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ABSTRACT

This study examined the relative effects of homogeneous versus heterogeneous ability grouping on performance and attitudes of students working cooperatively during interactive videodisc instruction. After two cooperative training sessions 80 fourth through sixth grade students, classified as high and low ability, were randomly assigned to treatments. Students completed a level II interactive videodisc science lesson about whales, an achievement test, and an attitude questionnaire. The amount of instructional time for each group was also recorded. Results revealed that homogeneous low ability groups scored significantly less than the other three groups, while the difference between achievement of high ability students in homogeneous and heterogeneous groups was not statistically significant. Homogeneous low ability groups consistently used more instructional time than the other groups, whereas homogeneous high ability groups used the least amount of time. Low ability students in heterogeneous groups had significantly better attitude scores than their high ability groupmates. Implications for the collaborative use of level II videodiscs are discussed. (29 references) (Author/BBM)

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The Impact of Cooperative Group Composition on Student Performance and Attitudes During Interactive Videodisc Instruction

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Ali Simsek

Abstract

This study examined the relative effects of homogeneous versus heterogeneous ability grouping on performance and attitudes of students working cooperatively during interactive videodisc instruction. After two cooperative training sessions, 80 fourth through sixth grade students, classified as high and low ability, were randomly assigned to treatments. Students completed a level II interactive videodisc science lesson, an achievement test and an attitude questionnaire. The amount of instructional time for each group was also recorded. Results revealed that homogeneous low ability groups scored significantly less than the other three groups, while the difference between achievement of high ability students in homogeneous and heterogeneous groups was not statistically significant. Homogeneous low ability groups consistently used more instructional time than the other groups, whereas homogeneous high ability groups used the least amount of time. Low ability students in heterogeneous groups had significantly better attitude scores than their high ability groupmates. Implications for the collaborative use of level II videodiscs are discussed.

The Impact of Cooperative Group Composition on Student Performance and Attitudes During Interactive Videodisc Instruction

Educators have systematically attempted to develop new techniques and technologies for providing effective instruction for all learners. Much of these efforts have resulted in individualized instruction that adjusts the instructional sequence to the cognitive and affective needs of each learner. However, the potential for individualized instruction may be limited due to the difficulties associated with identifying individual differences and translating them into instructional prescriptions.

Furthermore, individualized instruction has its own shortcomings. An important shortcoming is that individualization often implies isolation. Working alone for long periods may cause boredom, frustration, and anxiety. As a consequence of this sterile approach, students may think that learning is impersonal. Secondly, individualized instruction does not allow students to interact with and learn from each other because it limits students to the resources provided by the learning environment. Finally, individualistic use of emerging interactive technologies such as computers and videodiscs greatly increases design and utility costs. Financial implications are particularly obvious when instruction requires a work station for each learner (Hooper & Hannafin, 1991; Johnson & Johnson, 1986).

It seems that cooperative learning has the potential to overcome these limitations. Carlson and Falk (1989), for example, concluded that cooperative groups can successfully use interactive videodiscs and perform better than those working alone. Noell and Carnine (1989) indicated that cooperative videodisc learning may be more efficient than individualistic use of this technology. Atkins and Blissett (1989) reported that students in small groups spent much of their time for interacting with partners. Similar results have been reported for computer-based cooperative learning (Dalton, Hannafin, & Hooper, 1989; Johnson, Skon, & Johnson, 1980; King, 1989; Mevarech, Silber, & Fine, 1991). Moreover, comprehensive research reviews show that the benefits of cooperative learning are not limited to achievement effects. There is strong research evidence demonstrating the affective benefits of working in cooperative groups (Johnson & Johnson, 1989; Newmann & Thompson, 1987; Rysavy & Sales, 1991; Sharan, 1980; Slavin, 1991; Webb, 1988).

In addition to establishing the efficacy of cooperative learning for technology-based instruction, the researchers must identify factors which influence the effectiveness of learning in small groups. One of these factors is group composition with regard to student ability. Cooperative learning usually involves heterogeneous grouping. That is, groups are formed by combining students of disparate ability, gender, and ethnic background. However, there is considerable disagreement regarding the effects of heterogeneous grouping on performance and attitudes of students representing different abilities.

Advocates of heterogeneous grouping claim that there might be some important advantages to having students from different abilities work together on cooperative tasks. They argue that while high ability students benefit from providing explanations to partners, low ability students benefit from the increased opportunities for support and encouragement. The results of some experimental studies showed that students of all abilities benefitted from participating in a heterogeneous cooperative group compared to students of similar ability who worked alone (Dalton, Hannafin, & Hooper, 1989; Gabbert, Johnson, & Johnson, 1986; Hooper & Hannafin, 1988; Johnson, Johnson, Roy, & Zaidman, 1985; Johnson, Skon, & Johnson, 1980; Yager, Johnson, Johnson, & Snider, 1986).

Critics claim that heterogeneous grouping promotes personal gains at the expense of others. Hill (1982) indicated that the performance of high ability students on complex tasks may be detrimentally affected by medium and low ability students. Beane and Lemke (1971), however, found that high ability students benefitted more from heterogeneous grouping. Slavin (1983) suggested that heterogeneous grouping may offer few benefits to low ability students because they are simply given the correct answers and do not learn skills necessary to achieve when working alone. Goldman (1965), on the other hand, reported that students working with partners of higher abilities performed better than those working with partners of similar or lower abilities. Swing and Peterson (1982) found that peer interaction in mixed groups enhanced the achievement of high and low ability learners, but did not have any affect on the performance of medium ability students. Webb (1982) reached a similar conclusion that average students in homogeneous groups showed higher achievement and received more explanations than average students in heterogeneous groups.

In short, the results of cooperative learning studies which examined the effects of ability on student performance and attitudes are inconclusive. More research is needed to clarify this uncertainty. The present study attempted to extend these findings by determining whether interactive videodisc instruction can be completed as effectively in a mixed small group as in a uniform ability group.

More specifically, the following questions were addressed in this study: (1) What is the impact of heterogeneous and homogeneous ability grouping on achievement of students working cooperatively on a science task; (2) Does heterogeneous or homogeneous ability grouping influence differently the amount of time spent in a cooperative group; and (3) How do heterogeneous and homogeneous ability grouping affect student attitudes toward delivery system, subject matter, and group work.

Method

Subjects

A sample of 80 fourth through sixth grade students selected from a rural school district in Minnesota participated in the study. Of this total number, 36 (45%) were males and 44 (55%) were females. The sample included 20 (25%) fourth graders, 32 (40%) fifth graders, and 28 (35%) sixth graders. Equal number of subjects were randomly assigned to treatments; stratified for ability, gender, and ethnic background.

Materials

Lesson content. Subjects have completed a level II interactive videodisc lesson about whales. The basic lesson included four segments: (a) characteristics of whales; (b) kinds of whales; (c) behavior of whales; and (d) whales and people. Each lesson segment contained presentation sequences and relevant embedded questions. The lesson began by displaying a title screen with directions. Learners were then presented a main menu showing each of the four segments. Once a segment was chosen, students could not exit until that particular segment had been completed. However, learners could watch a segment as many times as they wished.

Pretest. Students' composite scores on the Iowa Test of Basic Skills were used for assigning them into high and low ability groups. The median score for the overall group was taken as the cut-off point. High ability students were defined as those with combined scores above the median, while students with combined scores below the median were defined as low ability. As a way of reducing the classification error, middle 10% of the students (those falling between 45th and 55th percentile) were not included.

Posttest. The achievement posttest contained 40 items divided among 10 true/false, 25 multiple-choice, and 5 matching questions. The KR-20 reliability coefficient for this test was .74, with an average item difficulty of .70. A typical item on the posttest was: "Mother whales feed or nurse their young with (a) shrimp, (b) milk in their bodies, (c) moss".

Attitude Questionnaire. This instrument measured students' reactions to cooperative learning. It included 27 Likert-type items divided equally among three categories: attitudes toward delivery system, attitudes toward subject matter, and attitudes toward group work. Possible responses ranged from "Strongly Agree" to "Strongly Disagree". The Coefficient Alpha reliability for the questionnaire was .82. A typical item on this instrument was: "I feel more comfortable working in a small group than working alone".

Procedures

Based upon their ability scores, students were randomly assigned to homogeneous and heterogeneous cooperative groups. Each heterogeneous group had two high and two low ability members, while each homogeneous group had four students of the same ability. Prior to the study, all subjects participated in two training sessions on cooperative learning. Students recorded the time before starting the lesson, and again upon completion. Following the instruction, they responded to an achievement posttest and an attitude questionnaire on individual basis. The entire experiment lasted about two hours for each student. Subjects were excused from their classes during the experiment and given a token reward for participating in the study.

Cooperation Training. The main purpose of this training activity was to help students become better cooperative learners on the study tasks. Two training sessions were conducted over two consecutive days. Participants completed several exercises emphasizing the basic principles of cooperative learning. First, the "Magic Triangle" exercise (Johnson, Johnson, & Holubec, 1991) required students to find the maximum number of embedded triangles in a big one. Some students completed this exercise in small groups, while the others worked individually. The result was overwhelmingly better success rate for those working together in small groups. This helped the students draw the conclusion that working together can be more effective than working alone. The students then collaborated in small teams to work on a rule-generation exercise for groups of similar figures. The rules to be generated ranged from fairly easy to very complex. Successful teams shared their answers and strategies with the whole class. The class discussion then focused on specific behaviors that were helpful (e.g. explaining) and not helpful (e.g. teasing).

The second day of training activities began with the "Broken Circles" exercise (Cohen, 1986). This game emphasized the importance of positive interdependence among members of a cooperative group. Each group was given pieces of broken circles. The task was to form at least one complete circle for each member of the group, but the students had to exchange pieces voluntarily without being asked. The students were also instructed not to talk and take others' pieces unless offered. This game forced the group members to pool and share their resources in accomplishing the mutual goal. The fourth exercise was about correcting some grammar errors in a short paragraph. Such an exercise provided the students with additional opportunities to practice cooperative skills on a school-related task. Finally, the students were asked to discuss the strengths and weaknesses of their group work by listing five advantages and disadvantages of working together.

Treatment. Students completed a level II interactive videodisc science lesson in small groups. Each tutorial-like presentation segment was followed by practice questions. Before responding to each question, the students discussed the options and attempted to reach a consensus about the answer. Following their response, they received feedback. When the answer was correct, they were presented affirmative feedback and progressed to the next item. If incorrect, however, the students were given a second chance. After two incorrect responses, the review of the relevant lesson segment was automatically provided. Group members watched the review and discussed it one more time. When they have completed a segment, the main menu was displayed and the group members selected the segment they wanted to study. Upon completion of the lesson, the students responded to the achievement posttest and the attitude questionnaire individually.

Design and Data Analysis

The study employed a 2 by 2 randomized block design. The first factor was the type of grouping (heterogeneous versus homogeneous), and the second ability (high versus low). The dependent variables were achievement, time on task, and attitudes toward instructional delivery system, subject matter, and team work.

Results

Achievement

Means and standard deviations for achievement scores are presented in Table 1. High ability students (M=30.13) performed better on the posttest than low ability students (M=25, 65). Also, the overall mean score for heterogeneous groups was slightly higher than the overall mean score for homogeneous groups (M=28.63 and M=27.15, respectively).

Table 1
Means and Standard Deviations for Posttest Scores

	Grouping		
Ability	Homogeneous	Heterogeneous	Total
High			
Mean:	30.45	29.80	30.13
SD:	2.61	3.02	2.80
N:	20	20	40
Low			
Mean:	23.85	27.45	25.65
SD:	5.15	3.79	4.82
N:	20	20	40
Combined			
Mean:	27.15	28.63	27.89
SD:	5.24	3.59	4.52
N:	40	40	80

Two-way ANOVA results yielded a significant main effect for student ability $F(1,76)=28.19$, $p<.001$. The main effect for type of grouping, on the other hand, was not significant $F(1,76)=3.06$, $p>.084$.

The interaction between ability and group composition was also significant F(1, 76)=6.36, p<.014. Figure 1 projects these results.

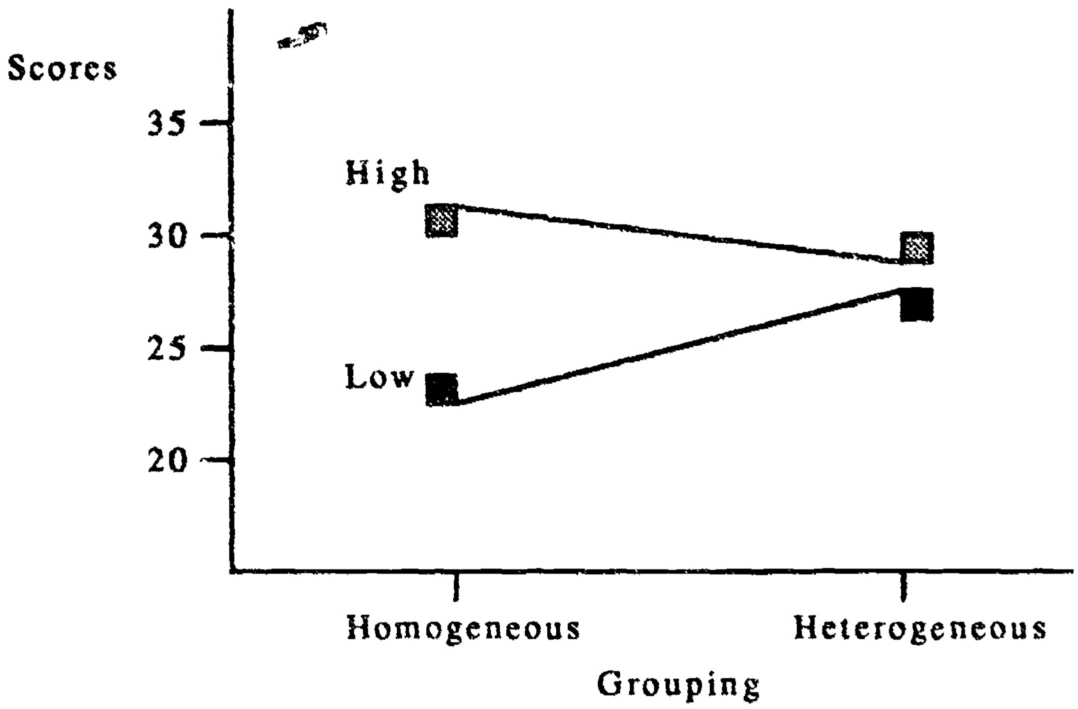

Figure 1. Interaction Between Ability and Group Composition on Posttest Scores

One-way ANOVA results revealed that the difference between the achievement of high ability students in either groups was not significant $F(1,38)=0.53$, $p>.471$. However, the difference between the achievement of low ability students was significant in favor of heterogeneous grouping $F(1,38)=6.33$, $p<.016$.

Time on Task

Means and standard deviations for time on-task are shown in Table 2. High ability students used less less time (M=33.80) than low ability students (M=40.60). The overall mean for heterogeneous groups was smaller than the overall mean for homogeneous groups (M=34.60 and M=39.80, respectively).

Table 2
Means and Standard Deviations for Instructional Time

	Grouping		
Ability	Homogeneous	Heterogeneous	Total
High			
Mean:	33.00	34.60	33.80
SD:	6.05	4.59	5.37
N:	20	20	40
Low			
Mean:	46.60	34.60	40.60
SD:	1.90	4.59	7.00
N:	20	20	40
Combined			
Mean:	39.80	34.60	37.20
SD:	8.19	3.53	7.08
N:	40	40	80

Two-way ANOVA results yielded a significant main effect for both ability $F(1.76) = 44.87$, $p<000$ and type of grouping $F(1.76)=26.24$, $p<001$. The interaction effect was also significant $F(1,76)=44.87$, $p<000$. Figure 2 shows these relationships.

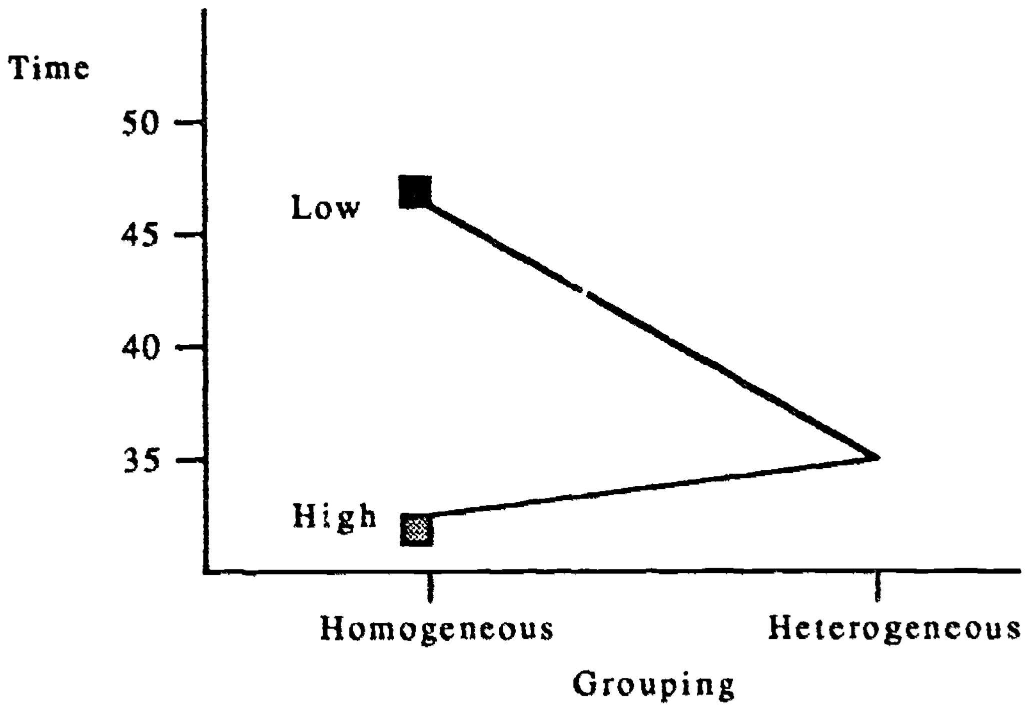

Figure 2. Interaction Between Ability and Group Composition on Instructional Time

One-way ANOVA results for the follow-up comparisons revealed that the difference in the amount of instructional time for high ability students in either groups was not significant $F(1,38)=0.89$, $p>.352$. On the other hand, the difference between low ability students was significant, suggesting the efficiency of heterogeneous grouping $F(1,38)=116.52$, $p<.001$.

Attitudes

Means and standard deviations for attitude scores are reported in Table 3. Overall, the mean attitude score for low ability students was higher (M=88.47) than the mean attitude score for high ability students (M=85.03). Similarly, heterogeneous ability grouping resulted in higher mean attitude score than homogeneous grouping (M=87.30 and M=86.20, respectively).

Table 3
Means and Standard Deviations for Attitude Scores

	Grouping		
Ability	Homogeneous	Heterogeneous	Total
High			
Mean:	87.30	82.75	85.03
SD:	9.54	12.78	11.37
N:	20	20	40
Low			
Mean:	85.10	91.85	88.47
SD:	9.94	10.96	10.88
N:	20	20	40
Combined			
Mean:	86.20	87.30	86.75
SD:	9.68	12.62	11.19
N:	40	40	80

Two-way ANOVA results yielded no significant main effect for ability $F(1.76)=2.01$, $p>.160$ and type of grouping $F(1,76)=0.20$, $p>.652$. However, the interaction effect was significant $F(1,76)=5.40$, $p<.022$. We also tested whether there was a significant difference between subcategories of the questionnaire. Neither the main effect for subcategories $F(1,76)=1.37$, $p>.256$, nor the interaction effects $F(1,76)=0.50$, $p>.610$ (ability by subcategory); $F(1.76)=0.98$, $p>.376$ (grouping by subcategory); and $F(1,76)=2.34$, $p>.099$ (ability by grouping by subcategory) were significant. This situation is reflected in Figure 3.

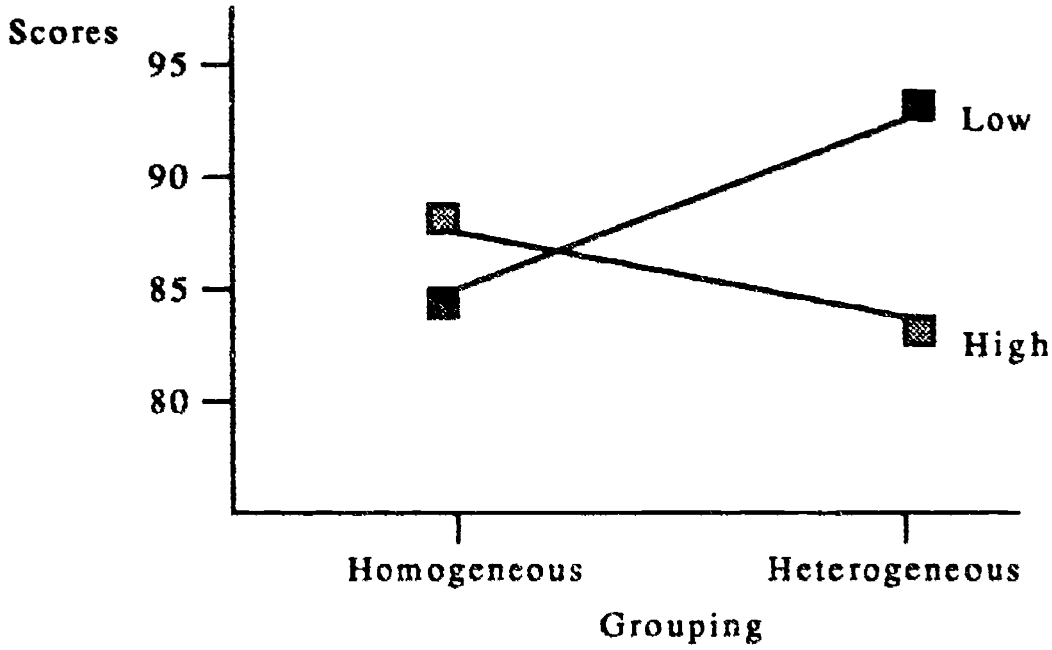

Figure 3. Interaction Between Ability and Group Composition on Attitude Scores

One-way ANOVA results for follow-up comparisons revealed that the difference between the mean attitude score for high ability students in eithe groups was not significant $F(1,38)=1.89$, $p>.177$. On the other hand, the difference between the mean attitude score for low ability students was significant in favor of heterogeneous grouping $F(1,38)= 5.66$, $p<.022$.

Discussion

This study examined the effects of homogeneous versus heterogeneous ability grouping on student performance, time on task, and attitudes toward delivery system, subject matter, and group work during interactive videodisc instruction in elementary science. At the end of the lesson, the students completed a posttest and an attitude questionnaire.

Results of the study showed that heterogeneous ability grouping was not detrimental for achievement, regardless of students' ability levels. There was no significant difference in the performance of high-ability students in either groups. However, homogeneous ability grouping was detrimental for the achievement of low-ability students. This is consistent with the findings of some other studies (Goldman, 1965; Hooper & Hannafin, 1988; Johnson & Johnson, 1989; Swing & Peterson, 1982; Webb, 1982). One possible explanation for this result would be that homogeneously grouped low ability students may not be capable of supporting each other's learning needs. They may also perceive their partners as not being able to find and explain better solution proposals to the difficulties of the group. On the other hand, high-ability students in homogeneous groups may overestimate each other's intellectual power. As Webb (1988) suggests, they may mistakenly assume that everyone in the group understands the task and therefore may interact less efficiently. Future research should test the validity of these speculations by comparing peer interaction within homogeneous groups.

Although homogeneous high ability groups spent less instructional time than heterogeneous groups, the difference was not statistically significant. However, low ability homogeneous groups consistently used more time on task than heterogeneous groups. This, in general, supports the notion that heterogeneous groups are more efficient for less-able students than homogeneous groups (Hooper & Hannafin, 1988; Webb

& Cullian, 1983). The reason might be that members of heterogeneous ability groups show higher understanding and employ better learning strategies in accomplishing the mutual task. As a result of interacting with their more-able partners in heterogeneous groups, low-ability students may acquire better problem solving skills. The use of more efficient strategies can accelerate slow learners in heterogeneous groups and reduce the time on task. On the other hand, homogeneous low ability groups cannot take advantage of diversity which helps them avoid typical mistakes and save time.

The results of the present study also demonstrated that heterogeneous ability grouping generates more positive attitudes toward instructional delivery system, subject matter, and team work than homogeneous grouping. The difference is particularly noticeable for low ability students in mixed groups, without an accompanying decrement for their high-ability groupmates. Homogeneous low ability groups reported the lowest attitude scores than the other three groups, but the difference between high ability students in either groups was not significant. This agrees with the findings of previous research (Hooper & Hannafin, 1991; Johnson, Johnson, & Maruyama, 1983; Webb, 1983). Perhaps, low-ability students in heterogeneous groups feel more supported and satisfied than other students. They may also feel privileged because their high ability groupmates are always available to help them. This special care, encouragement, liking, and mutual trust in heterogeneous groups may promote better social relationships among group members.

Conclusion

Although emerging interactive technologies are gradually taking place in schools, educators are still facing a serious dilemma. They are either to find more effective ways of using these technologies in the classroom or to limit the access by large groups of students. Interactive videodisc is no exception. Fortunately, however, new methods are being successfully developed for the effective use of interactive videodisc systems. Cooperative learning is one of them.

In general, advocates of cooperative learning recommend that students be grouped heterogeneously. However, the benefits of heterogeneous grouping have not been clearly established. Some claim that heterogeneous ability grouping supports the needs of one group at the expense of another. There is also substantial evidence suggesting that heterogeneous grouping is effective for all students. The results of this study supports the latter view. That is, heterogeneous grouping is more effective and efficient than homogeneous grouping. Thus, instructional designers and classroom teachers should consider using heterogeneous groups when designing cooperative videodisc environments.

It is a fact that homogeneous grouping is still a common practice in public schools. Unfortunately, educators tend to continue this trend. Therefore, future research should focus on developing more effective interventions within homogeneous learning groups. One of the potential variables that should be investigated further is the impact of exercising learner control during cooperative group work. Future research should also examine the effects of manipulating group size.

References

Atkins, M. & Blissett, G. (1989). Learning activities and interactive videodiscs: An exploratory study. British Journal of Educational Technology, 20(1), 47-56.

Carlson, H. L. & Falk, D. R. (1989). Effective use of interactive videodisc instruction in understanding and implementing cooperative group learning with elementary pupils in social studies and social education. Theory and Research in Social Education, 17(3), 241-258.

Cohen, E. G. (1986). Designing groupwork: Strategies for heterogeneous classroom. New York: Teacher College Press.

Dalton, D. W., Hannafin, M. J., & Hooper, S. (1989). Effects of individual and cooperative computer-assisted instruction on student performance and attitudes. Educational Technology Research and Development, 37(2), 15-24.

Gabbert, B., Johnson, D. W., & Johnson, R. T. (1986). Cooperative learning, group-to-individual transfer, process gain, and the acquisition of cognitive reasoning strategies. The Journal of Psychology, 120(3), 265-278.

Goldman, M. (1965). A comparison of individual and group performance for varying combinations of initial ability. Journal of Personality and Social Psychology, 1(3), 210-216.

Hill, G. (1982). Group versus individual performance: Are N+1 heads better than one? Psychological Bulletin, 91, 517-539.

Hooper, S. & Hannafin, M. J. (1988). Cooperative CBI: The effects of heterogeneous versus homogeneous grouping on the learning of progressively complex concepts. Journal of Educational Computing Research, 4(4), 413-424.

Hooper, S. & Hannafin, M. J. (1991). The effects of group composition on achievement, interaction, and learning efficiency during computer-based cooperative instruction. Educational Technology Research and Development, 39(3), 27-40.

Johnson, D. W. & Johnson, R. T. (1986). Computer-assisted cooperative learning. Educational Technology, 26(2), 12-18.

Johnson, D. W. & Johnson, R. T. (1989). Cooperation and competition: Theory and research. Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1991). Cooperation in the classroom. Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals. Review of Educational Research, 53, 5-54.

Johnson, D. W., Johnson, R. T., Roy, P., & Zaidman, B. (1985). Oral interaction in cooperative learning groups: Speaking, listening, and the nature of statements made by high-, medium, and low achieving students. The Journal of Psychology, 119(4), 303-321.

Johnson, D. W., Skon, L., & Johnson, R. T. (1980). Effects of cooperative, competitive, and individualistic conditions on children's problem solving performance. American Educational Research Journal, 17(1), 83-93.

King, A. (1989). Verbal interaction and problem solving within computer-assisted cooperative learning groups. Journal of Educational Computing Research, 5(1), 1-15.

Mevarech, Z. R., Silber, O., & Fine, D. (1991). Learning with computer in small groups: Cognitive and affective outcomes. Journal of Educational Computing Research, 7(2), 233-243.

Newmann, F. M. & Thompson, J. A. (1987). Effects of cooperative learning on achievement in secondary schools: A summary of research. University of Wisconsin-Madison, The Center on Effective Secondary Schools.

Noell, J. & Carnine, D. (1989). Group and individual computer-based video instruction. Educational Technology, 29 (1), 36-37.

Rysavy, D. M. & Sales, G. C. (1991). Cooperative learning in computer-based instruction. Educational Technology Research and Development, 39(2), 70-79.

Sharan, S. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. Review of Educational Research, 50(3), 241-271.

Slavin, R. E. (1983). When does cooperative learning increase student achievement? Psychological Bulletin, 94(3), 429-445.

Slavin, R. E. (1991). Synthesis of research on cooperative learning. Educational Leadership, 47(4), 52-54.

Swing, S. R. & Peterson, P. L. (1982). The relationship of student ability and small group interaction to student achievement. American Educational Research Journal, 19(2), 259-274.

Webb, N. M. (1982). Group composition, group interaction, and achievement in cooperative small groups. Journal of Educational Psychology, 74(4), 475-484.

Webb, N. M. (1983). Predicting learning from student interaction: Defining the interaction variables. Educational Psychologist, 18(1), 33-41.

Webb, N. M. & Cullian, L. K. (1983). Group interaction and achievement in small groups: Stability over time. American Educational Research Journal, 20(3), 411-423.

Webb, N. M. (1988). Peer interaction and learning with computers in small groups. Computers in Human Behavior, 3, 193-209.

Yager, S., Johnson, D. W., Johnson, R. T., & Snider, B. (1986). The impact of group processing on achievement in cooperative learning groups. The Journal of Social Psychology, 126(3), 389-397.