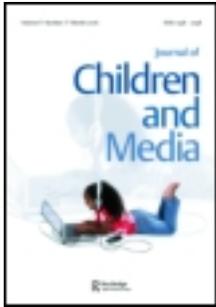


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Journal of Children and Media

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rchm20>

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Version of record first published: 12 Nov 2012.

To cite this article: Renee Hobbs & Michael RobbGrieco (2012): African-American Children's Active Reasoning about Media Texts as a Precursor to Media Literacy in the United States, *Journal of Children and Media*, DOI:10.1080/17482798.2012.740413

To link to this article: <http://dx.doi.org/10.1080/17482798.2012.740413>



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AFRICAN-AMERICAN CHILDREN'S ACTIVE REASONING ABOUT MEDIA TEXTS AS A PRECURSOR TO MEDIA LITERACY IN THE UNITED STATES

Renee Hobbs and Michael RobbGrieco

A study of 156 children ages 9–11 was conducted to examine potential differences in media use between high-achieving, gifted African-American children enrolled in a special program and those enrolled in a regular education program in a large urban city in the United States. Both high-achievers and regular students report living in highly saturated media home environments with little parental involvement in their heavy media use. This study uses a new measure of active reasoning about favorite media drawing on theoretical concepts of the active audience and constructivist learning theory. When asked to explain why they enjoy their favorite TV shows, songs and videogames, regular students are more likely to give a simple emotional reaction; by contrast, high-achieving students are more likely to offer a detailed, reasoned answer. More active reasoning about television and more complex attitudes toward restrictive parental mediation are associated with high academic achievement among African-American children. The educational potential of active reasoning about media favorites is discussed as a precursor to media literacy.

KEYWORDS African-American; urban; minority; children; television; media; digital; parental involvement; media literacy; education

Everyone wants children and young people to be active and selective in their use of television, videogames, popular music and the Internet. As the many forms of media and technology continue to multiply, children's lives are increasingly spent with various forms of media, including movies, social media, radio, and mobile phones. For example, a nationally representative study of 8- to 18-year-old children in the United States found that 76 per cent of children have an I-pod or Mp3 player, 66 per cent have a cell phone, 29 per cent have their own laptop computer. More than 70 per cent have a TV in the bedroom, 50 per cent have a videogame player in the bedroom, and 30 per cent have Internet access in their bedroom (Rideout, Foehr, & Roberts, 2010). As a result, most of American children's waking hours are spent in front of many different types of screens.

African-American children are particularly heavy users of television, music and videogames. The 2010 Kaiser Family Foundation study also found that African-American children spend 13 hours per day exposed to all forms of media, which is significantly greater than White children who averaged 8 hours and 33 minutes per day (Rideout et al., 2010). Children in Hispanic and African American families are more likely than children in other families to have televisions in their bedroom. Differences in media use in relation to race and ethnicity are even more pronounced, and they hold up after controlling for other

Journal of Children and Media, iFirst article, 2012

ISSN 1748-2798 print/1748-2801 online/12/000001-18

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demographic factors such as age, parent education, or whether the child is from a single or two-parent family (Rideout et al., 2010).

In the United States, 35 per cent of African-American children live in poverty. When it comes to academic achievement, racial and socioeconomic disparities among children continue to persist in the United States, with African-American and Latino children demonstrating significantly lower levels of academic achievement in reading and math. For example, only 12 per cent of fourth-grade boys are proficient in reading, compared with 38 per cent of white boys. By high school, the gap widens further as Black boys are less likely to graduate on time from public high school (completing Grades 9–12 in four years) and twice as likely to drop out of high school as White boys (Lewis, Simon, Uzzell, Horwitz, & Casserly, 2010). While African-American girls are more likely to experience academic success than boys, many experience academic challenges in schools with few resources and high teacher turnover rates. For these reasons, policymakers have called for the provision of special programs that support the academic achievement of African-American children, to ensure students are getting educational experiences at the appropriate level of rigor beginning in late elementary school, to help them stay on track academically. In many urban communities with large populations of African-American students, specially designed selective admission programs support a small group of students who, by their test scores, have demonstrated the potential to be admitted to the best public and independent college preparatory schools. These students are then offered a program of academics, mentoring and support to support their learning and development.

In this study, we had an opportunity to examine the technology and media use habits and the active reasoning of African-American children who were enrolled in a selective admission program as compared with a group of children in a regular education program who were not identified as gifted. In exploring differences in media use habits between the groups, we found preliminary evidence for the existence of habits of mind that can be activated in response to one's favorite television shows, videogames and music. These skills, which involve categorizing, describing, and making inferences that connect media texts to life experiences, may serve as precursor skills associated with the development of media literacy competencies.

Active Engagement with Media Texts

While some elementary classroom teachers view television as the enemy of print literacy and may discourage children's talk about television, films or videogames in the classroom, other educators are beginning to see value in using popular culture as a means to build connections between the classroom and the living room. However, for years, early childhood specialists have emphasized media and technology's power to "isolate children, emotionally and physically, from direct experience of the natural world" (Cordes & Miller 2000, p. 4). Some teachers may even be hostile or resistant to the idea of using mass media and popular culture as a place of engagement with young children (de Block 2011). One survey of early childhood teachers and caregivers found that 50 per cent of classroom teachers believe that children spend too much time in front of screens (Wartella, Schomburg, Lauricella, Robb, & Flynn, 2010). For these reasons, one scholar notes that "the majority of teachers fail to take advantage of the invaluable experience children are acquiring" with digital technology, mass media and popular culture (Dean 2011, p. 58).

To address these concerns, the National Association for the Advancement of Education of Young Children (NAEYC) has recently begun to acknowledge that, when used in developmentally appropriate ways, technology and interactive media can support the development and learning of young children. However, the focus of this work does not seem to include mainstream cable or broadcast television, contemporary Hollywood film, children's videogames or popular music (NAEYC, 2011). Even these authors, who enthusiastically recommend the use of learning technologies in early childhood, do note that inappropriate use of mass media may negatively affect children's learning and caution against "the mindless use of screen and audio media that is often so objectionable in early childhood settings" (NAEYC, 2011, p. 7).

Literacy educators have explored the complex relationship between children's mediated social worlds and academic experiences, discovering that children's playful enactment of stories about superheroes is a fundamental part of childhood, where "commercial culture often does become semiotic material for making sense of social experience," enabling children to process a variety of social dilemmas associated with the growing-up process (Dyson 1997, p. 15). Case study evidence from classrooms shows that by incorporating superheroes and media characters into their writing, children achieve a sense of personhood and social belonging and educators can support the development of active and reflective interpretive processes as children appropriate the artifacts of media culture for their own uses (Dyson 1997).

Such media-based activities support literacy development because they strengthen the oral language skills that are required for reading comprehension: understanding story schemas, conceptual knowledge and narrative comprehension skills (Linebarger & Walker 2005; Lonigan & Whitehurst 1998; Neuman 1995). Both oral language skills and decoding skills are necessary components of reading comprehension, as readers must construct coherent mental representations by connecting statements and ideas together, using both clues from the text itself and the readers' own background knowledge (Applebee 1978; Kendeou, van den Broek, White, & Lynch, 2009; Kendeou et al., 2005). Reading comprehension involves inference-making, where readers construct mental representations by identifying "meaningful relations among text elements and between text elements and background knowledge" (Kendeou et al., 2009, p. 766).

For more than fifty years, communication scholars have distinguished between *passive* and *active audiences* as a means to explore the differences in information processing and engagement that are associated with various types of media use. Passive audiences are considered vulnerable to media influence by simply reacting on an emotional level to the entertainment choices available to them. Active audiences are considered to be selective, using media to meet particular needs and goals. They make purposeful use of media content and are actively attending to and thinking about meanings in media messages (Biocca 1988). The concept of the active audience is deeply associated with fundamental ideas about human development, which is built upon the idea that children can translate their basic sensory experiences into thoughts and ideas (Bruner 1963), gradually moving from simple emotional reactions toward more complex and nuanced cognitive responses, "translating experience into a model of the world" through actions, images and finally, symbolic representation (Bruner 1966, p. 11).

Linking Biocca's definition of the active audience to current research on the development of oral language as a means to support inference-making, reasoning and reading comprehension skills, we conceptualize *active reasoning* as the process of engaging

in inference-making, reasoning or metacognitive thinking about media texts, tools and technologies. Active engagement with the process of meaning-making through symbolic forms, especially in responding to the pleasures experienced in consuming television, movies, popular music and other forms of mass media and popular culture, can support the development of critical thinking and reasoning skills that are more generally associated with academic achievement (Alvermann 2006; Alvermann & Xu 2003; Hobbs & Frost 2003; NAMLE, 2008). These competencies are often conceptualized as fundamental media literacy competencies for children in the early grades (Bazalgette 2011; Hobbs 2004).

Early childhood educators who have positive views about the role of mass media and popular culture in the elementary grades tend to see children's interest in media texts as a means to strengthen core literacy competencies, especially speaking and listening. For example, working as a language support teacher in a London primary school, de Block (2011) found that references to television often dominate children's informal social interactions, games and jokes on the playground and in the lunchroom, as children use program details, celebrities or other media incidents as points of discussion for peer engagement. In hands-on work with media literacy in over sixty elementary schools in England, scholars found that film viewing and discussion activities promote high levels of talking and sharing in extended discourse. While watching, children listened closely and noticed much detail about the dialogue and music, plot, setting and character (Marsh & Bearne 2008).

High levels of student motivation and engagement are stimulated when children are empowered to bring their taste culture and media preferences into conversations with their teachers and peers. Some scholars have examined how children's out-of-school literacy practices, including their use of mass media and popular culture, can support children's academic achievement. Based on qualitative case studies, researchers have argued that the use of children's popular culture in educational institutions may offer recognition of children's identities and the things they value, thus enhancing self-esteem and motivating children to participate more deeply in learning (Marsh et al., 2005). Framing her work within the context of cultural studies, Dyson (2003) examined how children blend images of football players, popular songs, plots from movies, and cartoons, using them in both personal narratives and extended pieces of writing. In analyzing advertising, children in one classroom developed spontaneous critiques of ads' representation of race, childhood and class, even when curriculum materials did not suggest this approach (Banaji 2011). It is not yet known whether these types of activities are more likely to occur in high-functioning families and schools. But we suspect that high-achieving children are more likely to engage in such practices, either spontaneously or with support from teachers and parents.

Accordingly, we hypothesize:

- H1: African-American children enrolled in a Selective program will engage in more active reasoning about their favorite television programs, videogames and music than students enrolled in a regular education (Charter) program

Media Use Habits among African-American Children

Today, digital media and the Internet are becoming a new entertainment media even among young children, with the increase in social media rising sharply among

African-American and Hispanic children and young people, where "more than radio, corporate rap or music video, the Internet has become the new town square" (Watkins 2005, p. 132). Mobile phones empower children and young people to engage in communication free from the constraints of physical proximity and spatial immobility, serving as a portable computer, notebook, alarm, GPS, calculator, diary, gaming device, camera, and data storage tool. Researchers are discovering that the mobile phone is a pervasive part of child and adolescent culture, where texting, sharing photos and videos, and playing games make the device increasingly central in the context of everyday life (Stald 2008).

Both positive and negative relationships have been found between children's media use and factors like behavior, academic achievement, and attitudes. Researchers have noted how media images may shape the development of children's ethnic identity, a process that falls into place during middle childhood and preadolescence (Graves 1999) and is intensified by the variety of models available to children, who prefer media messages that feature black characters (Berry 2007). Understanding media use in underrepresented populations may enable educators to better support the development of children's academic achievement. Some researchers have found that more than 4 hours of television viewing a day has a negative effect on children's reading achievement (Neuman 1995). A study of low-socioeconomic African American preschool children shows that children who watched the most television (between 30 and 55 hours per week) exhibited poorer academic skills than their peers who watched fewer than 25 hours per week (Clarke & Kurtz-Costes 1997). In the 2010 Kaiser Family Foundation study, nearly half (47 per cent) of all heavy viewing children and teens say they usually get fair or poor grades (mostly C's or lower), compared to 23 per cent of light media users. Heavy media users are also more likely to say they get into trouble a lot, are often sad or unhappy, and are often bored. Moreover, the relationships between media exposure and grades, and between media exposure and personal contentment, withstood controls for factors such as age, gender, race, parent education, and single vs. two-parent households (Rideout et al., 2010). Negative relationships have been found between television/video game use and academic achievement, exposure to TV/movie violence and aggression, and violent video game exposure and aggressive behavior. In one longitudinal study of a large sample of urban minority 6th graders, researchers found that increased use of violent media (including movies, video games, and music) was associated with lower academic achievement, aggressive behaviors, and delinquent behavior (Graber, Nichols, Lynne, Brooks-Gunn, & Botvin, 2006).

Adults play a vital role in promoting the positive uses of media and technology for learning. Parental cultural socialization enhances children's educational success, since parents nurture and equip their children with cultural skills and competencies that can give their offspring a head start in school. Parental mediation is generally defined as "any strategy that parents use to control, supervise or interpret content" (Warren 2001, p. 212). It has been described as one of the most effective ways of managing television's influence on children (Buijzen & Valkenburg, 2005). A large body of research indicates that children's educational performance partly depends upon parental resources and socialization activities (Coleman 1988). For African American families, income may be a better indicator than education for predicting parenting practices that differentiate educational and non-educational media use for children (Bickham et al., 2003). Socio-economic factors also structure the day-to-day media use habits of American families. For example, researchers have found that as parent education rises, parent availability to children increases

(Warren 2001). Available parents are more likely to verbally interact with young children and use co-viewing and active questioning practices rather than restrictive mediation styles, contributing to the development of critical viewing skills (Warren 2003). Family media activities, such as online technology use, reading and television viewing in the home, may enhance children's school success by fostering intellectual curiosity, respect for diverse points of view, and openness to new ideas.

Despite the public rhetoric about the dangers of children's excessive media use, most parents have generally positive attitudes about mass media, popular culture and technology in the lives of their children. In a study of British parents of young children, parents report that their young children generally lead well-balanced lives, with popular culture, media and new technologies playing an important, but not overwhelming role, in their leisure activities (Marsh et al., 2005).

Engagement with media and new technologies appears to be a primarily social, not individual, activity, taking place most often with other family members and in shared parts of living spaces. Parents feel that their children learn a great deal from film and television and that it has a positive impact on many aspects of their lives (Marsh et al., 2005). For these reasons, we have reason to believe that gifted, high-achieving African-American children enrolled in a selective and academically competitive program will have different media use habits and different home media environments than students enrolled in a regular education program. Stated as a hypothesis,

- H2: African-American children enrolled in a selective admission program for academically talented students (Selective) will have different media use habits and different home media environments than students enrolled in a regular education (Charter) program

Methodology

Sample. This study examined the media use habits, media environment, active reasoning, and parental media involvement in two independent samples of African-American children in a large urban city in the Mid-Atlantic region of the United States. One group of children participated in a highly selective academic program for high-achieving students and one group of children came from a regular class of students at an urban charter school. The group of high-achievers included all 5th and 6th graders from a highly competitive extra-curricular citywide academic program offered by a non-profit youth serving organization. These children have been formally identified as "gifted." This program selects low-income elementary student applicants from the urban public school district, based on recommendations from teachers, academic achievement and family interviews, and prepares them for placement in competitive middle and junior high schools. Participating Selective students come from more than 30 low-income neighborhoods in the city. Between grades 4 and grade 12, Selective students attend summer school and weekend classes, modeled after those in a college preparatory school. In the past five years, 88 per cent of students enrolled in the Selective program graduated from high school and 97 per cent of those students enrolled in four-year colleges.

The "regular" group included all 5th and 6th graders from a public K-6 grade elementary school (Charter) that draws student applicants by lottery from across the same urban city. The city's newspaper published a "Report Card" on the school district and

reported that the district-wide high school dropout rate was 44 per cent. This charter school draws its predominantly African-American students from 41 low-income neighborhoods across the city. The mandated statewide testing system tests students in grades 3 through 8 and 11 in math and reading, in grades 5, 8 and 11 in writing, and in grades 4, 8 and 11 in science. Data show that children from this school are generally performing at rates about even with or above par with city school averages, but considerably lower than state averages. For example, only 38 per cent of Grade 5 children have reading scores at or above proficient, as compared with 65 per cent of children from across the state. While 41 per cent of children in the charter school are at or above proficient for math, 74 per cent of children at the state level score at or above proficient. Among 6th graders, 45 per cent score at or above proficient in reading as compared with 68 per cent of students statewide; 50 per cent score at or above proficient in math as compared with 76 per cent statewide.

The sample included the entire population of high-achieving 5th and 6th graders enrolled in the Selective program ($n_1 = 73$) and the entire population of regular 5th and 6th graders enrolled in the charter school ($n_2 = 83$). Gender and age were nearly equal between the two groups, with 11 per cent 9-year olds, 68 per cent 10-year olds, and 31 per cent 11-year olds in the sample, with 55 per cent girls and 45 per cent boys.

Procedure. Children completed a paper-and-pencil survey in their classrooms, in the presence of their regular classroom teacher, after Institutional Review Board approval of the study had been granted and parental permission forms had been signed and returned.

Variables. Measures included questions about children's media use, perceptions of parent involvement in media monitoring, and a measure of active reasoning that asked children to name favorite television programs, music, and videogames and explain why they liked them.

Amount of media use was measured by listing the number of hours spent using each of various types of media (TV, music, Internet, videogames, cell phones, and reading books, newspapers and magazines) on a typical school day and a typical weekend day. Since children's estimates of hours of daily activity cannot be expected to be precise, the survey asked students to select from six choices ranging in 2-hour spans from *never* to *8 + hours* for each item. These answers were transformed into a numeric scale from 0 to 5. These numbers were then transformed into expressions of light, moderate and heavy use. For a weekday, 0 and 1 indicated *light use* (under 2 hours), 2 indicated *moderate use* (2–4 hours) and 3–5 indicated *heavy use* (4 + hours). For a Saturday or Sunday, 0–2 indicated light use (under 4 hours), 3 indicated moderate use (4–6 hours) and 4–5 indicated heavy use (6 + hours).

Parental involvement in children's media use was measured with eight Likert-scale items about various kinds of parent involvement in children's media activities, including reading, music, videogames, Internet, television, general conversation, co-use, overall engagement, and rules about media use. Children read items and indicated whether these were true *all the time, a lot, sometimes, a little, or never*. Students were also offered the chance to respond to an open-ended writing prompt to explain what they liked or disliked about parent involvement in their media and technology activities.

Active reasoning of media was measured through the use of three open-ended items where children were asked to name their favorite TV show, videogame, and song, and to explain why they liked each one in writing. In addition to naming a specific media text and offering their reasoning about their favorites, children were asked to draw a picture about their favorite television program. Figure 1 shows two examples of student responses to the

prompt about favorite TV shows. Students responded to the prompt, "In the space below, draw your favorite TV show. You can use pictures and words." At the bottom of the page, the prompt reads: "The show is called . . ." with a space for children to write in the name of the program. Another prompt asks children to complete the sentence: "I like it because . . ." In the first example, a nine-year-old girl has drawn a picture of Sponge Bob and completed the sentence prompt by writing "It's funny." In the second example, a boy has drawn a picture of Naruto and wrote: "it got ninjas, actions and it's from Japan."

Students demonstrated active reasoning if answers had one or more of the following components: recognition of the genre or type of message; explicit link between two elements of the composition (e.g., lyrics + beat, beat + dance); description of a compositional element; identification of the message's purpose or meaning; reference to some social aspects of using media; or description of an emotional response plus one other element of the message. After initial training, two coders worked independently to code the data and percent agreement was 96 per cent.

Results

High achievers use reasoning instead of just reacting to media messages. Our first hypothesis examined whether African-American children enrolled in a selective and academically competitive program will engage in more active reasoning about their favorite television programs, videogames and music than students enrolled in a regular education program.

When students are actively processing media, they are thinking about media's content and form in relation to their own desires, interests and needs. When students are passively using media, they react emotionally to the entertainment value of the message. When 9, 10, and 11-year-old children use reasoning to reflect on their motivations for using

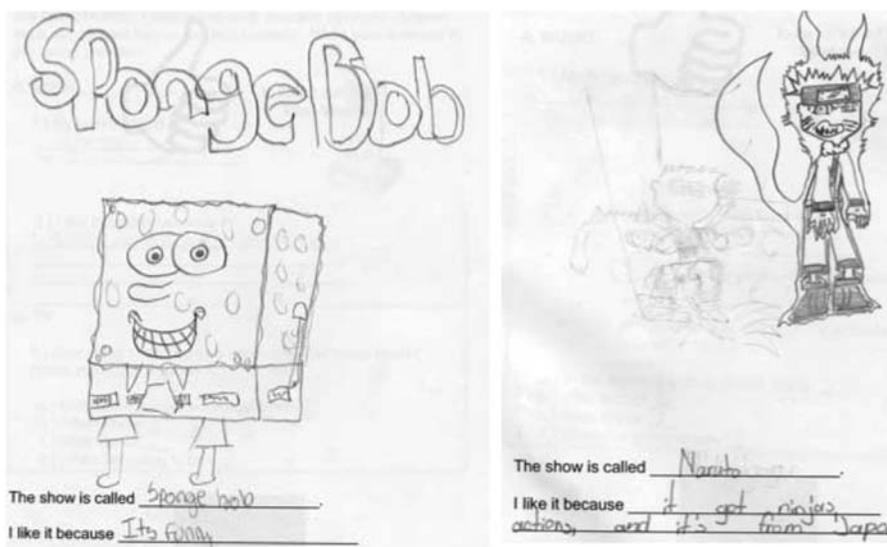


FIGURE 1
Student examples

media, they may or may not be critical viewers, but some children are spontaneously able to articulate ideas about why they like media messages and what they find valuable in them.

We identified five features of children's answers that demonstrated active reasoning: identifying the message genre, describing a compositional element, making a link between elements, identifying the purpose or meaning of a message, and identifying the social purpose, function or value of the message. These were evident in children's description of why they liked their favorite videogames, television shows, and songs. We counted an answer as evidence of active reasoning if children mentioned the *genre* or type of media message. Examples of this included: a boy who wrote, "It is scary and it is horror"; a girl who wrote, "It is appropriate and does not have any profanity in it. It's more of a gospel song than a rap song"; and a boy who wrote "It's so actiony [sic] and awesome."

If children *described a compositional element*, we counted this as evidence of active reasoning. Examples include: a girl who wrote, "It is hilarious and some of the boys on there are cute and funny and it has my favorite t.v. stars"; and this response from a boy who described a favorite videogame, "You can tackle some body with a big hit you can break out of a tackle throw a deep touchdown pass are you can intercept a thrown pass."

Some children were able to *link an emotional response to a compositional element*, as in the response from a boy who wrote, "It's funny and the cartoons can sometimes be so clueless and at other times can be so evil." When asked to explain why they liked a favorite videogame, a boy offered the following thoughts: "It has awesome graphics, great characters, and cool super attacks." A girl wrote, "I like it because it feels like you are really playing sports."

Other children mentioned the *meaning of the message or its purpose*, as with the boy who wrote, "I like Naruto because it is about a boy who will follow his dreams no matter what. It has a lot of action." A girl wrote,

It is about a teenager who is a rock star and it shows me that even a kid can be famous and a star. It was her dream and even if it was hard, she accomplished it. It shows me that I can do that too.

Finally, some children described why they liked a particular song, videogame or television show by *identifying a social function* in the context of everyday life. Examples include a fourth grade girl who wrote, "I like modeling. Its [sic] interesting and I like to get to know how there [sic] feelings are." A boy wrote, "I like it because it reminds me of when my dad used to be in the marines." We decided not to code or analyze these categories as independent variables because so many answers included a mix of several elements. For example, one boy wrote about a favorite videogame, explaining, "It's a fighting [game] and it's the 5th Tekken. I have been a fan since the first one came out." This answer includes some ambiguous language that may mix information about genre, description of a compositional element, and the social function of being a fan. Another student, a girl, wrote about her favorite TV show, explaining, "It has drama, it funny, it about teenagers which I will be in 2 more years," where we see a number of concepts in evidence.

These answers stand in sharp contrast to other answers from children who simply reacted with an emotional response. Many children in this study did not demonstrate active reasoning when describing their favorite TV show, videogame or pop song. These children responded to the question by mentioning only a reactive answer—usually a simple emotional reaction. The most common answer overall was "It's funny." Other answers were

descriptions of how frequently they watched, played or listened. When asked to explain why they liked various media, many claimed only that "It's my favorite," "It's cool," or "It is the best," or offering other vague or redundant descriptors.

High-achieving, gifted African-American children enrolled in the Selective program demonstrated more reasoning about all three forms of media in their written explanations of favorite TV shows, videogames and songs as compared with children enrolled in the Charter program. Table 1 shows that 64 per cent of high-achievers used active reasoning as compared with only 35 per cent of Charter students when describing their favorite TV show. 45 per cent of Selective children used reasoning when describing their favorite song, as compared with 34 per cent of Charter students, and 69 per cent of high-achievers used active reasoning as compared with 62 per cent of regular students. While Selective students outperformed Charter students for all three forms of media, statistically significant differences were found between high-achieving and regular students for active processing of TV shows, $t^{154} = 2.61, p < .05$, but not for music or videogames.

Academic achievers are heavy electronic media users but consume less than Charter students and are somewhat less likely to have a TV in the bedroom. Our second hypothesis stated that African-American children enrolled in a selective and academically competitive program will have different media use habits and different home media environments than students enrolled in a regular education programs. Most students in our survey do spend considerable amounts of time with television, videogames, the Internet, music and cell phones. Children in both groups report heavy use of electronic media on a typical school day (4 + hours), and on a typical Saturday or Sunday (6 + hours). As we predicted, for both school days and weekend days, a statistically significant difference was found, showing Charter students to report greater electronic media use than Selective students for a school day ($t^{154} = -3.1, p < .05$) and Saturday or Sunday ($t^{153} = 5.28, p < .05$). As Table 2 shows, only about half of Selective students report heavy viewing on weekends ($M = .56$) as compared with Charter students ($M = .85$), most of whom report viewing more than 6 hours daily on weekend days. In general, though, media consumption among both groups is quite substantial, at 30 + hours weekly.

We measured children's media consumption in a way so as to accurately capture the many different types of children's media use in the home. T-tests for equality of means showed no statistically significant difference between Selective and Charter students in their reports of time spent reading books, magazines, comics, and newspapers with means indicating light use (0–2 hours) for most students in each group on school days and weekend days. For example, nearly half of both Selective and Charter students report never reading a newspaper, and only 5 per cent of students read a newspaper a lot or all the time.

TABLE 1
Percentage of active reasoning in response to favorite media

	High achievers $N = 73$	Charter students $N = 83$
TV Show	64%	35%*
Music	45%	34%
Videogame	69%	62%

* $t^{154} = -2.61, p < .05$.

TABLE 2

Percentage of electronic media use: Saturday or Sunday

	High achievers <i>N</i> = 73	Charter students <i>N</i> = 83
Heavy (6 + Hours/Day)	56	86*
Moderate (4–6 Hours/Day)	22	10
Light (0–4 Hours/Day)	22	4
	100	100

* $t^{153} = 5.283$ $p < .05$.

Means for students' electronic media use were computed by using a cumulative scale that added each student's score on the five electronic media variables (TV, music, Internet, videogames, cell phones), for a possible range of 0–25. The scale was found to have acceptable reliability (Cronbach's $\alpha = .67$). By computing the average for high achievers (Selective, $M = 6.8$) and for regular students (Charter, $M = 8.9$) on this scale, the mean scores for students in each group could be compared to determine any statistically significant differences in reported electronic media use between the two groups of students. In order to account for possible student multi-tasking, another measurement was used to confirm the significant difference between groups in average daily electronic media use, and to find how many students in each group reported heavy, moderate, and light electronic media use on a given day. Researchers took each student's highest score of the electronic media use questions for a given day and assumed that score (0–5) to be a report of the student's total use for the day. Thus, in this conservative measure, it is assumed that the student is fully multitasking, using all reported hours of electronic media use at once across TV, Internet, videogames, music, and cell phones, with the highest score for any one of these media representing the total hours of use.

Even with this approach to estimating daily media use, most students in both groups reported being heavy users of electronic media. T-tests for equality of means were performed to test the null hypothesis that there is no difference between Selective and Charter students in electronic media use on a school day and on a Saturday or Sunday. Again as predicted, for both school days and weekend days, a statistically significant difference was found, showing Charter students to report greater electronic media use than Selective students for a school day ($t^{154} = 2.61$, $p < .05$) and Saturday or Sunday ($t^{154} = 3.26$, $p < .05$).

The large majority of African-American children in this study have television and videogames in the room where they sleep. A t-test of equality of means showed statistically significant differences between groups, with 88 per cent of Charter students have TV in the bedroom, as compared with 79 per cent of Selective students, $t^{152} = 1.97$, $p < .05$. High achievers do have fewer televisions in the bedroom. However, it's clear that high-achieving students live in homes that are nearly as saturated with media and technology as regular students. Most students in both groups reported having TVs, stereos, videogame devices, and cell phones in their own bedrooms, and about half of each group reported having computers with Internet in their bedrooms.

Children do not see parents as involved in their media use habits and activities but some evidence suggests differences in children's attitudes about restrictive mediation. According to children who participated in this study, the overall level of engagement of parents in children's media consumption behaviors is low. Few parents spend time talking

with children about TV, music, the Internet, videogames, and print media, at least according to the children who participated in this study. When they do talk about media with their children, it is more likely to be about TV and least likely to be about videogames. High achievers and Charter students value positive conversations with parents and generally understand why their parents set limits, but others feel that restrictive parental mediation creates conflict and try to keep their media and technology use a secret. There were no statistically significant differences between Selective and Charter students in any of the parental involvement measures, including items about reading, music, videogames, Internet, television, general conversation, co-use, overall engagement, and rules about media use. When asked to rate parental involvement on a scale asking children if the statements were true *all the time*, *a lot*, *sometimes*, *a little*, or *never*, most children checked *never* or *a little*.

We asked children to describe their feelings about parental involvement with an open-ended opinion prompt and categorized children's comments about parental involvement in media and technology use by identifying the most common themes that emerged. Table 3 shows these results. More than one-third of children in our sample offered positive comments about parents' active involvement in talk about media and technology. The most general *open communication* comments included examples such as the boy who wrote, "I like to talk with my mom about school and TV shows and another boy who wrote, "I agree that my parents should talk about things I like because I like them." Some children liked talking with their parents about favorite media because they felt that they *gained knowledge* from their parents. For example, a girl wrote, "The reason why is that it may be important facts about it [sic]" and another girl wrote, "I like it because whatever

TABLE 3

Children's responses to open-ended prompt about parental involvement in media and technology use

	High achievers	Charter students
Parents are active		
Open communication	16	18
Gain knowledge	0	11
It's pleasurable	7	0
Shows they care	0	4
Offers a reward	3	0
Subtotal	26 (36%)	33 (40%)
Parents are restrictive		
Rules make me feel safe	9	0
Sets limits	21	0
Creates conflict	1	11
Want to be independent	0	10
Want to keep secrets	10	0
Subtotal	41 (56%)	21 (25%)
Parents are not responsive		
Busy	0	8
Ignorant about media	0	8
Blabbers on and on	0	7
Subtotal	0 (0%)	23 (28%)
Unable to classify	6 (8%)	6 (7%)
	<i>N</i> = 73	<i>N</i> = 83

they're telling me, it's interesting." Some children noted the *pleasure* of engagement. For example, a boy wrote, "Because it's fun talking to my mom," and a girl wrote, "Most times it's a fun conversation." A few defined the pleasure specifically in terms of being *cared for*, as in the boy who wrote, "I like that because it shows that your parents care about the things you like," and a girl who wrote, "It is good to know that my mom cares about me enough to sit down and talk about what I do."

But for other children, the emotional valence of the comments suggested a range of positive and negative attitudes responding specifically to various forms of restrictive parental mediation, including setting limits on TV viewing time, movie ratings, exposure to media violence or other kind of content, or issues relating to online safety. As Table 3 shows, Selective students comment more frequently on restrictive mediation than Charter students. Nine high achievers (but no Charter students) commented on how this form of restrictive mediation *makes them feel safe*. For example, one girl wrote, "I know when they do that they're trying to protect me," and another girl wrote,

I agree because you should already know what to do and not to do on media. But if you don't know you will get a heads up on what's appropriate, safe, and what's best. It will most likely keep you from getting in trouble if you listen.

Twenty-one Selective students made neutral comments that indicated they were *aware of parental limit setting*. For example, a boy wrote, "It gives me boundaries to what I can and can not do," and a girl wrote, "Sometimes when I talk about those things I'm told I can't go to that website, I can't watch that movie, etc." While Selective children were generally positive about restrictive mediation, ten children mentioned their need to *keep secrets about their media and technology use*. One fifth grade boy wrote, "I disagree because it is really none of there [sic] concerns," while a girl wrote, "There are some things that you just have to hold back from your parents."

Twenty-five percent of Charter school children articulated their feelings about restrictive mediation in consistently negative ways. Eleven children related *uncomfortable feelings or interpersonal conflict*. For example, a girl wrote, "I don't like when my mom talk me [sic] about video games." Another girl wrote, "I disagree because my parents and I have totally different opinions about these types of things." Ten Charter school children described their *need to be independent*. For example, a 9-year-old girl wrote, "Because I like to have my own freedom and I don't like to be told what to do." A boy wrote, "I disagree because I'm old enough to play and visit [what] I want to."

Twenty-eight percent of Charter children (but no Selective students) commented that their parents were not engaged in talking about media or were overgenerous in sharing their opinions. Some children noted their parents were *too busy to talk*. For example, a boy wrote, "Because my parents almost never be home [sic]." A girl wrote, "My parents don't really talk a lot about that stuff. They are surely at work. I wouldn't mind though." Other students felt that parental *ignorance* created a barrier. One boy wrote, "Because they might not understand the game" while another boy wrote, "I disagree because my parents are old school so when I talk to them about the latest videogames, movies, TV etc, they get a little confused." Other children felt their parent *blabbered on and on* in unproductive ways. Sample answers included a boy who wrote, "I disagree because she makes like a hour long conversation" and a girl who wrote, "Sometimes the conversation will be long."

These findings confirm our hypothesis that there are some nuanced differences between Selective and Charter students in the role of parental mediation in the home. This evidence underscores the importance of parents using active mediation strategies by communicating in ways that children can understand, as Mendoza (2007) pointed out when examining the relationship between parental mediation and media literacy education. She writes, "Parents must consider how the content of their speech, their nonverbal expressions and tone or intonation in their voice will influence their messages" (p. 24).

Discussion

Considering that most of the urban, public school children who participated in this study come from poor and working-class socio-economic backgrounds where parents may work long hours and live in neighborhoods where crime and violence are prevalent, it is not surprising that most students report heavy electronic media use daily with low parental involvement regardless of whether children are enrolled in a program for those with high levels of academic achievement or not. However, it is surprising that no significant differences were found between high-achievers and regular students in the time spent reading and in the home media environment, as prior research has found this association (Strasberger 1995).

One of the major concerns in education is the development of children's higher-order reasoning and problem-solving skills. The capacity of individuals to use reasoning and evidence to support ideas and opinions is a central component of critical thinking as skill that emerges in childhood (Roychoudhury 2007). It generally develops in a dialogic environment in which children are encouraged to provide support for their conclusions and choices. While most students have the ability to develop reasoning and argumentation skills, they need guidance and a supportive environment, where reasoning is valued and appreciated. Parents and teachers play a crucial role in the development of these competencies. Children's use of reasoning and argumentation in relationship to everyday activities in the family, like media consumption and technology usage, may be leveraged to support success in the classroom (Seiter 2005).

When the family environment or classroom culture supports a discourse of reasoning and argumentation, children develop confidence in expressing ideas and opinions using language. If students can be encouraged to use reasoning in responding to everyday mass media, popular culture, and technology, children's language, literacy and critical thinking skills may be increased. This may be of special value to African-American children, who spend considerably more time using television, videogames, music and digital media than White students.

High-achieving 9, 10, and 11-year olds do show more active reasoning about favorite media than regular students, offering more well-elaborated answers in responding to a question about television programs, videogames and music. Both high-achievers and regular students clearly have knowledge and expertise related to popular media that can be used to stimulate and engage the sort of active, engaged and analytical thinking that educators would like all of their students to develop.

This was an exploratory study of a unique and understudied population of African-American children's media use habits which offered an opportunity to examine informal reasoning at work as children shared examples of their favorite music, videogames and TV shows. However, several limitations to this study must be noted. Our sample was limited to

African-American children in an urban community where we had the opportunity to compare and contrast children enrolled in a regular education program with those involved in a selective admission program. Future research should more systematically explore how active reasoning skills may be evident in a more diverse sample of children that includes White, Latino and Asian children enrolled in both regular and selective admission programs.

Due to time constraints in data collection, our measure of active reasoning was not consistent across the three genres of television, music and videogames. We asked students to write the name of their favorite programs and offer a written response for television, music and videogames. Only for the television example were students asked to draw a picture. Differences in measurement limit our ability to compare students' active reasoning across the three media forms, as it is possible that the process of drawing may have suppressed, altered or activated the process of active reasoning.

Another limitation of this study is the use of written responses, which are likely to be biased toward children who have greater levels of comfort in using writing to express their ideas. Children enrolled in the Selective program are likely to be more skillful writers and thus better able to express more complex ideas. It's quite possible that the differences we found in this study could be an artifact of children's differing levels of comfort and facility with written language. It's also possible that high-achieving students with highly engaged parents may be better able to express more sophisticated feelings about parental involvement in their media use as compared with children whose parents may be less engaged with their academic achievement. Future research should explore how children may or may not demonstrate active reasoning about their favorite media and parental mediation in the context of oral talk about television, music and videogames.

Since our findings show an association between more active reasoning and higher levels of academic achievement in children, we believe that both academically gifted and regular education students may benefit academically from efforts to help children improve their active reasoning and argumentation skills in response to mass media, popular culture and digital media. This research contributes to understanding the roles of media in the lives of students who come from predominantly African-American families. Much more research needs to be done with this population to determine what sorts of classroom activities and in-home activities may support the development of higher-order active reasoning and academic achievement.

High-achieving African-American children in this study were less likely to have a TV in their bedroom and watched less TV than children enrolled in a regular education program. This is likely a result of particular attitudes among family members, which were not measured in this study. More information is needed to understand parental perspectives on children's media use. It will also be important to learn how these student survey reports compare to other measures such as media diaries and home interviews. More research is required to determine causality and direction of influence (i.e., to determine whether media use influences achievement or achievement influences media use). Perhaps because the levels of parental involvement are so low, parent involvement in media and technology does not seem to be associated with active reasoning, children's media use, or amount of media in the home environment.

Given the potential for schools to promote both greater parental involvement with children's media use and more active engagement that supports literacy, reasoning and creative self-expression among students, future research should investigate the impact of media literacy education on the relationship between academic achievement, higher-order

thinking skills, and media use for children from urban, public elementary schools. Reading our data through learning and media literacy theories led us to conceive of the active reasoning about media favorites, more evident among high achievers, as a precursor to media literacy. Further research should observe and test the effect of classroom practice and parental mediation styles to develop media literacy in students who demonstrate, and who lack active reasoning about their media favorites.

ACKNOWLEDGEMENTS

The authors jointly collaborated on this research. We gratefully acknowledge the assistance of teachers and school administrators from the participating school in supporting data collection.

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