

M E R I D I A N



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"The underlying goal of this project is to grow beyond using the Internet merely to disseminate knowledge. Rather, we hope to use this as a forum to engage in the process of creating knowledge."

Editor's Note: Introduction to The Living Article

Linda C. Greene
North Carolina State University

A Living Article, as we hope to implement it, begins with the presentation of a strong and possibly controversial article related to the field of technology and adolescent education. The readers of the article are then asked to respond to what they have read in the manner of an open forum, using the resources of the Internet to collaborate with other readers. Our concept of a Living Article has evolved over the course of several years and through discussions with a rotating group of Meridian's Review Board members. The underlying goal of this project is to grow beyond using the Internet merely to disseminate knowledge. Rather, we hope to use this as a forum to engage in the process of creating knowledge. We want to expand the possibilities of academic collaboration to include the entire audience of Meridian. In so doing, we hope to create a new forum for academic discourse.

This Living Article is an experiment. As with any experiment, there are sure to be some glitches as we go along. There are bound to be some unforeseen problems. As we discover these problems, some of the information surrounding the Living Article may change. If you discover any such problems, we hope that you will make us aware of your discoveries and offer some potential solutions. Our hope is that this collaboration will inform not only the content of the article but the process of creating it as well.

The co-authors of this article are doctoral students in Counselor Education at NC State University who are also members of Meridian's Review Board. Since this project has been up for discussion for some time among the Meridian Board, we were unable to put this article through the same blind review process that is our usual policy for all Meridian articles. However, we have solicited feedback from our board members and faculty advisors prior to publication and we plan to document the process that we implement throughout the life of this project. We hope to make this documentation available to Meridian readers in a future issue.

Editor's Note:

The content of our first Living Article focuses on the use of technology as a tool for promoting healthy adolescent development. We have used examples of school violence (particularly the incident at Columbine High School) to highlight the need for promoting healthy development among students. We have then used the literature on adolescent development to outline the age-appropriate developmental tasks for middle school students. The major question posed by this article is "How can we use technology as a tool to promote the successful resolution of these adolescent developmental tasks?"

In answer to this question, we hope to receive responses in the form of anecdotal evidence, relevant research in this area, and commentary on the topic from various points of view. As we begin to compile these responses, they initially will be reviewed (to ensure that they are indeed responses to the article) and then posted intact in a manner similar to bulletin board type postings. They will later be edited into the article and cited using links to the entire response. In this way, the article will evolve. We plan to maintain all versions of the article in an archive (linked from the most current version of the article) so that the process itself can be examined.

We hope that you will find the information presented both useful and thought provoking. We also hope that you will share the thoughts that the article has provoked with us. We look forward to the collaboration.



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"With the current emphasis on accountability and measuring the success of our educational system in terms of scores on end-of-grade tests, how are we to account for the emotional and social well-being of the children entrusted to us?"

Using Technology as a Tool for Promoting Healthy Development in Middle School Students

Linda C. Greene and Charles F. Blackburn
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NOTE: Be sure to read the [Introduction to the Living Article](#) before you continue.

"You say you want to bring about some kind of change in the schools. Start by putting a sign over the entrance of every school building that reads: "School May Be Harmful to Your Emotional and Social Well-Being. Enter at Your Own Risk. This School Does Not Assume Responsibility for Your Sense of Belonging or Your Sense of Place." (Quint, 1994, p. 10)

This commentary on our educational system by a young man who had dropped out of school was made in response to questions from a researcher investigating the needs of homeless students. His scathing assessment of the ways that schools routinely fail to meet the needs of students is disturbing. It is uncomfortable for those of us in education to hear such an indictment of our work. Unfortunately, if we are honest, we must recognize that there is some truth in this statement. Many of our schools have indeed become toxic environments for the souls of the students whom they purport to serve. With the current emphasis on accountability and measuring the success of our educational system in terms of scores on end-of-grade tests, how are we to account for the emotional and social well-being of the children entrusted to us?

There is no easy way to do this and there is certainly no way to quantify our success at developing emotionally stable, well-adjusted children. Unfortunately, too often it seems that the only time the public becomes aware that schools should be concerned with the emotional well-being of children is when something goes terribly wrong. Events such as the ones in Littleton, Colorado, Jonesboro, Arkansas, or Pearl, Mississippi, spark sudden public outrage that schools are not meeting the emotional needs of students. Simply hearing the names of these towns summons frightening images of teenagers gone wrong—teenagers who committed the most extreme forms of violence against their teachers and classmates in public schools. What went wrong? Why didn't anyone at the school do something to stop these boys before they killed? Why didn't someone at the school notice that something was wrong? Why did the teachers, counselors, and administrators fail to help these boys? How could they have let this happen? In the wake of tragedy, the public demands answers.

"Rather than focusing on what we don't want students to do, a more useful approach might be to focus on what we do want students to do."

Although more than a year has passed since the tragedy at Columbine High School, no simple answers to the questions surrounding that event have emerged. While it is easy to second guess the actions (or lack of action) of the school personnel in Littleton, none of us knows for sure how we would have behaved had we been in their shoes. Obviously, there were many small failures that paved the way for the tragedy that occurred the day that these boys finally exploded. We can speculate about the various points in these boys' lives that an intervention on the part of school personnel might have taken them off of the path that led to their deaths and the deaths of their classmates.

As a result of these incidents and the fear that they have inspired, numerous explanations and potential solutions have been offered. Proposed solutions have ranged from so-called "zero-tolerance" policies to posting the Ten Commandments in every public school classroom. Others, particularly as a result of the Columbine incident, have argued for banning video games or imposing other limits on students' access to technology. The fact that the students who committed the violence at Columbine were heavily involved in technology (playing video games, using the Internet, and making home videos) has been used by some as evidence that there is inherent danger when teenagers become interested in technology. Following this line of reasoning, the solution must lie in limiting or banning students' access to technology.

While these actions may in some cases ameliorate the symptoms, the root of these problems will likely remain intact. These solutions ignore the internal realities of the students who commit the violent acts that demand our attention. They also ignore the internal realities of the students whose actions may be just as troubling but do not demand our attention. Are there students in our schools who are just as troubled as the young men who killed their classmates and teachers but who direct their violence toward themselves rather than toward others? What about the students who are victimized every day by words rather than bullets? What are we doing to protect them? Are their wounds of less concern simply because they are less visible?

As we begin to explore these questions and attempt to generate possible solutions in answer to these concerns, perhaps a shift in focus would be helpful. Rather than focusing on what we don't want students to do, a more useful approach might be to focus on what we do want students to do. In other words, how do we expect students to behave? How do we expect them to think about things? How do we expect them to go about making decisions and setting priorities? If we are to begin to answer these questions, we need an understanding of adolescent development and the age-appropriate developmental tasks during the middle school years. The field of development includes a number of specializations. We have provided a very brief synopsis of some developmental theories, focusing primarily on the developmental tasks involved in enhancing problem-solving abilities, self-reflection, and the capacity to take another's point of view. We hope that this brief introduction to developmental theory will stimulate further thought and discussion.

Technology as a Tool

"Cognitive developmental theory proposes that changes in the quality of thought, understanding, and relating are fundamentally important in the growth and maturation of young adolescents."

Developing Opportunities for Increased Problem-Solving, Self-Reflection, and Role-Taking

As middle school students mature into adulthood, there are many drastic changes. While these budding adolescents change physically, there are also dramatic transformations in the ways they understand and relate to the world. These transformations of the cognitive processes are both quantitative and qualitative. Just as adolescents grow in stature, other quantitative changes become evident. For example, there is a vast expansion of vocabulary, knowledge of facts, and capacity to address more class material in a shorter amount of time. However, there are also qualitative changes in the ways these students construct and relate with the world around them. Many adolescents begin to demonstrate more complexity in problem-solving, role-taking, and self-reflection. Cognitive developmental theory proposes that changes in the quality of thought, understanding, and relating are fundamentally important in the growth and maturation of young adolescents.

This qualitative shift in understanding and relating to the world is reflected in the work of Piaget. In his stage theory of cognitive development, young adolescents begin to emerge from concrete operations and progress towards formal operations (Inhelder & Piaget, 1958). While many 10 year olds, using concrete operations, attempt to organize and understand the world around them through facts and descriptions, the more sophisticated adolescents begin to think abstractly and hypothetically. This qualitative change in the cognitive process to formal operations allows the adolescents to consider multiple strategies and probabilities, as well as enables them to practice a more complex form of role-taking and self-reflection.

Selman and Schultz (1990), described a qualitative transformation in the way that children and young adolescents progress towards greater awareness of the perspectives of others. While younger children, through play and interaction, exhibit difficulty differentiating between their individual perspectives and those of their peers, developing adolescents begin to conceptualize the interpersonal relationship with more complexity and elaboration. Not only do the older children and adolescents begin to understand the perspectives of others, but they are required to reflect on their own perspectives and compare these to the views, thoughts, and feelings of those around them. Such a qualitative shift in meaning-making provides an opportunity for greater richness and perspective in interpersonal relationships.

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It has been theorized that the complexity of problem-solving and the depth of role-taking and reflection also have implications for moral decision-making. This has been a topic of considerable debate regarding theories of moral development. Kohlberg's cognitive developmental theory of moral development is one of the most widely researched and accepted theories in this domain. Based on his longitudinal research with preadolescent boys in the late 1950s and early 1960s, he theorized that individuals progress through six qualitatively distinct stages of moral reasoning in invariant sequence. As individuals increase in cognitive complexity and progress in moral judgment, there is a gradual movement from reasoning which focuses on authority-based concerns and self-interest to a more principled and moral level of reasoning which considers the rights and perspectives of others.

Inherent in the process of moral development is the notion that individuals begin to utilize and develop role-taking. Gielen (1991) explains, "Role-taking is fundamental to symbolic communication, social perspective-taking, and moral development since higher stages of moral development are based on more complex levels of role-taking" (p. 23). In review of the Kohlberg's (1981) stages of moral development, qualitative shifts in role-taking are reflected in the progression to higher stages. For example, in the first two stages of Kohlberg's model, the preconventional level of moral reasoning, individuals focus on avoidance of punishment and self-interest. Moving to more conventional levels of moral reasoning, the third and fourth stages, individuals shed an egocentric approach and place greater emphasis on what is right for the group. Here, more role-taking is incorporated as needs and order of the larger group are taken into consideration.

"Through carefully-structured activities and curriculum design, cognitive developmental tasks such as role-taking, complex problem-solving, and self-reflection can serve as important goals in the education of middle school students."

The consensus of research conducted on adolescent moral development indicates that most individuals begin to make the transition from preconventional to conventional levels of moral reasoning during early adolescence. It is during this time that young adolescents begin to utilize formal operations and demonstrate a greater capacity to take the perspectives of others. However, Kohlberg (1984) asserted that "at-risk" and delinquent youth have not necessarily progressed towards conventional levels of moral judgment. Research in the last two decades has supported this claim (Gregg, Gibbs, & Basinger, 1994; Arbuthnot & Gordon, 1988). These studies have reflected that the majority of juvenile delinquents function at a preconventional level of moral reasoning, primarily at the second stage.

Given that some individuals demonstrate lower levels of development, there has been considerable interest in the design and implementation of programs that stimulate and support moral development. One of the most popular means of sparking such development has been the use of moral discussion groups (Blatt & Kohlberg, 1975). Through the discussion of moral dilemmas, group members are challenged to consider the perspectives of others and consider new ways of thinking about the problem. As a result, they may experience a shift in the way

they make meaning of the dilemma. There are numerous studies that support this intervention as a means to foster moral development. (Rest & Thoma, 1986) Given that adolescents are exposed and challenged in qualitatively new ways, this may have particular relevance for incorporating of dilemmas in the classroom.

Teachers, parents, and school administrators play an important role in supporting the development of children and adolescents. Through carefully-structured activities and curriculum design, cognitive developmental tasks such as role-taking, complex problem-solving, and self-reflection can serve as important goals in the education of middle school students. Kohlberg and Mayer (1972) argue that the main goal of education is to support this increased cognitive development. Through stimulation and support of developmental tasks, students are given an opportunity to test new ways of knowing. Instead of focusing solely on norms and facts in the curriculum, an emphasis on how the young person constructs the world and relationships may serve as the foundation for educational objectives.

Technology-Based Interventions

A literature search focused on finding interventions that use technology as a tool for promoting adolescent development yielded only one program. SMART Talk (Bosworth, Espelage, & DuBay, 1998) uses a multimedia computer program consisting of six modules that incorporate games, simulations, and other forms of interactive technology. This program proposes to address the problem of school violence with modules focusing on anger management, conflict resolution, and perspective taking. While results from this pilot study appear promising, additional exploration of this area is needed.

What Next?

Now that we have a basic understanding of a few of the developmental tasks associated with adolescence, how do we use this knowledge to make our schools places that promote a healthy sense of emotional well-being among students? The SMART Talk program (Bosworth, et al., 1998) offers but one example of the innumerable possibilities for ways that educators might use technology to promote health adolescent development. Programs such as this one exploit adolescents' natural interest in technology in order to provide opportunities for engaging in activities that will promote the positive resolution of the developmental tasks associated with adolescence. What other types of programs might incorporate available technology to create experiences that will promote healthy growth and development for middle school students?

As you think about these questions (and others that may have been provoked by this writing), we encourage you to explore the links that have been provided in the sidebar. These links are offered as sources of additional information and possible alternative perspectives on some of the topics mentioned.

How to Respond to this Living Article

We encourage responses to any and all elements of this article. Our goal is to create a living document that will reflect numerous points of view that are based on personal opinion, experience, and anecdotal evidence, as well as rigorous educational research. Obviously, we are hoping to generate some answers to the questions that we have posed. However, that does not preclude the possibility that this article may generate additional questions. The exciting thing about this living document is that we really don't know where this will lead. That is up to you. We are anxiously waiting for your responses.

Responses may be sent in the body of an email message or as an attachment and should include your name and professional affiliation (work setting, title, etc.) as well as complete reference information for any material that you may cite in your response. Be sure to include any relevant Internet links so that we can include those as additional sources of information for our readers. If sending an attachment, please describe the type and version of software used to create the attachment and include contact information so that we may get in touch with you if there are any problems in reading the attachment. Send all responses to [Linda Greene](#) with the words "Living Article" in the subject line of the message.

[Piaget's Stage Theory of Development](http://web.psych.ualberta.ca/~mike/Pearl_Street/Dictionary/contents/P/piaget's_stages.html)

(http://web.psych.ualberta.ca/~mike/Pearl_Street/Dictionary/contents/P/piaget's_stages.html)

[Tutorial on Kohlberg's Theory of Moral Development](http://snycorva.cortland.edu/~ANDERSMD/KOHL/content.HTML)

(<http://snycorva.cortland.edu/~ANDERSMD/KOHL/content.HTML>)

[Kohlberg's Stages of Moral Development](http://www.awa.com/w2/erotic_computing/kohlberg.stages.html)

(http://www.awa.com/w2/erotic_computing/kohlberg.stages.html)

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