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Relationships among parents, students, and teachers: The technology wild card

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Abstract

Parent involvement and home-school partnerships have gained the status of a self-standing research area in the past three decades. While continuing to intrigue researchers and practitioners alike, a wild-card factor has been added that has changed the known dynamics, and has presented parents, teachers, students with a challenge that has neither been researched nor systematically addressed in everyday practice. The wild card is the explosion of technology use, and parents and schools are scrambling to find ways to monitor and control the influence of online interactions, often falling short on both fronts. The paper discusses the relationships of technology and cognitive, social and emotional processes, as well as the impact of electronic media on families and schools.

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1. Introduction

Over the past three decades researchers and practitioners alike explored the power of parent involvement and the importance of fostering school family partnerships in order to enhance the academic, social and emotional learning for children and adolescents (Patrikakou, Weissberg, Redding, & Walberg, 2005; Patrikakou, 2004, 2008). As a fuller picture of variables, processes, direct and indirect effects influencing parent involvement, and, in turn, student success, became clearer, a major new factor has introduced itself, and has made the parent involvement and school-family partnerships literature enter a new era. Media access and its increasing use by children and teenagers have

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enormously changed the parameters in the field, which is pursuing anew to understand how technology use impacts relationships among children, parents and schools. The rapid internet boom since the 1990s, as well as the speedy expansion of mobile technology use in recent years, have introduced a new educational avenue and a communication factor that play an increasingly important role in the relationships among parents, teachers, and students. The current generation (known as the Net generation, i-generation, digital natives, etc) is the first one that has known digital technology since birth, and seems to feel the most comfortable using it. Children and adolescents spend more than seven hours a day with media, which, in cases, is the most time spent on any activity, including sleep) and 97% of adolescents report that they play video games on a variety of platforms, including computers, hand-held devices, and game consoles (Kaiser Family Foundation, 2010; Strasburg, Jordan, & Donnerstein, 2010). In a policy statement, the Council on Communications and Media of the American Academy of Pediatrics (AAP) expresses concern for the increased media use and its potential harmful effects, while it also recognizes the positive impact that media use can have. The AAP suggests that pediatricians incorporate questions regarding media use in well-visits and make recommendations to parents to monitor and limit media exposure and use (American Academy of Pediatrics Council on Communications and Media, 2013).

2. Technology and Cognition

These rapid technological changes have shifted the learner's profile. Access to knowledge is not relatively static (e.g., choice of books), but its form changes tremendously at light speed. The goals are no longer to acquire the best ways to access information from a source, such as a book, but, rather, to learn to keep up with the brisk changes in accessing resources: applications, blogs, virtual reality environments, instant messaging, texting, social networks, gaming, with more forms and applications added daily (Subrahmanyam & Greenfield, 2008).

In order for learners to be successful in this landscape, they need to have a *flexible cognitive schema*. This flexibility allows the learner to quickly adjust their thinking to adapt to yet another form of communication or venue of accessing information. A flexible cognitive schema is supported by fluid reasoning (the capacity to think logically and solve problems in novel situations) and relates to fluid intelligence, reading fluency and reading comprehension (Cattell, 1987). In this environment, cognitive processes, which are part of a learner's personal competencies, assume an even more pronounced role with potentially a more narrow profile: learners without a flexible cognitive schema will struggle to keep up with new advances and, therefore, with accessing and processing information.

Research has mostly centered around the negative effects of media on cognitive development and academic achievement, but benefits have also been documented. For example, although exposure to educational programming on TV can foster cognitive development and academic achievement, violent programming can impact cognitive development, learning, and behavior in a negative way (Kirkorian, Wartella, & Anderson, 2008). Recent studies have further placed an emphasis on the benefits of media use. For example, gaming can have a variety of cognitive benefits such as improved spatial skills, faster and more accurate visual processing and attention, as well as problem-solving skills. It is important to note that observable gains in neural processing and efficiency obtained through game-playing are not restricted to just gaming, but they can generalize to other, non-gaming contexts improving an individual's performance and achievement (Granic, Lobel, & Engels, 2014; Ventura, Shute, & Zhao, 2013).

3. Technology and social and emotional development

Technology has also altered the nature and quality of social relationships. Whether a public venue (e.g., chatrooms) or private media (eg., instant messaging), a different type of social interaction has rapidly evolved. Online interactions lack features that have been a crucial part of human relations, such as eye contact, body language, etc, and, therefore, are often characterized as lacking the richness of face-to-face interactions. In addition, new phenomena such as "cyberbullying" have caught all involved in education by surprise, forcing them to scramble to address issues in a crisis mode.

There have been both positive and negative features identified in online interactions. Relieving social anxiety of meeting and interacting with people whom you do not know well is an example of the former, while cyberbullying and sexual predation is an example of the latter (Subrahmanyam & Greenfield, 2008). In addition, adolescents, report feeling more comfortable sharing their feelings online, as they feel they can be more honest, and, especially, shy teenagers, utilize the safety of being behind the screen to reach out and communicate (Rosen, 2007). It has also been indicated that most adolescents use online networks to extend and enhance already existing, off-line friendships, indicating a “friendship-driven” and also “self-directed” form of social and emotional learning (Ito et al. 2008). On the other hand, other types of technology, such as cell-phones, and other hand-held devices, have undermined family practices, mealtimes, etc, and have established new generational boundaries, including the lack of screening calls by parents (Ling & Yttri, 2006).

Current research also draws attention to motivational and emotional benefits such as enhanced creativity, persistence and motivation in the face of failure, improved mood, and positive emotions as a result of media use (Granic, Lobel, & Engels, 2014; Ventura, Shute, & Zhao, 2013). Through targeted media use, adolescents can explore and develop specialized interests and connect with others sharing these interests outside their local community. They also have the opportunity to share and disseminate their work on such a broad, global scale, for example through youtube, something that would have been unthinkable a few years back. This “interest-driven” media use can significantly enhance not only academic, but also social and emotional learning, preparing individuals to better address and function in a tech-based, global world (Ito, et al., 2008).

4. Relation of face-to-face and online interactions

4.1 The chicken and the egg dilemma

The ways in which online interactions affect face-to-face relations are not yet fully understood, and conflicting findings have created controversy regarding the relationship between these two types of interactions (Kujath, 2011). Emerging patterns beg the question of the direction of causality. In other words, were face-to-face interactions problematic to begin with, and that increased the desire, and pursuit of, online interactions, or vice versa? Some evidence indicates that youth seeking out online relationships with strangers had high conflict levels with their parents, as well as low levels of communication (Wolak, Mitchel & Finkelhor, 2003). Also, teenagers who spent a lot of time on sites such as “MySpace” felt that they received less support from their parents (Rosen, Cheever & Carrier, 2008). However, other evidence suggests that youth use online media to extend already existing, offline relationships, and do not pursue online interactions because the offline, face-to-face interactions are problematic (Ito, et al., 2008; Schurgin O’Keeffe, Clarke-Pearson, & Council on Communications and Media, 2011). Although, these two broad types of evidence seem to contradict each other, they may be just pointing to the intricacies of media-use, prompting us to closely examine the complexity of the reasons behind the use of certain media as a means to maintain, and to a different extent, form new friendships.

4.2 Electronic media and parents

Although the Net generation is the first to grow up in a digitalized world, this is not the first generation that created a media-use uneasiness for parents. When television became widely available, its use and effects on children became an issue for parents and educators alike. However, in the present Net generation the accelerated pace of technological developments, as well as the short time period during which this technology has saturated world markets, have added several issues that have not been encountered before (Roberts & Foehr, 2008; Rosen, 2007). The mere fact that, on average, children and teens know more than their parents about the technological aspects of the new forms of communication and accessing information may lead to inter-generational conflicts unlike those seen before. Depending on the type of media use, effects could be positive or negative on family cohesion. For example, it has been indicated that if media were used for social purposes, it lead to family conflicts, whereas, if media were used for school-related purposes, it was not linked to family conflicts (Mesch 2006).

There are two ways that parents seem to be exercising influence regarding technology and media use: (a) by monitoring activity through filters and other software, and (b) by restricting access to certain sites, or limiting time that can be spent online. However, there is little research on what parents actually know regarding their own teens' e-media use. One study reported that parents were unaware about their adolescents' MySpace use (Rosen, Chever, & Carrier, 2008), while another study found that 90% of adolescents did not tell an adult, including parents, even instances of cyberbullying (Juvonen & Gross, 2008).

Initial evidence also links parenting style with online media use. Four parenting styles (authoritarian, authoritative, neglectful and indulgence) are based on two basic dimensions of parental behavior: acceptance and responsiveness on one hand, and demand and control on the other (Baumrind, 1966); Maccoby, E. E. & Martin, 1983). It has been indicated that authoritative parents were most knowledgeable about their child's use of social media. Authoritative parents were also more likely to set limits about media use and teenagers with parents of this parenting style were the least likely to engage in high-risk, online behaviors, such as sharing of personal information (Rosen, Cheever & Carrier, 2008). It is interesting to note that developmental differences were associated with parent style and monitoring online use. In general, parents of younger teenagers were displaying authoritarian and authoritative styles, and were more likely to closely monitor media use and set limits than parents of older teenagers who practiced more neglectful or indulgent parent styles.

It has also been shown that the type of media use may be mediating the parents' reaction and limit-imposing behavior. For example, if technology is used to complete homework, acquire new skills and information, it is deemed compatible with parent expectations, and, therefore, in these cases, media use is negatively associated with conflicts. However, if technology is used solely for entertainment and social purposes, these uses contradict parent expectations, increase parent-child conflicts, and, therefore, negatively affect family cohesiveness (Mesch, 2006).

If viewed as an isolating, individual-only activity, other issues are also associated with media use and families, such as time displacement, since spending time on electronic media is negatively associated with quantity and quality of family time. However, internet and media use can become a shared activity and provide families the opportunities to create family sites, play games, stream movies, create family movies and albums, etc.

5. Electronic Media and Schools

5.1 Technology and Learning

Schools are trying to handle the explosion of media use in a variety of ways. At one end of the continuum seem to be schools and districts that have completely blocked access to a variety of e-media forms including cell-phone use, websites, games, etc, sometimes even blocking sites and media that can be of legitimate use in the educational process (Simmons, 2005). At the same time, others have embraced the use introducing blended learning (instruction with both face-to-face and online components), flipped classrooms (students access new material outside of class, via online lectures, videos, etc, and then use of class time is applying, analyzing, evaluating, and debating issues). This approach has been picking up momentum and studies have offered evidence of learning gains compared to a traditional instructional method (Brame, 2013; Mazur, 2009).

However, a significant roadblock in broadly applying a blended learning format is educator preparation. On average, pre-service, and to a higher degree in-service educators, have not been prepared to integrate extensive and complex technology in their daily practice. Such training is not a simple dissemination of information in a number of workshops or courses, but rather a comprehensive revision of the current pedagogy and classroom ecology (Voogt, Almekinders, Akker, & Moonen, 2005). In many ways, the role of an educator will have to be re-examined and re-defined, as technology uses will expand in schools and in daily functioning, causing a big shift in theoretical paradigm and practice. In addition to this paradigm shift, another issue needs to be addressed in a pressing and comprehensive way: involving families to extend this technology-supported learning at home.

5.2 Technology and School-family Partnerships

Technology can play a vital role in increasing parent involvement in the educational process. Since nearly all schools are connected to the internet, and more than 77% of adults in the U.S. have access to it, increasing home-school communication and fostering meaningful home-school relationships should be easier than ever (Olmstead, 2013). With the help of technology, being actively involved does not necessarily require the parents' physical presence at school, and it can also provide increased immediacy in home-school communication. In addition, keeping parents informed about classwork and homework, as well as their children's progress has become much more efficient through technology. School and teacher websites can keep parents abreast of school and classroom workings, only if they are frequently updated. Through such a system the perennial statement "I don't have any homework" can be easily confirmed and, more importantly, give students the message that the line of home-school collaboration is ongoing and well-established, leaving little room for pinning parents against teachers. In addition, online progress and grade reports can provide parents with a systematic way of monitoring their children's school performance, and, also, foster direct communication between parents and teachers through posted links that parents can access if they have questions regarding their child's progress.

In this era of rapidly evolving demands for technology use in schools, establishing school-family partnerships extends beyond facilitating two-way, home-school communication and information dissemination. In the core of the extended use of technology in schools lies the assumption that technology-based student learning will extend to the home, as students are asked to use technology to complete homework, or, in a flipped classroom format, even familiarize themselves with new material and concepts. Under this assumption, fostering school-family partnerships assumes an even more important function than ever before, as it becomes an integral part of technology-based learning (Kong, & Li, 2009).

There have been several technological advances prior to the dawn of the digital age, but an important difference this time is that changes are swift and have immediate applications. This calls for swift and pressing changes and actions on several levels. Although educational policy and school systems are convoluted and slow to change, given that technological applications will continue to increase, and learning demands on students will continue to shift, we cannot afford to lose time. Better understanding of the way these applications affect parent, teacher, and student interactions, as well as addressing changes in the educational process, instruction, and outreach to families is an urgent mandate for researchers, practitioners, and policy-makers alike.

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