

Involving Middle School Students as Co-Researchers of Their Media Environment

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Purpose of the Study

This study was an analysis of one component of a three-year NSF-funded research project examining the media messages about information technology and careers that middle school students receive from television, popular magazines, books, videotapes, movies, and Web sites. The purpose of the larger, overall project was to examine whether the content of these media reinforces or hinders the development of gender and racial diversity in the information technology workforce. The goal of this component of the project was to understand the media environment of middle school students from the perspective of the students themselves while involving middle school students as co-researchers in each phase of the study. To this end, three seventh-grade teachers collaborated with three university researchers to develop and implement an interdisciplinary project-based curriculum. This paper describes the experiences of the teachers and students and the meaning they gave their experiences.

Background

The curriculum project was based on the principles of student-centered, interdisciplinary, project-based learning in which students apply their knowledge to address real-world problems. Over the years, progressive educators have advocated this type of learning in various forms and under various names: integrated curriculum (Beane, 1991), interdisciplinary teaching (Vars, 1993), authentic instruction (Newman & Wehlage, 1993), project-based learning (Wolk, 1994), engaged learning (Jones et al., n.d.), teaching for understanding (Perrone, 1994), and integrated units (Daniels & Bizar,

1998), to name a few. In its 1995 position paper, the National Middle School Association called for an “integrative curriculum,” a student-centered approach in which students and their teachers plan learning experiences organized around real-world issues significant to both young people and adults (NMSA, 1995). In examining these issues, students apply concepts and skills from many disciplines. The emphasis is on higher-order thinking, cooperative learning, and democratic values. Among the arguments for curriculum integration are that: a) students are more highly motivated and learn better because an integrative curriculum relates to their needs, problems, concerns, interests, and aspirations (Erlandson & McVittie, 2001); and b) students are better prepared for life in contemporary society because an integrative curriculum addresses current social problems in all their real-world complexity (Vars, 2001).

The real-world social issue addressed in this curriculum project was the influence of the media in the career aspirations of women and minorities. Research has shown that the middle school years are a crucial period during which students make key decisions that affect their future educational and career choices. In particular, these are the years when the interest of minority and female students in technical areas like science, math, and information technology declines (AAUW, 2000; Clewell & Braddock, 2000). During this critical juncture in their development, middle school students are bombarded by media messages. A national survey of media use by children (Kaiser Family Foundation, 1999) found that the middle school years include the period of highest media exposure, a total of eight hours and eight minutes a day. Students’ exposure to media included television (3 hours and 37 minutes), print media (50 minutes), computer use (32 minutes), commercial videotapes (29 minutes), and movies (26 minutes).

Media play an important socializing role in the lives of adolescents. However, little attention has been devoted to the influence of media on the career aspirations of women and minorities. Research on cultivation theory suggests children (Swan, Meskill & DeMario, 1998) and adolescents (Signorielli, 1990, 1993; Huston & Alvarez, 1990; Wroblewski & Huston, 1987) learn about the workplace from the unrealistic and stereotyped images they view on television. Studies of gender and/or race portrayals in science-related television programs have found a paucity of minority participants, a disproportionately high number of males, and the assignment of females to secondary roles (Steinke, 1998; Steinke & Long, 1996; Long, Bioarsky, & Thayer, n.d.).

Description of the Curriculum Project

In this curriculum project, students surveyed their peers to answer questions about the media environment and career aspirations of middle school students. They helped to design survey questions, administered the survey, analyzed the data, and interpreted the results. Then they conducted a content analysis of the representation of gender, race, and various technologies in the most popular magazines as identified by the survey. Finally, they presented the results of their research to an audience of students, parents, local media, and university researchers.

The students were co-researchers on an NSF-funded project to gather data to understand their own social and cultural environment. Authentic student research has the potential to be a powerful agent for educational and social change. In this case, the knowledge that students gain from gathering and analyzing data about popular media may increase their awareness of gender and racial stereotypes in the media messages they receive.

Methods

This study used qualitative inquiry to investigate the experiences of three seventh-grade teachers and their students as they implemented an interdisciplinary research project about the media environment of middle school students. Qualitative methods are relevant for understanding social phenomena in the natural setting, in this case, the experiences of teachers and learners in the natural classroom environment. Qualitative researchers attempt to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Lincoln & Guba, 1995).

The setting for the study was a middle school in a small Midwestern city. The middle school enrolled 357 students in grades six through eight. The majority of the students lived in town, while the others were bused to school from surrounding rural areas. Most of the students (90.4%) were Caucasian, with the largest minority group comprised of African American students (6.4%). Half (50.6%) of the students were eligible for the free or reduced lunch program. Fewer than 60% of the school's sixth-graders passed the state proficiency tests in mathematics, reading, citizenship, and science, but 85% passed in writing. The school was a member of the Coalition of Essential Schools (2002) and teachers were encouraged to participate in a variety of professional development activities.

The three participating teachers taught language arts, mathematics, and science as part of a seventh-grade team consisting of five teachers and 105 students. The three teachers shared a daily planning period and collaborated regularly. Collectively, they had 40 years of teaching experience at the middle school level. All three had computers in

their classrooms with Internet access and were comfortable using computers as a personal and instructional tool.

Data for this study were gathered over five months from multiple sources: a) observations of classroom activities during different phases of the project, b) students' oral presentations and artifacts of students' work, c) informal interviews with students, and d) a two-hour debriefing session with the teachers. All observations, presentations, and interviews were videotaped and the debriefing session was audiotaped and transcribed. Triangulation of the data across multiple sources and member checking enhanced the qualitative validity of the findings (Lincoln & Guba, 1985). To analyze the data, the researchers viewed the videotapes and read the debriefing transcript multiple times to look for emerging themes that recurred across multiple sources of data.

Findings

Based on the data from teachers, students, and classroom observations, the following themes characterized the experiences of the teachers and students.

- *Authenticity.* Students recognized that the project was authentic. They were collecting real data about themselves and their peers about a topic that genuinely interested them.
- *Responsibility.* Students accepted responsibility for the project and for their learning. They were fully engaged in the project at every stage and took it seriously.
- *Student-centered environment.* The teachers established an environment in which they were co-researchers along with the students. They let the students decide

how to organize the data collection and structure the analysis: “Let’s figure this out together.” They let the students make mistakes and figure out how to solve problems that arose. The students were surprised that the teachers didn’t know the “answers” to the research questions in advance.

- *Interdisciplinary curriculum.* The language arts, mathematics, and science teachers planned and worked as an interdisciplinary team to implement the various components of the project in the seventh-grade curriculum. In addition to specific seventh-grade curriculum objectives, the students learned research skills, oral presentation skills, and technology skills.
- *Sense of audience.* Students were motivated by having an audience for their work beyond their teachers and classmates. They presented their findings to the project directors from the university and invited parents, other seventh graders, the principal, and the local media to the presentation.
- *Self esteem.* The students expressed surprise and pride that they were selected for this nationwide research project. They were also proud that they and their teachers were interviewed for two feature stories in the local newspaper.
- *Teachers’ risk-taking.* The teachers said their colleagues remarked about their willingness to take a risk with such a complex, long-term project even though they had never done anything like this before and didn’t have a written curriculum or the experience of other teachers to guide them.
- *Cooperative group skills.* When asked what they learned as a result of this project, the students repeatedly reported that they learned to work together in groups, and this result was confirmed by the teachers. The teachers reported that students

learned to take a position and defend it. They learned to listen to their classmates' point of view. They learned to compromise and reach consensus.

- *Technology as a tool.* The students learned new technology skills as they needed them to accomplish specific tasks. They learned to use spreadsheets, make charts, and design PowerPoint presentations, which they had never done before.
- *Time.* Although the project took more class time than the teachers expected, they and the principal wholeheartedly agreed that it was worth the time.
- *Understanding of the issues.* Although the students were fully engaged in their part of the research process, they had difficulty articulating the social issues that were the focus of the overall project. They recognized the gender differences in media use and the racial stereotypes in media messages, but didn't go beyond that to consider the relationship between the media messages and young people's gendered career choices. In addition, they expressed some misperceptions in interpreting the results of their survey findings.

Educational Significance of the Study

This study provides further evidence that an integrated project-based approach to curriculum leads to relevant, meaningful learning experiences for middle school students. The seventh graders in this study were engaged and empowered as co-researchers involved in long-term, sophisticated inquiry about a topic that was meaningful to them. They took responsibility for their learning and developed valuable collaborative skills and technology skills. However, the experiences of the students in this study suggest that students may need explicit guidance and scaffolding in order to ensure that they have opportunities to synthesize and use higher-order thinking skills.

Given the current climate of standards-based curricula and high-stakes testing, even the leading advocates of curriculum integration are reconsidering their stance (Vars, 2001). Yet this study provides support for those who argue that curriculum integration is worthwhile. The teachers in this study were enthusiastic about the educational value of the interdisciplinary project even though it consumed several weeks in their curriculum. They reported that students were able to accomplish the same curriculum objectives as they usually did but in a different way. Moreover, in a school in which the sixth-graders did not meet the state's standard for passing the proficiency tests, the principal was so impressed with the outcomes of the students' work that he asked the teachers to design three similar projects for next year so that every seventh grader in the school can participate. Although studies show that students engaged in interdisciplinary projects usually do well on standardized tests (Vars, 1997), further research is needed to address the impact of this and similar projects on students' standardized test scores.

References

- American Association of University Women. (2000). *Tech-savvy: Educating girls in the new computer age*. Washington, DC: Author.
- Beane, J. A. (1991, October). The middle school: The natural home of the integrated curriculum. *Educational Leadership*, pp. 9-13.
- Clewell, B. C., & Braddock, J. H. (2000). Influences on minority participation in mathematics, science, and engineering. In G. Campbell, Jr, R. Denes, & C. Morrison (Eds.), *Access denied: race, ethnicity, and the scientific enterprise* (pp. 89-137). New York, NY: Oxford University Press.
- Coalition of Essential Schools. (2002). Retrieved July 5, 2002, from <http://www.essentialschools.org>
- Daniels, H., & Bizar, M. (1998). *Methods that matter: Six structures for best practice classrooms*. York, ME: Stenhouse Publishers.
- Erlandson, C., & McVittie, J. (2001). Student voices on integrative curriculum. *Middle School Journal*, 33(2), 28-36.
- Huston, A., & Alvarez, M. (1990). The socialization context of gender role development in early adolescence. In R. Montemayor (Ed.), *From childhood to adolescence: A transitional period* (pp. 156-179). Newbury Park, CA: Sage Publications.
- Jones, B. F., Valdez, G., Nowakowski, J., & Rasmussen, C. (n.d.). *Plugging in: Choosing and using educational technology*. Washington, DC: Council for Educational Development and Research.
- Kaiser Family Foundation. (1999). *Kids and media: The new millennium*. Menlo Park, CA: Author.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.
- Long, M., Boiarsky, G., & Thayer, G. (n.d.). *Gender and racial counter-stereotypes in science education television: A content analysis*. (Funded by NSF Small Grant #9634595). Unpublished manuscript.
- National Middle School Association. (1995). *This we believe: Developmentally responsive middle level schools*. Columbus, OH: Author.
- Newman, F. M., & Wehlage, G. G. (1993). Five standards of authentic instruction. *Educational Leadership*, 50(7), 8-12.

- Perrone, V. (1994). How to engage students in learning. *Educational Leadership*, 51(5), 11-13.
- Signorielli, N. (1990). Children, television, and gender roles: Messages and impact. *Journal of Adolescent Health Care*, 11, 50-58.
- Signorielli, N. (1993). Television and adolescents' perceptions about work. *Youth & Society*, 24(3), 314-341.
- Steinke, J. (1998). Connecting theory to practice: Women scientist role models in television programming. *Journal of Broadcasting & Electronic Media*, 42, 142-151.
- Steinke, J., & Long, M. (1996). A lab of her own? Portrayals of female characters on children's educational science programs. *Science Communication*, 18(2), 91-115.
- Swan, K., Meskill, C., & DeMaio, S. (1998). *Social learning from broadcast television*. Cresskill, NJ: Hampton Press.
- Vars, G. F. (1993). *Interdisciplinary teaching: Why and how*. Columbus, OH: National Middle School Association.
- Vars, G. F. (1997). Effects of integrative curriculum and instruction. In J. L. Irvin (Ed.), *What current research says to the middle level practitioner* (pp. 179-186). Columbus, OH: National Middle School Association.
- Vars, G. F. (2001). Can curriculum integration survive in an era of high-stakes testing? *Middle School Journal*, 33(2), 7-17.
- Wolk, S. (1994). Project-based learning: Pursuits with a purpose. *Educational Leadership*, 52(3), 42-45.
- Wroblewski, R., & Huston, A. C. (1987). Televised occupational stereotypes and their effects on early adolescence: Are they changing? *Journal of Early Adolescence*, 7, 283-297.