located in rural areas, and one was located in a suburban area. All participating students were enrolled in 9th-grade English classes. The general education classrooms were typical, each having desks, chairs, an overhead projector and screen.

Six classes were randomly assigned to the experimental condition (hereafter called "experimental classes"; seven classes were randomly assigned to the control condition (hereafter called "control classes"). Altogether, six teachers taught the thirteen classes. Although some teachers taught multiple classes, no teacher taught both experimental and control classes.

For the selection process, students volunteered to allow their data to be used in this study by returning consent forms signed by their parents. Although all students present in the classrooms received the instruction, 73 students who participated in the experimental condition and 61 students who participated in the control condition gave consent for their data to be used.

Four types of students were included: students classified for the study as high-achieving (HA) students, normal-achieving (NA) students, low-achieving (LA) students, and students with disabilities (SWDs). The HA students had grade-point averages of 3.50 or above in academic classes in both semesters of the school year during which the study took place. The NA students had grade-point averages below 3.50 with no more than one "D" or "F" in either semester of the year during which the study took place. The LA students had received at least two grades of "D" or "F" in academic courses during at least one of the two semesters of the school year during which the study took place. Students with disabilities (SWDs) had been formally classified as such by their school districts, which followed district and state guidelines. Thirty-seven HA students (17 in the experimental condition and 20 in the control condition), 52 NA students (31 in the experimental condition and 21 in the control condition), 27 LA students (16 in the experimental condition and 11 in the control condition), and 18 SWDs (9 in the experimental condition and 9 in the control condition) were involved in the study. In the experimental condition, there were 32 males and 41 females; in the control condition, there were 33 males and 28 females. Demographic data for the SWDs appear in Table 1.

The Question Exploration Guide and Routine

The Question Exploration Guide is a two-dimensional graphic device that allows the teacher to display a Critical Question and information related to it: Key Terms, Supporting Questions, and basic knowledge resulting from an explanation of the Key Terms and exploration of the Supporting Questions. It also allows the teacher to display a Main Idea Answer to the Critical Question and two Challenge Questions related to exploring this Main Idea Answer within the subject area and extending it to the world at large. Prior to class, the teacher creates a draft of the Question Exploration Guide. (See Figures 1 and 2 for examples.) The final version is developed with the class through an interactive process called the Linking Steps and the Cue-Do-Review Sequence (Bulgren, Lenz, Deshler, & Schumaker, 2001).

The Linking Steps are procedures the teacher uses to guide the students through the in-class interactive development of the Question Exploration Guide. The teacher's draft of the guide serves as a rough draft (which the students never see), rather than an exact lesson plan or a handout for the students, because students' suggestions and questions may require adaptation of information on the drafted guide. Students are asked to participate in the process of developing the guide for the purpose of enhancing their understanding of the answer to the Critical Question as well as enhancing their thinking processes related to answering any Critical Question.

The Question Exploration Routine, the instructional routine used to create the Question Exploration Guide with the students, also contains three instructional phrases: "Cue," "Do," and "Review." The overall goal associated with these phases is that the Question Exploration Guide be developed on an interactive basis between the teacher and the students to help the students take apart a critical question, and understand and use the main idea answer. During the "Cue" phase, the importance of understanding the information, the importance of note taking and participation, and the use of the Question Exploration Guide are cued and explained. The "Do" phase of the Question Exploration Routine involves the construction of the Question Exploration Guide by the students, as much as possible, with teacher guidance. Through the use of the series of Linking Steps in this phase, the teacher leads the students through the logical cognitive processes involved in identifying a critical question and small, supporting questions that help answer the critical question, finding and explaining answers to the supporting questions, constructing a main idea answer, using the main idea answer in the content area, and generalizing the main idea to the real world. The "review" phase involves reviewing the information on the guide, checking students' understanding of the information, and discussing the process involved in answering the critical question and constructing and using the main idea answer. The purpose of this phase is to ensure that students can use the information on the guide, can explain the cognitive processes involved in thinking about and working with a difficult question to arrive at a main idea answer, and can also use the answer in different ways.

The Lessons and Materials

Shakespeare's *Romeo and Juliet* was selected as the topic for the lessons because all teachers participating in the study typically teach this play each year, and lessons about the topic could be designed that contained the type of information that students in a 9th-grade English class might be expected to understand and remember. Topics to be explored within the lessons were related to messages delivered by Shakespeare in *Romeo and Juliet* and included *prejudice* and *impetuous behavior*. For each of these topics, the teachers agreed upon a critical question, key words and phrases associated with the question, and supporting questions that helped answer the critical question. In addition, they agreed on the answers to the supporting questions, a main idea answer, a way to show deep understanding of the play and its main idea, and a way that the main idea could be generalized to the world of today. The critical questions and main idea answers related to the critical questions were: (a) Critical Question 1: What is Shakespeare's message about prejudice?, Main Idea Answer 1: Prejudice can last from one generation to another; (b) Critical Question 2: What is Shakespeare's message about impetuous behavior?, Main Idea Answer 2: Impetuous behavior often causes more problems than it solves.

Two sets of lesson materials were designed for each lesson: one set for the experimental teachers who would be using the Question Exploration Routine and Guide, and one set for the control teachers. For each of the topics, researchers developed a lesson based on the use of the Question Exploration Routine for experimental classes and prepared Main Idea Guidelines for the control classes. The information contained in both sets of materials was the same. The Question Exploration Guide contained key words and supporting questions related to the targeted concept and developed a main idea about that concept as well as extended use and generalization of the main idea. The Main Idea Guidelines were written to replicate all information that appeared in the Question Exploration Guides. Thus, materials were developed so that both experimental and control teachers could present the same information to their classes and develop the same main idea about the topic being discussed.

Measurement

Student measures. Two tests, each with 16 multiple-choice items and four short-answer questions, were developed to measure student understanding of the information in the lessons. One test focused on the information in the prejudice lesson; the other focused on the information in the impetuous behavior lesson. The items on the two tests were parallel in content and format. For one of the items in the short answer portion of each test, students were asked to write Shakespeare's main idea about the targeted topic in *Romeo and Juliet* and to give an example of the main idea from the play (the answers to this item will hereafter be referred to as the Main Idea and Example Answers). For the other item in the short-answer portion of each test, they were asked to give an example from real life or current events that also showed this main idea

and to explain why it showed the main idea (the answers to this items will hereafter be referred to as the Generalization and Explanation Answers).

Researchers scored the tests after all marks identifying the students were masked or removed. Scorers awarded one point for each correct answer on the multiple-choice portion of the tests. Scorers awarded one point for the main idea, one point for an example of the main idea, one point for an example from real life, and one point for an explanation of the real-life example on the short-answer portion of the tests. Interscorer reliability was determined by having two scorers independently score a random sample (22%) of the tests taken by students in all classes. The two scorers' recordings were compared item-by-item, and the percentage of agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. For the short-answer portion of the tests, the scorers agreed 597 times out of 660 opportunities to agree, for a percentage of agreement of 90.5% (the range on individual tests was 25% to100%; the 25% agreement occurred in only one instance).

Student satisfaction data relative to the use of the Question Exploration Routine was also collected. The survey had seven items, and each item had a 7-point Likert-type scale associated with it. The scale ranged from "1" (completely dissatisfied) to "7" (completely satisfied.)

Student data was also collected to determine student confidence relative to their preparedness for the tests associated with the two topics. This survey had three items, and each item had a 7-point Likert-type scale associated with it. The scale ranged from "1" (completely disagree) to "7" (completely agree).

Teacher measures. For teachers, a Content Score Sheet was designed to allow observers or interviewers to determine if the teachers had covered all informational items relevant to the topics selected. On the Content Score Sheet were listed each of the items of information appearing on the Question Exploration Guide (used by experimental teachers) or in the Main Idea Guidelines (used by control teachers). The observer/interviewer attended class and checked an item when the teacher covered that item in class and also interviewed the teacher to ascertain that all items had been covered.

Procedures

Researchers conducted meetings with ten, ninth-grade English teachers from an urban, a suburban, and a rural school to select a topic of study that would be common among nearly all ninth-grade English classes. After Shakespeare's *Romeo and Juliet* was determined to be the piece of literature taught at this level across all schools, teachers were asked to suggest concepts related to *Romeo and Juliet* that they typically taught each year. Suggestions were discussed. All of the teachers agreed upon four concepts for instruction: prejudice, impetuous behavior, fate, and meddling. Two of these, prejudice and impetuous behavior, were selected for this study. Prior to the beginning of the study, all teachers agreed that the concepts chosen fit well with their

curriculum. They also agreed that, as part of their regular instruction, they would help their students gain an understanding of the main ideas related to the concepts.

Teachers of students in the experimental condition were trained to use the Question Exploration Routine and the Question Exploration Guide. The training session was 60 minutes long and included a description of the Question Exploration Guide and Routine, modeling the use of the routine, and a discussion with the teachers.

During the two specified lessons, teachers in the experimental classrooms used the Question Exploration Routine interactively with students to explore information associated with the main ideas chosen by the teachers. The teacher completed the Question Exploration Guide on the overhead projector, while the students completed Question Exploration Guides at their desks.

Teachers of students in the control classrooms were asked to use the Main Idea Guidelines to discuss information related to the main ideas. They used the overhead projector and typical class discussion to guide the students toward an understanding of the main ideas. They were asked to conduct the discussion as they usually did.

Five of the six experimental teachers were observed by researchers to ensure that they followed the steps of the Question Exploration Routine and used the Question Exploration Guide. Six of the seven teachers in the control classrooms were observed to measure whether they covered the points specified in the Main Idea Guidelines relative to content. All of these teachers were also interviewed to determine if points on the Main Idea Guidelines had been covered at a time other than the day they were observed by researchers.

Each lesson was presented during one class period. On the following day, students were given a test over the related topic, e.g., prejudice or impetuous behavior. Satisfaction and confidence questionaires were administered by the teachers to students within a month after the completion of the instruction.

Design and Analysis

The design was a control-group design in which intact classes were randomly assigned to either an experimental or control condition. A general linear mixed model approach was used to analyze the data. In this analysis, the treatment condition (experimental or control) is considered a fixed factor and the classrooms as well as the students are considered as random factors. The nested structure of the data is explicitly modeled by including variance components for both students and classrooms nested within teachers. SAS PROC MIXED was the analysis program used to determine the statistical results. The denominator degrees of freedom were determined using the Kenward and Roger (KR) method (1997). The primary analysis focused on the effect of the intervention (use of the Question Exploration Routine compared to traditional methods to teach content information) on the test performance of the students. For each of the topics, impetuous behavior and prejudice, three test performances were examined: the total test score,

the main idea/example score, and the generalization/explanation score. Statistical tests were conducted on the total scores. Because the main idea and generalization scores had limited variability (possible scores were 0, 1, or 2), these results were examined descriptively.

Results

Total test score. Students who were instructed using the Question Exploration Routine during the prejudice lesson correctly answered, on average, a higher percentage of questions on the total test than did students who received traditional instruction, $F(1, 10.9) = 11.20$, $p = .007$. The overall means for these groups were: the experimental group mean was 80.36% and the control group mean was 64.74%. For students in the subgroups, the average means were as follows: the HA students in the control group earned a mean score of 66.00% and those in the experimental group earned a mean score of 90.00%; the NA students in the control group earned a mean score of 65.25% and those in the experimental group earned a mean score of 84.76%; the LA students in the control group earned a mean score of 56.88% and those in the experimental group earned a mean score of 72.31%; and the students with disabilities in the control group earned a mean score of 67.78% while those in the experimental group earned a mean score of 68.89%. (See the left side of Figure 3.) Significant differences were found for the HA students between those in the experimental condition ($n = 12$) and the control condition ($n = 20$) on the total score, $F(1, 9.1) = 18.64$, $p = .002$, and for NA students, $F(1, 10.3) = 11.25$, $p = .007$.

For the impetuous behavior lesson, the overall means on the total test for these groups were: the experimental group mean was 87.88% and the control group mean was 65.66%. The difference between these means was statistically significant, $F(1, 9.32) = 24.27$, $p = .0007$. Total mean scores for the achievement groups were as follows: the HA students in the control group, 73.00%, and in the experimental group, 95.67%; NA students in the control group, 64.52%, and in the experimental group, 91.17%; LA students in the control group, 61.36%, and in the experimental group, 80.00%; and students with disabilities in the control group, 57.22%, and in the experimental group, 73.75%. (See the right side of Figure 3.) Significant differences were found between the experimental and control groups on the total score for HA students, $F(1, 8.36) = 31.44$, $p = .0004$. Differences on the total score were also found between the NA students in the two treatment groups, $F(1, 10.1) = 39.01$, $p < .0001$.

Main idea/ example score. Differences in performances for these same groups of students relative to writing a main idea and example answer for each critical question were also examined. For the prejudice test, the mean scores on these items were as follows: the HA students in the control group, 60.00%, and in the experimental group, 91.67%; the NA students in the control group, 72.50%, and in the experimental group, 97.62%; the LA students in the control group, 37.50%, and in the experimental group, 88.46%; and students with disabilities in the control group, 77.78% and in the experimental group, 77.78%. (See the left side of Figure 4.)

In general, differences between the experimental and control groups were greater for the students in the higher achieving groups. For the test on 'impetuous behavior," mean scores for the groups on the main idea/example test were: the HA students in the control group, 67.50%, and in the experimental group, 100%; the NA students in the control group, 64.29%, and in the experimental group, 90.00%; the LA students in the control group, 63.64%, and in the experimental group, 76.64%; and students with disabilities in the control group, 55.56%, and in the experimental group, 81.25%. (See the right side of Figure 4.) As was found for the prejudice test, differences between the experimental and control groups were greater for the students in the higher achieving groups.

Generalization/ explanation score. Differences in performances were also examined for these same groups of students relative to writing a generalization and explanation answer. On the prejudice test, the mean scores on the generalization items were as follows: the HA students in the control group, 60.00%, and in the experimental group, 87.50%; the NA students in the control group, 62.50%, and in the experimental group, 83.33%; the LA students in the control group, 50.00%, and in the experimental group, 80.77%; and students with disabilities in the control group, 66.67%, and in the experimental group, 77.78%. (See the left side of Figure 5.)

On generalization items on the impetuous behavior test, the mean scores for each group were as follows: the HA students in the control group, 62.50%, and in the experimental group, 96.67%; the NA students in the control group, 59.52%, and in the experimental group, 93.33%; the LA students in the control group, 63.67%, and in the experimental group, 84.54%; and students with disabilities in the control group, 55.55%, and in the experimental group, 68.75%. (See the right side of Figure 5.)

Student satisfaction. The results of the student satisfaction questionnaire indicated that experimental students were between "neither satisfied nor dissatisfied" and "somewhat satisfied" with aspects of the routine. Mean ratings (on the seven-point scale) were the following: whether the Question Exploration Guides helped them follow what the teacher was saying (4.9); whether the guides helped them take notes (5.0); whether the guides helped them focus attention on what was important in class (4.7); whether the guides helped them study for tests (5.2); whether the guides helped them do well on tests (5.2); whether they liked this new way of teaching as compared to when their teacher did not use the guides (4.1); and whether the guides helped improve their grades (4.7).

The results of the student confidence questionnaire indicated that students in the experimental classes were more confident of their preparedness for the tests than students in the control classes. Mean ratings were the following: whether they knew what to expect when they took the tests (experimental 5.1 vs. control 3.8); whether the tests allowed them to show what they learned about the topics (experimental 4.6 vs. control 4.3); and whether they were confident

that they learned the information that they needed to master (experimental 4.9 vs. control 4.4).

Discussion

This study provides support for the use of the Question Exploration Routine in inclusive secondary content classrooms that contain students with disabilities. Significant differences were found between the test scores earned by students in classes where the routine was used and the test scores of students in control classes. Additionally. substantial differences in test scores were apparent for all types of students within the groups.

Interestingly, the students with disabilities in the experimental group earned scores that were only slightly higher than those in the control group when the teachers used the new routine for the first time, whereas students in the other three achievement groups in the experimental condition scored, on average, between 15 and 20 percentage points higher than those in the control groups on total test score. However, on the test following the teachers' second use of the new instructional routine, the students with disabilities in the experimental group scored substantially higher than students with disabilities in the control group, as did the experimental students in the other achievement groups.

The reason for this is unclear. The students with disabilities in the control group might have known a great deal about prejudice, or there might have been a "dose" effect whereby two lessons were required before the students with disabilities started benefiting from the use of the Question Exploration Routine and Guide. Students with disabilities may need more time than students without disabilities to become familiar with and benefit from this new instructional procedure.

The results of the short-answer portions of the test raise other issues. For example, students with disabilities in the experimental group earned scores that were no higher than those in the control group on the short answer test items related to knowledge of main idea and example on the first test, but, as with the total test score, scored higher on the second test when asked to provide a main idea and example associated with the topic. Interestingly, students with disabilities in the experimental group performed higher than those in the control group on the portions of both tests related to generalization and explanation of the main idea.

The highest levels of student satisfaction were expressed related to the idea that the guides helped students do well on tests and to take notes. Students in the experimental condition had, overall, greater levels of confidence that they knew what to expect when they took the tests than did students who received traditional lecture-discussion instruction.

The results of this study are similar to the results of studies focusing on other Content Enhancement Routines (e.g., Bulgren, Schumaker, & Deshler, 1988; 1994; Bulgren, Deshler, Schumaker, & Lenz, 2000). In each of those studies, the use of a routine and a visual device enhanced the performance of students representing all achievement groups in inclusive classes.

The differences between the experimental and control or comparison groups in each case were similar to the differences found here. In essence, the use of one of the routines results in an average boost in performance equal to approximately 15 percentage points on a test of knowledge, and this boost in performance results in many more experimental students passing a test than comparison/control students.

One of the limitations of this study is that the effects of the intervention over time were not measured. That is, the effects of the routine and the satisfaction of the students after the routine has been used across several months may be different from what was achieved here. Students might become more aware of the kinds of information that they were expected to learn and study for the tests in a different way. Another limitation of the study is the relatively small numbers of students with disabilities included in the classes. The requirement of the study that all the teachers use the same lesson material in the same level English course limited the number of teachers who could participate. A further limitation is that the Question Exploration Routine was tested in relation to only two English class concepts.

Future research is needed to address some of these limitations. Research needs to be conducted with larger numbers of classes containing students with disabilities for longer periods of time. Research also needs to be conducted in other subject areas at other levels of schooling. Additionally, research is needed combining the use of the Question Exploration Routine with the use of other research-based Content Enhancement Routines to determine the cumulative effects of the routines on student performance.

References

Andrews, J., Carnine, D., Coutinho, M., Edgar, E., Forness, S., Fuchs, L., Jordan, D., Kauffman, J., Patton, J., Paul, J., Rosell, J., Rueda, R., Schiller, E., Sktric, T., & Wong, J. (2000). Bridging the special education divide. *Remedial and Special Education, 21*(5), 258-260.

Bulgren, J. A., & Lenz, B. K. (1996). Strategic instruction in the content areas. In D. D. Deshler, E. S. Ellis, & B. K. Lenz (Eds.). *Teaching adolescents with learning disabilities: Strategies and methods.* (2nd ed., pp. 409-473). Denver: Love Publishing.

Bulgren, J. A., Lenz, B. K., Schumaker, J. B., & Deshler, D. D. (2001). *The question exploration routine.* Lawrence, KS: Edge Enterprises, Inc.

Carlsen, W. S. (1991). Questioning in classrooms: A sociolinguistic perspective. *Review of Educational Research, 61*(2), 157-178.

Casabos, L., & Tanner, M. L. (1998). Promoting and studying discussions in Math classes. *Journal of Adolescent & Adult Literacy, 41 (*5), 342-349.

Elder, L., & Paul, R. (1998). The role of Socratic questioning in thinking, teaching, and learning. *The Clearing House, 71*(5).

Kenward, M.G., & Roger, J.H. (1997). Small sample inference for fixed effects from restricted maximum likelihood. *Biometrics*, *53*, 983-997.

Pressley, M., Wood., E., Woloshyn, V. E., Martin, V., King, A., & Menke, D. (1992). Encouraging mindful use of prior knowledge: Attempting to constuct explanatory answers facilitates learning. *Educational Psychologist, 27*(1), 91-109.

Rea, P. J., McLaughlin, V. L., & Walther-Thomas, C. (2002). Outcomes for students with learning disabilities in inclusive and pullout programs. *Exceptional Children, 68* (2), pp. 203-222.

Wong, Bernice Y. L. (1994, Spring). Instructional parameters promoting transfer of learned strategies in students with learning disabilities. *Learning Disabilities Quarterly, 17*, 110-120)

Young, Kathleen McCarthy (1995). Explaining explanations: A conversation with NRCSLsenior scientist Gaea Leinhardt. *Learning, 3*(1). University of Pittsburgh.

Table 1

Description of Students with Disabilities

	Experimental		Control	
Variable	*Mean*	*Range*	*Mean*	*Range*
Age*	15.4	15.5-16.3	15.3	14-.0-16.4
Variable	*n*		*n*	
	Gender			
Girls	0		2	
Boys	9		7	
	Grade Level			
9th	9		8	
10th	0		1	
	Race			
Caucasian	7		8	
Hispanic	1		0	
Not specified	1		1	
American Indian.	0		0	
Asian American	0		0	
African American	0		0	
	Lunch Status			
Full Pay	5		6	
Free/Reduced	3		2	
Not specified	1		1	
Average Number of Schools Attended				
Elementary	2.1		1.6	
Middle	1.3		1.1	
High	1		1	
Variable	*Mean*	*SD*	*Range*	*Mean*	*SD*	*Range*
Test Scores						
IQ	104.2	14.5	86-121	99	14.9	76-114
Reading	88.5	25.1	55-120	84	4.8	78-91
Knowledge	94.8	39.1	87-103	88.6	15.6	72-109
Written Language	82.9	22.4	58-124	82.2	10.9	74-94

Note. * Age reported in years and months. IQ scores (full-scale) are from the Weschler Intelligence Scale for Children. Achievement scores reported are from the Woodcock-Johnson (III).

Question Exploration Guide

Text Reference _____ Name: _____

Course _____
Unit _____ Critical Title Shakespeare's Romeo and Juliet
Lesson _____ Question #: 1 _____ Date _____

(1) What is the critical question?

What is Shakespeare's message about prejudice in Romeo and Juliet?

(2) What are the key terms and explanations?

What is prejudice?	Prejudice is a negative opinion made without looking at facts.

(3) What are the supporting questions and answers?

What behaviors go with prejudice?	Behaviors include negative attitudes, negative words, or physical fights.
Give examples of each from R & J.	Attitude: Lord Capulet and Lord Montague have long hated eachother. (1.1.87-93) Words: Montague accuses Capulet of being a "villain." (1.1.75) Fights: Capulet calls for his long sword to kill old Montague. (1.1.72)
What are the effects on younger people?	Attitude: Young Tybalt has learned to hate all Montagues "as he hates hell." (1.1.68) Words: Even the servants insult each other as "dogs". (1.1.10) Fights: Mercutio and Tybalt are killed in sword fights. (3.1.65-135)

(4) What is the main idea answer?

Prejudice can last from one generation to another.

(5) Explore and use the main idea. How do the citizens in Act 1 feel about the fighting and prejudice?

The citizens are able to see the harm caused by long-term prejudice and end up hating both families.

(6) Extend the main idea to your world. Describe an event in which prejudice hurts people over a long period of time.

The Protestants and Catholics in Northern Ireland have fought from generation to generation.

Bulgren KU-CRL 2/01

Figure 1

Question Exploration Guide

Text Reference _____ Name: _____

Course _____
Unit _____ Critical Question #: 3 Title Shakespeare's Romeo and Juliet
Lesson _____ _____ Date _____

(1) What is the critical question?
What message does Shakespeare deliver about Romeo's impetuous behavior in Romeo and Juliet (R & J)?

(2) What are the key terms and explanations?

What is impetuous behavior?	Impetuous behavior is to act suddenly without thinking things through.

(3) What are the supporting questions and answers?

Why are some people impetuous?	Impetuous behavior might happen in love, marriage or suicide.
How does Romeo show these behaviors?	Love: Romeo loves Rosalind one minute and Juliet the next. (1.4.17-22 & 41-53) Marriage: Romeo convinces the Friar to marry him and Juliet immediately. (2.3.57-92) Suicide: Romeo commits suicide just minutes before Juliet awakens. (5.3.101-120)
What other ways could he have acted?	Love: Romeo & Juliet could try to buy more time and let the relationship mature. Marriage: The Friar could have delayed the planned marriage. Suicide: Romeo could have paid attention to Juliet's signs of life in the tomb.

(4) What is the main idea answer? Impetuous behavior often causes more problems than it solves.

(5) Explore and use the main idea. Explain the problems caused by old Capulet's impetuous behavior.

Old Capulet keeps changing his mind about Juliet marrying, forcing the lovers to act.

(6) Extend the main idea to your world. Describe a news event in which impetuous behavior has caused problems.

Bulgren KU-CRL 2/01

Figure 2

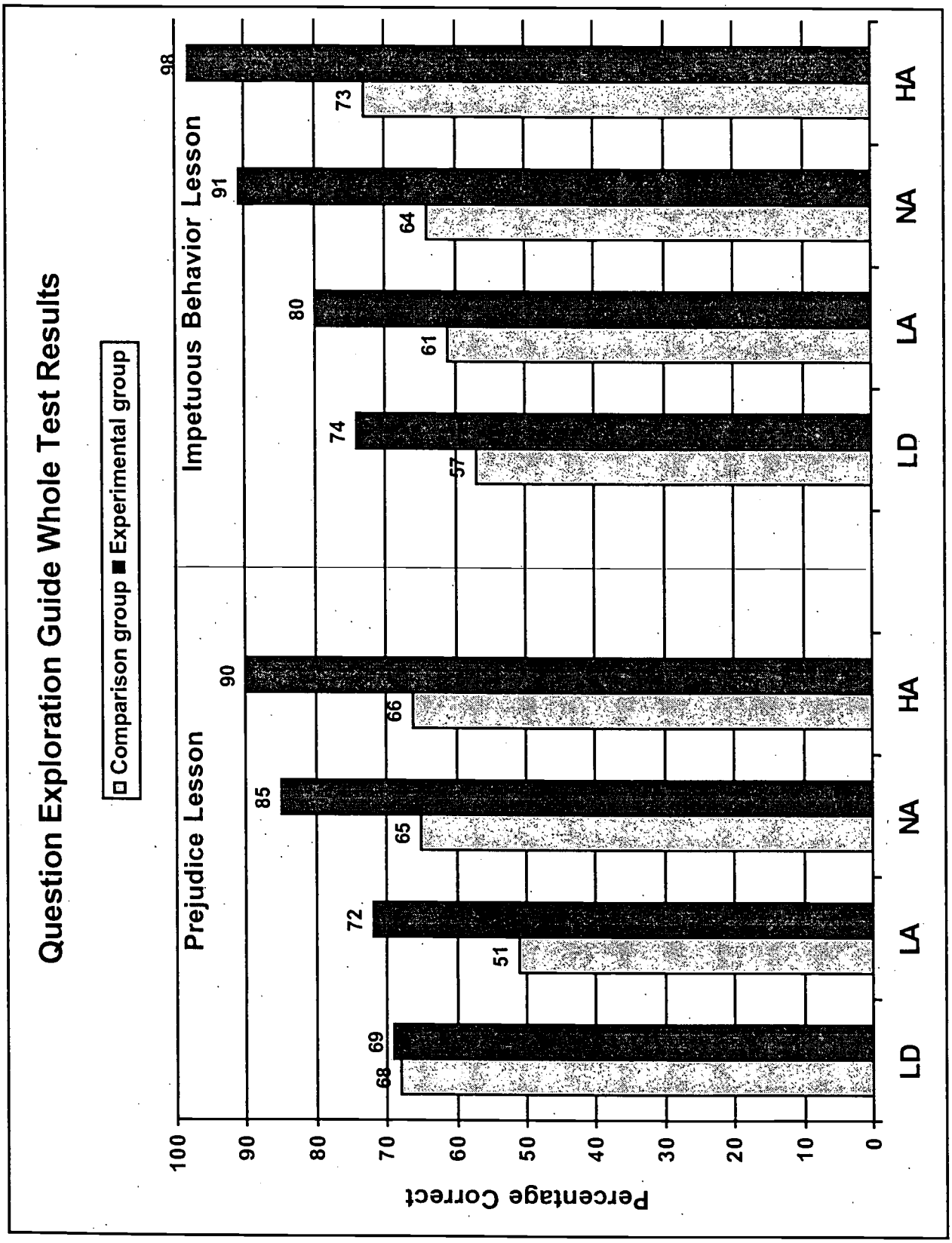

Figure 3. Question Exploration Guide Whole Test Results

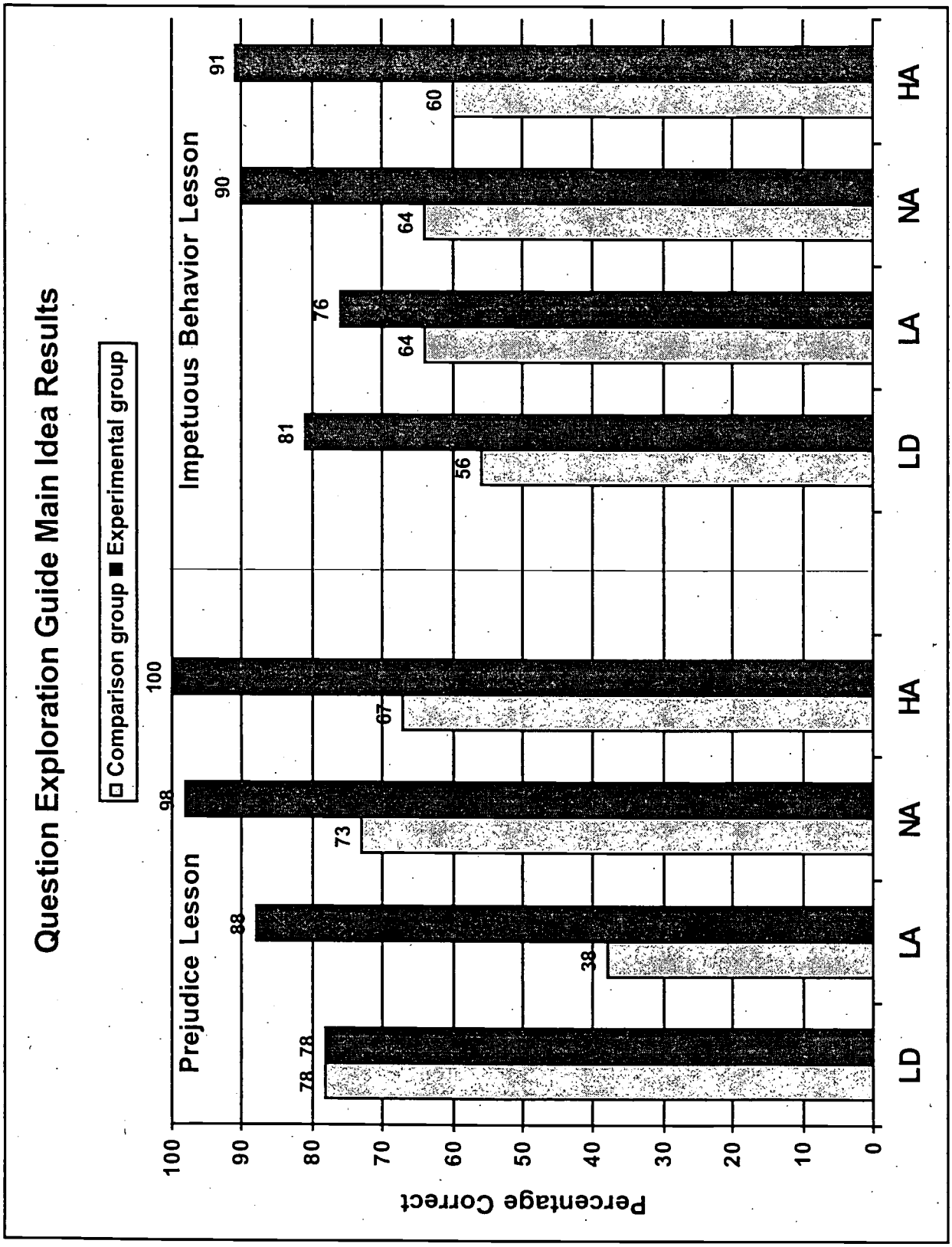

Figure 4. Question Exploration Guide Main Idea Results

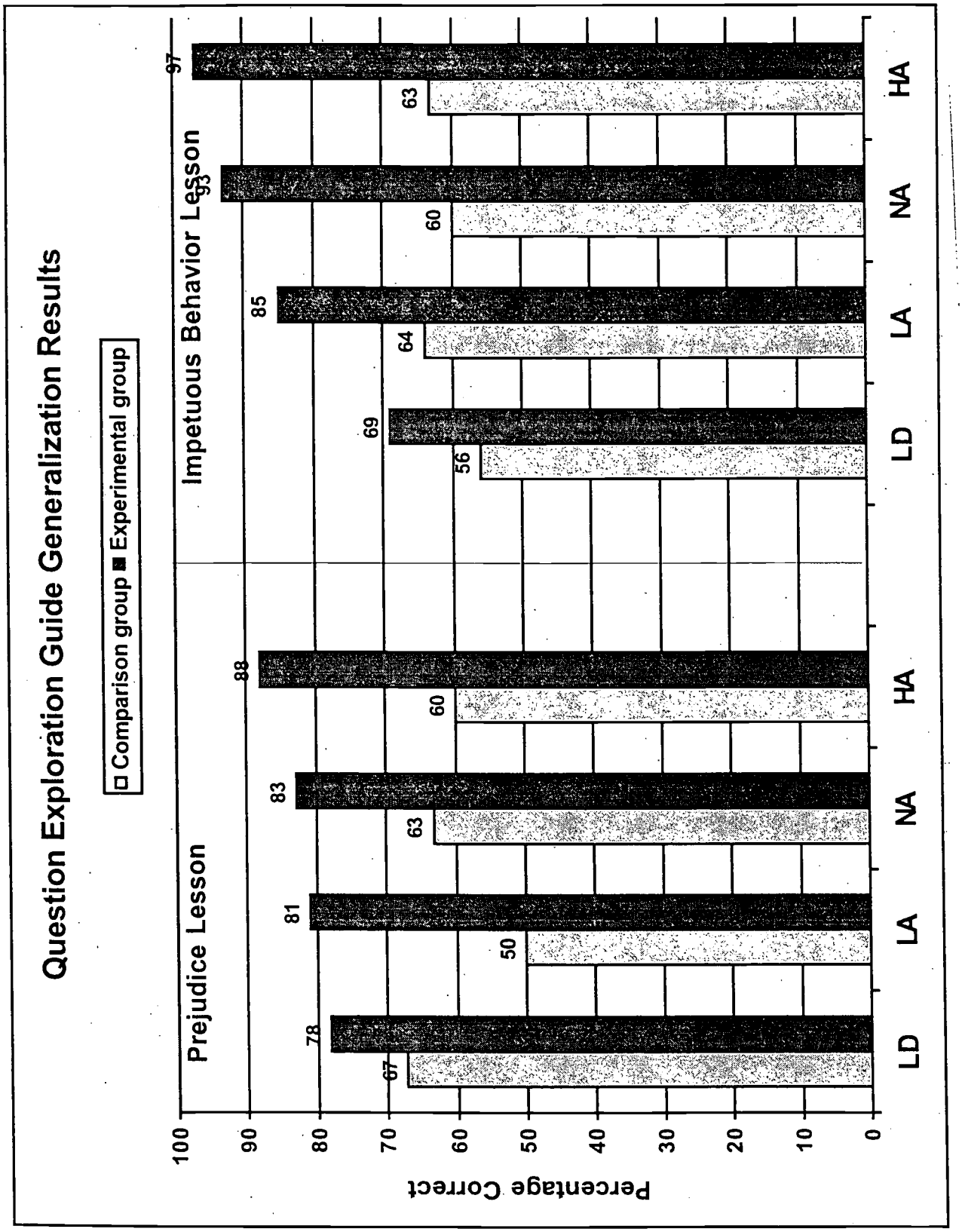

Figure 5. Question Exploration Guide Generalization Results

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

☐ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☒ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").