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Cooperative learning and academically gifted students

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Abstract
This article examines the complexity of cooperative learning as an instructional strategy and discusses its positive effects for all students. The writer then defends cooperative learning as a classroom strategy for the academically gifted, even though gifted education practitioners frequently criticize it. He cites current research that identifies cooperative learning as an appropriate general education classroom strategy for all learners, as well as studies that criticize its effectiveness. After reviewing both positive and negative research related to cooperative learning and academically gifted students, the writer concludes that cooperative learning can be a positive instructional strategy if implemented according to the standards and procedures developed for its use.
COOPERATIVE LEARNING AND ACADEMICALLY GIFTED STUDENTS

A Publishable Article
Submitted to the
Department of Curriculum and Instruction
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of the requirements for the Degree
Masters of Arts in Education

UNIVERSITY OF NORTHERN IOWA

by

John Joynt

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William Waack
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Abstract

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Ms. Susan Johnsen, Editor
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Dear Susan Johnsen,

I would appreciate your consideration of the enclosed manuscript for publication. I have written “Cooperative Learning and Academically Gifted Students” in partial fulfillment of the requirements for a Master of Arts in Education of the Gifted from the University of Northern Iowa. I am currently the coordinator for gifted education at the Emmetsburg Community School District.

The accompanying article focuses on an investigation of positive and negative affects of cooperative learning on academically gifted students. On the basis of this investigation, I conclude that cooperative learning, when used correctly, is a useful classroom strategy for all students. The manuscript is 14 pages long including title page, abstract, text and references. Throughout the manuscript, I have followed the guidelines established in the Publication Manual of the American Psychological Association, Fourth Edition.

If you have any questions regarding this manuscript, please contact me at the address above, by telephone (712-852-3915), or by E-mail (jjoynt@emmetsburg.k12.ia.us).

Thank you for your consideration of this manuscript.

Sincerely,

John Joynt
Enclosure
In recent years cooperative learning has become an increasingly popular classroom strategy in our nation's schools. It has, however, drawn criticism from teachers of the academically gifted and from other professionals in the field. I have been a classroom teacher since 1981 and have effectively used cooperative learning strategies in my general education classroom, but I have recently been exposed to negative comments about cooperative learning. Fellow graduate students in the field of gifted education have shared their negative personal experiences and opinions on the topic of cooperative learning and its effects on academically gifted students and have been able to cite literature to back up their criticisms of cooperative learning.

The critical comments concerned me because of my positive experiences using cooperative learning as a classroom teaching strategy; and, up to this time, I was unaware of the possibility of cooperative learning being an inappropriate classroom strategy for the academically gifted students. I respect the opinions of my fellow graduate students; indeed, one of the first items brought up in our graduate course work was the importance of advocacy. I do realize, however, that I am also an advocate of useful classroom strategies. Upon reflection, it occurred to me that many of my gifted education colleagues might be adhering very closely to our instructions to be gifted student advocates and, as a result, might not be recognizing the usefulness of cooperative learning in the general education classroom. Although I am learning to become an advocate for the education of the gifted, I am enough of a realist to understand that cooperative learning is a very good classroom strategy.

I decided that I needed some sense of closure on this issue for professional and personal reasons. Consequently, I examined numerous articles written on cooperative learning as a classroom strategy and how it may affect academically gifted students. I
discovered some interesting research on which to reflect, and along with my experiences and perceptions as a veteran teacher, have used the information to develop a defensible position on cooperative learning as it relates to academically gifted students. On the basis of my study, I have come to the conclusion that cooperative learning, when used correctly, can be a useful classroom strategy for all students, including the academically gifted. This article presents some bases for reaching that conclusion.

The Complexities of Cooperative Learning

My initial conclusion is partially based on my perception that gifted education professionals may not have a clear understanding of the depth and breadth of cooperative learning. For example, fellow graduate students in the field have indicated to me that cooperative learning is used primarily to have academically gifted students teach other students in their assigned mixed ability group. On the basis of my personal experience and research, this instructional strategy is not the primary purpose of cooperative learning. It is not just a teaching strategy that throws students together to figure out concepts on their own; rather, it is a carefully concentrated and planned educational strategy.

Robert Slavin (1996) identified three elements of cooperative learning that demonstrate the complexity of cooperative learning. Slavin’s three elements are:

1. Team rewards. Teams earn certificates or other awards if they achieve above designated criteria. Grades are not given based on team performance.

2. Individual accountability. The team’s success depends on the individual learning of all team members.

3. Equal opportunities for success. Students contribute to their teams by
improving over their own past performance. This ensures that high, average, and low achievers are equally challenged (Slavin, 1996).

He stated that educators need to have an understanding of the three elements of cooperative learning in order to have an understanding of the complexity of cooperative learning as a classroom teaching strategy.

Slavin also developed a number of cooperative learning methods for different learning environments. The three most often used cooperative learning methods are Student Teams-Achievement Divisions (STAD), Teams-Games-Tournament (TGT) and (CIRC) Cooperative Integrated Reading and Composition. STAD involves four member learning teams of mixed ability, race and ethnicity. The teacher presents a lesson, and the teams work on mastery, followed by a quiz and possible team rewards. TGT is similar to STAD, except quizzes are replaced by competitions. CIRC works on reading and writing techniques but by using pairs in specified groups. For example, students in their group pair up to work on reading or writing strategies while the teacher works with a different group.

There are other cooperative learning strategies, such as Jigsaw, Learning Together and Group Investigation, that essentially use the three major elements of cooperative learning. Group investigation, as described by Maker and Nielson (1995), “is a student-centered approach to cooperative learning, based on John Dewey’s philosophy that active experience, inquiry in a social setting, and reflective thinking are the tools of intellectual development” (p.199). From these brief descriptions and statements it is apparent that cooperative learning is a structured, complex process; and, therefore, education professionals need to have a clear understanding of cooperative learning in
order to use it effectively or to criticize it as an inappropriate classroom strategy.

Johnson, Johnson and Holbec (1986), summarized the goals and complexities of cooperative learning this way:

Remember, it's a people-help people world; all students including high-achievers, benefit from participating in heterogeneous cooperative learning groups; different assignments may be given to different members of a cooperative learning group when it is desirable to do so; when teachers wish to do so, group grades may be given and will be perceived as fair by most students; mastering cooperative learning strategies is difficult; and cooperative learning procedures have a richness that takes a teacher several years to explore. (p.117)

They mention that teachers need a long period of time to develop and use cooperative learning strategies. Indeed, a complex, general education classroom strategy such as cooperative learning is not mastered quickly.

Cooperative Learning Research

As a classroom teacher, I occasionally used STAD and Jigsaw variations of cooperative learning strategies to vary my teaching methods and instructional strategies. I did not use cooperative learning extensively; but, on the basis of observation and assessment, I was convinced it was a useful tool in my social studies classroom. In addition, I had a teacher colleague who used cooperative learning quite extensively and was very successful, both by observed perception of his peers and by results of standardized test scores. My perception of cooperative learning was very positive and consistent with research published by Johnson and Johnson (1999) which indicated that cooperative learning raised academic achievement levels for all students. I was largely unaware of any negative literature on cooperative learning until I became active in the
field of gifted education.

With the complexity and goals of cooperative learning established, I turned to what research indicated to be the impact of cooperative learning on the academically gifted. I sought to answer two questions. First, what does research say about academically gifted students and cooperative learning? Second, can academically gifted students achieve in cooperative learning settings? These were questions that I wanted to answer as part of my investigation.

An article by Johnson and Johnson (1992) gave me a definitive answer concerning the impact of cooperative learning on the achievement of high ability students:

Consistently, the mastery and retention of assigned material by high ability students has been found to be higher in cooperative than in competitive or individual learning situations. What they learned within the group discussion they demonstrated and used in subsequent situations when working alone. When you really want students to master and retain assigned material, cooperation is the instructional method of choice. (p.45)

I also discovered additional research indicating that achievement scores for all students in cooperative learning groups are better than those of students in whole group instruction. Johnson and Johnson (1999) found that over 375 studies indicated that, “working together to achieve a common goal produces higher achievement and greater productivity than does working alone,” and “cooperative learning ensures that all students are meaningfully and actively involved in learning” (p.72). These researchers have shown
that academically gifted students do achieve in cooperative learning settings in the general education classroom.

Several other researchers mentioned positive attributes of cooperative learning but did not focus directly on academic achievement. For example, Mara Sapon-Shevin (1993) agreed that cooperative learning is also about learning to respect others and to interact successfully with different racial, ethnic, religious, and socioeconomic groups. Larry Geffen (1994) summarized his research by indicating that gifted students in heterogeneous groups showed tolerance for differences among people, accepting different opinions and accepting help. Nancy Armstrong Melser (1999) studied heterogeneous and homogenous groupings in her research. She wrote, “Gifted students working in mixed ability groups had an increase in self-esteem; gifted students who worked cooperatively in homogeneous groups had a decrease in self-esteem scores” (p.316). From this commentary, it appears that cooperative learning can have a positive influence on academic achievement of all students as well as having a positive influence on all students’ social and emotional growth.

Social and emotional growth of all students, especially academically gifted students, is as important as academic growth in our effort as educators to produce successful students. I found it particularly interesting that a large number of the examined articles often revolved around the affective needs of the learners. As a classroom teacher, I used cooperative learning and was aware that the strategy was to help the student in ways other than cognitive development. Research by Johnson and Johnson (1992) indicated that cooperative learning in heterogeneous groupings would raise academic achievement of all students; and research by Sapon-Shevin (1993), Geffen
Cooperative Learning (1994) and Melser (1999) indicated that cooperative learning has a positive influence on the social and emotional needs of our students.

On the basis of these findings, my two questions have been answered to my satisfaction. The research I examined has very positive comments about cooperative learning in the general education classroom and its effects on academically gifted students. Several examined studies indicated that all students demonstrated higher achievement in cooperative learning instruction than in traditional whole group instruction. It also showed that the social and emotional issues of all students are addressed in cooperative learning.

Criticisms of Cooperative Learning

What are some of the bases for criticism of cooperative learning? My examined research, for the most part, is very positive. To alleviate any confusion on the topic of cooperative learning and the academically gifted students, I sought out and reviewed sources that did not support cooperative learning. I received helpful information from my gifted education colleagues. They did not hesitate to remark on my initial stand as a supporter of cooperative learning and gave me specific articles to read. Cheryl Werner (personal communication, 2001), a gifted education colleague, mentioned specifically that cooperative learning does not recognize the needs of the gifted and does not provide for differentiation of needs because cooperative learning is group oriented. Other colleagues mentioned that cooperative learning, on occasion, is abused by having high ability students tutor others. Another frequent complaint was that the gifted learner is not challenged and is often bored.

Marian Matthews (1992) interviewed gifted children in cooperative learning settings. The students interviewed seemed to contradict the claims of the positive effects
on students' emotional and social needs that cooperative learning advocates have mentioned. As a result of her findings, she suggested more independence and homogeneous grouping. Randy Elmore (1994) attacked positive research findings on cooperative learning and the academically gifted as being over-generalized to the gifted population, thus discrediting the achievement claims of cooperative learning proponents. Vickie Randall (1999) attacked cooperative learning as a strategy that is abused and overused. She indicated that cooperative learning is a strategy that only promotes the transfer of knowledge and skills and does nothing for higher order thinking skills.

In my opinion, criticism of cooperative learning by educators such as Werner, and researchers such as Matthews and Elmore, should not be interpreted as a call to end cooperative learning for the academically gifted. Indeed, some researchers in the field of gifted education presented more positive viewpoints. For example, Randall (1999) promoted the occasional use of cooperative learning if academically gifted students are allowed to take concepts as far as they could. The National Association for Gifted Children (2001) published a position paper on this topic that coincides with Randall's thoughts. The position paper states that heterogeneous groupings in cooperative learning settings may not meet the needs of gifted children. It concludes that, if heterogeneous groupings are used, a major focus should be placed on high level tasks. Furthermore, those high level tasks must require students to manipulate, apply and extend meaningful ideas.

Cooperative Learning for All Students

On the basis of my prior knowledge concerning cooperative learning and my examination of current research, I believe cooperative learning can be a useful tool to promote the achievement of all students if properly used. Cooperative learning should not
be used as the only classroom strategy because it may tend to focus on the transfer and mastery of knowledge and less so on higher order thinking skills. None of the research presenting the negative side of this issue called for an end to cooperative learning as a classroom strategy. In fact, most detractors presented suggestions to improve the implementation of cooperative learning. The position paper from NAGC (2001) concludes that cooperative learning can be an appropriate strategy when used concurrently with those strategies aimed at differentiating the education of gifted students.

There seemed to be a lack of research findings indicating that cooperative learning in the general education classroom is a detriment to the academic achievement of gifted students. My colleagues’ comments, and the interviews published by Marian Matthews (1992) in Educational Leadership, appear to be somewhat subjective evidence and not equivalent to the large number of positive articles I have found in my research. I cannot call for an end to all complaints because I feel that there may be considerable abuse of cooperative learning by untrained teachers. These feelings are corroborated by Marian Matthews (1993), who perceived some teachers’ cooperative learning strategies as “simplistic, unimaginative, and poorly structured cooperative learning” (p.64). I empathize with her perspective. I have used cooperative learning after very little formal training and can see how teachers could abuse it.

The National Association for Gifted Children did not call for an end of cooperative learning; rather, it presented suggestions on its proper use. The proper use of cooperative learning is benefitting thousands of our students today, and even the NAGC seemed to indicate that we cannot end a very successful teaching strategy because it sometimes may not meet the needs of the gifted student. In addition, Robert E. Slavin
(1993), an early and persistent advocate for cooperative learning, indicated in an article on ability grouping that total heterogeneous groupings may not always be the best strategy. He presented suggestions on Cooperative Integrated Reading and Team Assisted Individualization, two cooperative learning strategies that confirm this opinion. He stated, “Both of these methods are designed to accommodate a wide range of student performances levels in one classroom, using both homogeneous and heterogeneous within-class groupings” (p.546). Slavin also indicated that these are very successful programs and that they do not rely exclusively on heterogeneous groups. Indeed, allowing academically gifted students to work together occasionally may be beneficial to all students in the classroom.

On the basis of my personal reflection and research, I now strongly believe that cooperative learning, when used correctly, can be a useful classroom strategy for all students including the academically gifted. We must, however, promote developing proper staff development models to ensure that cooperative learning is appropriately instituted in our classrooms and that the needs of academically gifted students are met through its use. Teachers must become aware that cooperative learning is to be used neither exclusively nor just for the transfer of knowledge and skills. Homogeneous groupings and mixed ability groupings can occur, and high level thinking and application must be used along with knowledge and skills attainment. Finally, it can be said that quality cooperative learning experiences may meet the cognitive and affective needs of our academically gifted youth and, subsequently, advocates for the education of the gifted should work with general education teachers to promote proper cooperative learning strategies.
References


Appendix
Gifted Child Today Guidelines for Authors

Gifted Child Today is a quarterly publication for parents, teachers, and other professionals who are interested in gifted education. Manuscripts may address all areas of gifted education that pertain to practices, policy, or applications of research.

Gifted Child Today is a peer-reviewed publication. The editor refers manuscripts to qualified reviewers who have expertise in a specific area. Reviewers' comments are then provided to the author by the editor. To avoid delay in the publication process, the author should follow these instructions:

1. Manuscripts should represent only original work that has not been published previously or is not being considered for publication elsewhere. If copyrighted material is used, copies of letters granting permission for publication should be included.

2. Manuscripts should be between 2,000 and 10,000 words long.


4. Send four copies of the original manuscript. They should be typed, double-spaced on one side of the page only. Each page should be labeled with the page number and the working title in the upper right-hand corner. They should be sent on letter-bond paper or heavier. Manuscripts should include at least a one-inch margin around each page. In addition to a title page, a cover page must be attached that includes the author's name, title, school and program affiliation, and home and work addresses, phone numbers, and fax numbers.

5. Place tables, figures, illustrations, and photographs on separate pages. Illustrations must be in black ink on white paper. Photographs must be glossy prints, either black and white or color, or transparencies. Each should have a title.

6. Include a full reference for each citation that is mentioned in the text on a separate sheet at the end of the manuscript.

7. Authors of accepted manuscripts must transfer copyright to Gifted Child Today, which holds copyright to all articles and reviews.

8. Upon acceptance, the author must submit a brief 50-100 word biography. Final copies of the manuscript are to be prepared along with a hard copy and a diskette. On the outside of the diskette the author should indicate the type of computer, the word processing program used, title of the article, and file name.

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