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Why Kids Need To Be Bored: A Case Study of Self-Reflection and Academic Performance

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Abstract

This case study involved 3 middle school students in an assessment of the influence of self-reflection on general academic performance. It was hypothesized that increased self-reflection would have a positive influence on academic performance as measured by grades on tests, writing assignments, and homework. The participants were ages 13.4, 13.5, and 13.8. The study covered 3 months and was divided into two stages. During the first stage (month 1), the participants kept daily logs of all activities and were asked to write in their personal journals for 15 min each day. Logs indicated that participants devoted an average of 42.2 hrs per week to watching TV, playing computer and video games, listening to music, and talking on the telephone. During the second stage (months 2 and 3), participants limited TV, computer and video games, music, and telephone time to 30 min per day; in the time made free thereby, they were to read, sit quietly, write in their journals, meet with friends, and so on, provided these activities did not include any of the proscribed activities. Two of the participants dropped out of the study within 2 weeks, stating that they could not bear the lack of electronic activities. The remaining participant succeeded in modifying her schedule, followed by improvement in overall academic performance.

The role of reflection in education has been a topic of research since Dewey's (1910) groundbreaking work, which differentiated "routine action" from "reflective action." Over the intervening years, various scholars elaborated on the concept of reflection. Van Manen (1977), for example, emphasized the importance of the focus of reflection and identified three hierarchical levels of reflective practice: technical, practical, and critical. Schön (1983, 1987, 1991) introduced the notions of "reflection-in-action" and "reflection-on-action." The former refers to reflection that occurs contemporaneously with situational problems, whereas the latter refers to reflection that occurs afterward. Mezirow and Associates (1991) stressed the importance of critical reflection, which focuses on challenging and critiquing the social and political contexts of school and conveyed knowledge.

Drawing on the ideas of George Herbert Mead and Lev Vygotsky, Cinnamond and Zimpher (1990) emphasized the role of reflection as a sociocultural phenomenon; self-reflection serves as a way of constructing a sense of self vis-à-vis interactions with the environment. Bandura (1986), Schunk (1994), and Zimmerman (1994) linked self-reflection with self-regulation and performance. In their accounts, various self-regulatory processes are activated in learning situations: A person enters a learning situation with goals, agency, and a sense of self-efficacy. Agency and self-efficacy initiate learning strategies that affect performance, and self-reflection triggers both self-evaluation and integration.

Self-reflection in this context, and as used in this study, refers to mental activities associated with learning and

developing meaningful interpretations of learning experiences. Because self-reflection and self-efficacy have been shown to be significantly related to academic performance (Bandura, 1993; Pajares, 1996; Pajares & Johnson, 1994), they offer valuable frameworks for educational research. Several studies showed that self-reflection aids certain types of academic tasks, such as science (Dweck, 1999). Some research indicated that learning from experience through self-reflection must be self-conscious; spontaneous self-reflection was found to be difficult, particularly for children under the age of 7 (Valkanova, 2004; Yussen, 1985; Zelazo, 2000). Such findings may be related to the fact that self-reflective behavior, like many other human behaviors, is learned through modeling. Without appropriate or sufficient modeling, spontaneous self-reflection would, predictably, be rare. As a result, the majority of the research on self-reflection and academic performance focused on high school students (ages 15–18) and adults in classroom settings, with efforts tending to involve organized classroom activities. In addition, this research often linked reflection to specific problem solving rather than to general academic achievement (Adler, 1991; Calderhead, 1989).

One of the more frequently used techniques for stimulating and assessing self-reflection among adults is the assignment of writing tasks, particularly journal writing (Sparks-Langer & Colton, 1991; Surbeck, Park-Han, & Moyer, 1991). Andrews and Wheeler (1990) and Freidus (1991), for example, asked students in teacher education courses to record their thoughts regarding classroom experiences and concluded that the journal entries allowed subjects to find an individual "voice" that was evidence of self-reflection. Hatton and Smith (1995), also working with adults enrolled in a teacher education program, required subjects to complete a variety of writing tasks in which they examined the factors that, over the 4-year period of the study, had influenced their thinking and practice. The researchers reported that analysis of subjects' writing demonstrated evidence of reflection.

Typically, research on young children below age 7 involved applications of technology to encourage self-reflection. Graesser (2000), for example, engaged subjects ranging from 3.5 to 5 years in computer games and simulations and asked them to relate what was involved and what it meant. Forman (2000), Valkanova (2004), and Zelazo and Boseovski (2001) provided children (ages 7–12) with opportunities to create and then edit digital videos of their learning experiences and found that, at least for the older subjects, the tasks led to improved academic performance and increased use of reflective statements that were judged to be evidence of increased self-reflection.

The existing literature, however, reveals several limitations in the research. The most salient is the dearth of research on self-reflection and academic performance among middle school children. Given the performance difficulties observed at this level over many decades (Blythe, Simmons, & Carlton-Ford, 1983; Fenzel, 1992; Finger & Silverman, 1966; Mullins & Irvin, 2000; Petersen & Crockett, 1985), the scarcity of research is puzzling. In addition, the majority of the studies of self-reflection and academic performance focused on developing ways to encourage reflection and on assessing whether these techniques were effective. Few studies addressed the question of whether reflection leads to improved academic performance overall, and they generally were located in the context of specific classroom activities.

Although social cognitive theory emphasizes the connection between self-reflection and perceived competence on specific tasks, Bandura (1986) noted the importance of self-reflection and perceived *general* competence. Self-reflection allows people to look beyond the probabilistic relation between actions and outcomes by giving them the cognitive tools to link progress on tasks with goal setting and the behaviors necessary to accomplish those goals. Thus, it is reasonable to propose that general, as well as specific, self-reflection may have positive effects on overall academic performance and that such reflection may be unrelated to school experiences; indeed, reflection may effectively take place outside the school setting. Furthermore, by limiting reflection to school settings, the existing research has not addressed adequately the likelihood that self-reflection may best occur in isolation, which suggests that studies involving large numbers of participants performing standardized tasks may not be the most appropriate research design.

Self-reflection may have special relevance to middle school children, owing to their unique needs and challenges. Various studies have reported declines in academic performance and self-esteem for children transi-

tioning to middle school (see Mullins & Irvin, 2000). Fenzel (1989) and Harter, Whitesell, and Kowalski (1992) reported that self-ratings of academic competence declined among students after they entered middle school. Simmons, Rosenberg, and Rosenberg (1973) found that students between the ages of 12 and 14 had the lowest self-esteem ratings of all the children in their pool of 2,000 students in grades 3 through 12 (also see Eccles, Midgley, & Lord, 1991). Reviewing such research, Zemelman, Daniels, and Hyde (1993) argued that self-reflection can serve as a powerful means of improving middle school performance. The explanation may well lie in Bandura's (1986) linkage of self-reflection and self-efficacy, the belief one has that he or she is capable of performing tasks successfully. Stimulating self-reflection among middle school children would, according to social cognitive theory, give them the tools not only to set academic goals but also to accomplish them, thereby improving both academic performance and self-esteem.

The present study

The present study was undertaken to assess the effect of stimulating self-reflection among middle school children. This age group provides an ideal subject pool because the children are old enough to engage in activities designed to stimulate self-reflection but are too young to have developed significant negative behaviors that would make implementation of such activities difficult. A case study design was used so as to separate self-reflection from any specific social context, with the aim of offering participants periods of isolation in which to engage in self-reflection. Notably, such a design severely limits the generalizability of the results, and this point is acknowledged here. Based on Healy's (1990) argument that children today have little of the free time necessary for reflection, especially those between the ages of 10 and 16, the study sought to assess the participants' daily schedules as accurately as possible with the goal of determining when self-reflection could take place. Finally, based on previous research that identified writing as a legitimate tool for encouraging self-reflection, the present study engaged participants in journal writing. A positive correlation was hypothesized between the amount of time devoted to self-reflection (journal writing) and grades in school (academic performance).

Methods

After receiving district authorization, the researcher contacted three middle schools in the Southeast and apprised them of the nature of the study at the beginning of the spring term. The schools received a summary of the study and parental permission forms, which teachers distributed to all parents of seventh grade students. Sixty-four percent of the parents indicated that they were willing to allow their children to participate in the study, for a total of 224 students. From this group, the researcher randomly selected 20 students for individual interviews to determine their willingness to participate in the study. The students were advised that the study would last for 3 months. During the first month, they would be required to keep a daily log of all activities and to write daily in a personal journal. Participants would receive payment of $25 at the end of the month. At the end of month 1, the daily logs would be used for modifying students' schedules, specifically identifying times when a non-school-related activity could be substituted for a reflection activity over the next two months. Participants who successfully adhered to the modified schedule would receive a payment of $100 at the end of the study. The researcher stressed to each participant that payment depended on adhering to the schedule.

From this group, the researcher identified 5 students who seemed to be the most willing, and therefore the most likely, to follow the specified parameters. Then he met with the parents of these 5 to discuss the study and their children's involvement and to assess the degree to which self-reflection was modeled in the home. Assessment was based on parents' responses to a set of questions shown in Appendix 1. After these interviews, 2 students were eliminated owing to lack of parental support, giving a final participant pool of 3 (2 females and 1 male) for the case study. The females were ages 13.4 and 13.8, respectively, whereas the male was 13.5. For the purposes of this report, the students are called "Amy," "Jason," and "Judy." The students were from middle-class families with average household incomes, as reported by the parents, between $75,000 and $87,000, with both parents working full time. Amy was an only child; Jason had an older brother (age 17.1), and a younger sister (age 9.5); and Judy had a younger brother (age 8.3).

The three participants took the *Culture Fair Test of Intelligence, Forms A and B* (Institute for Personality and Ability Testing, 1961, 1963), the *16-PF Personality Inventory* (Institute for Personality and Ability Testing,

1972), and the *Group Embedded Figures Test* (GEFT) (Witkin, 1971). These instruments provided data on intelligence, personality traits, and cognitive style, respectively.

Preliminary interviews indicated that all students spent substantial amounts of time each day watching television, playing video games, surfing the Internet, talking on the phone, listening to music, and using their computers for instant messaging. (These activities were grouped together under the category of *Electronics*.) When questioned about interactions with siblings, Jason and Judy reported that they were limited to watching certain TV programs together and occasionally playing video games together. The age differences appeared to incline Jason and Judy to isolate themselves from their siblings. The interviews also revealed that listening to music was rarely a discrete activity but rather ocurred under nearly all conditions. The researcher anticipated that schedule adjustments would focus on reducing the time used for these activities.

Each participant received a spiral agenda book for the daily log and a bound composition book for the journal. The researcher told participants that they could write whatever they wanted in their journals but that they needed to remember that he would be reviewing them weekly and that they should not include any writing that they would be uncomfortable sharing. The calendars in the agenda books listed days of the week and hours from 6 a.m. to 11 p.m. and included lines for activity entries. Participants merely needed to record activities in the spaces labeled for day and time.

Each student was from a different school, so none shared any teachers. Teachers reported that each student was average (Amy and Jason) to slightly above average (Judy). To assess participants' academic performance, their teachers provided the researcher with grades on class work and homework during the period of the study. Because the study began at the start of the spring term, the teachers were familiar with the participants and their levels of academic performance; however, they were not kept apprised of the progress of the study so as to preclude any anticipation effect. At the end of the study, the researcher debriefed the students and parents.

Month 1

During month 1, participants recorded their daily activities, and they also were directed to spend 15 min each day making journal entries. They could write anything they wished in their journals. The researcher visited their homes each Sunday evening to review entries. The participants' teachers provided the researcher with grades on tests, quizzes, homework, and writing assignments.

Months 2 & 3

At the end of month 1, the researcher required participants to limit Electronics time to 30 min per day, including listening to music. More specifically, participants could not listen to music as a background activity while in transit to school, doing homework, and so on, but had to make it a discrete activity performed during the allotted time for Electronics. In the time made free by the reduction of Electronics activities, they could read, sit quietly, write in their journals, meet with friends, and so forth, provided these activities did not involve Electronics. They were to continue with their daily logs so as to document how time was used. The participants' teachers again provided the researcher with grades on tests, quizzes, homework, and writing assignments.

Results

Standardized test results showed that the participants were of approximately average intelligence (IQ scores ranged from 98 to 110, all within a standard deviation of the mean). The participants had no dominant personality traits, such as extroversion or introversion, although each was found to have a tendency toward extroversion. Each tested as field independent on the GEFT.

Month 1

All of the participants reported that they did not set aside a specific time for making journal entries, but they noted that they typically made entries while watching TV, listening to music, or while in transit to school or an activity.

Students' daily logs revealed the students' activities throughout the study. Table 1 illustrates the typical weekday, whereas Tables 2 and 3 illustrate typical Saturdays and Sundays, respectively. Table 4 shows total average hours per student spent in school, extracurricular activities, homework, and Electronics per weekday. Table 5 shows total average hours per student spent on extracurricular activities and Electronics on weekends. During the week, the students were at school 7 hrs per day; engaged in extracurricular activities an average of 2 hrs per day; devoted an average of .5 hrs per day to homework; and spent an average of 3.8 hrs engaged in Electronics. On weekends, the students did no homework. They continued their extracurricular activities, particularly on Saturdays, for an average of 2.7 hrs. On Sundays, Amy and Jason did not have any extracurricular activities, whereas Judy had 2 hrs of music lessons. Over the weekend, all three participants increased considerably the amount of time given to Electronics, for an average of 22 hrs. The overall average for Electronics was 41.2 hrs per week. Because all the participants had music playing nearly constantly, even when doing homework, music could not be included in this average.

The logs also documented how the participants differed with respect to the amount of time given to watching TV, playing video games, and talking on the phone. Amy and Judy did not report playing any video games during month 1; instead, approximately 26% of Electronics time was devoted to watching TV, 11% to surfing the Internet, 45% to talking on the phone, and 18% to sending instant messages. Jason, on the other hand, devoted approximately 35% of Electronics time to watching TV, 46% to video games, 10% to talking on the phone, and 9% to sending instant messages. The amount of time Jason spent on the Internet was negligible (< 1%) and almost exclusively involved looking for video game "cheats" on various Web sites.

It is worth noting that the participants reported that they only interacted with adults in school, during meals at home, and while in transit to school or extracurricular activities. Yet parents reported not only that they placed a high value on conversations with their children but also that they had such conversations daily (see Appendix 1). These results suggest a disconnect between the perceptions of the participants and their parents. When queried during a weekly meeting, participants indicated that they would spend more time with their parents if possible, but their schedules, as well as those of their parents, made it difficult. The participants also reported spending little time with peers outside of school or extracurricular activities. During all of month 1, Amy reported visiting with her friends only twice, once in her home and once in the home of a friend, whereas Jason and Judy reported only one such visit. Interactions with peers outside of school and extracurricular activities were limited to telephone conversations and instant messages.

Journal entries during month 1 tended to be fairly vague and were primarily very brief summaries of daily events that sometimes included commentary on those events. During the weekly visits to review journal entries, the researcher asked participants whether they used the entire 15 min per day for their journal entries. All indicated that they did, but the brevity of the entries suggests that this was not the case. The examples below are illustrative (all examples of journal writing have been edited to correct spelling and punctuation):

> **Amy:** Had a good time at soccer practice today. Almost scored a goal. We won 3-2!
>
> **Jason:** School was really boring today. In fact, it's boring every day. Kept thinking about the end of the day. Just played a bit of Halo and kicked some butt. Gotta go!
>
> **Judy:** My music teacher was unhappy with me because I kept making mistakes. She said I need to practice more, but I can't practice because we don't have a piano yet. Mom said maybe for Christmas, but what am I supposed to do in the meantime? I don't like piano that much anyway.

A review of students' grades during month 1 showed no change in academic performance.

Months 2 & 3

At the end of the first week of month 2, Jason informed the researcher that he "couldn't stand it" and that he was dropping out of the study. When queried, he stated that he could not "just do nothing" because it was "boring." He also stated that the "silence" of doing nothing "bothered" him and made him feel "uncomfort-

able." When asked whether he had considered reading during the free time he had, Jason stated that he did not like to read and that reading is "boring." When asked whether he had spent any of his free time during the first week thinking, he stated that he had not because he had "nothing to think about." When asked whether he had considered spending more time on school work, he indicated that he had not because he could finish all his homework very quickly and did not need more time (Jason's grade average was a C).

When asked what he had done with the free time created by the adjusted schedule, Jason stated that for the first 2 days he had just stared out his bedroom window. On the third day, however, he "couldn't stand the silence" and began playing music, thereby breaking the terms of the schedule. By Friday, he had resumed all his usual Electronics activities, at which point his parents suggested that he should drop out of the study, given his inability to abide by its conditions.

At the end of the second week, Amy's mother contacted the researcher and informed him that Amy had resumed Electronics activities. During the scheduled Sunday meeting, Amy notified the researcher that she was dropping out of the study. When queried, her reasons for ending her participation were very similar to Jason's. For example, she indicated that she could not bear the long hours of silence and that she missed talking to her friends on the phone. When asked whether she could talk to her friends during the school lunch periods, she noted that the lunch period was "too short" for all they had to say to one another. She stated that she was "used to having music playing" and that the lack of music and the resulting silence made her "fidgety." When asked whether she had considered reading during the free time she had, Amy revealed that she did not like to read and only read when she was "forced to." When asked whether she had spent any of her free time during the first week thinking, she, like Jason, said that she had not because she had "nothing to think about." When asked whether she had considered spending more time on school work, she indicated that she had not because she was doing fine in school (though her average grade was a C).

At the end of the first week, Judy also expressed distress over her changed schedule and stated that she was extremely bored. However, she indicated that she was committed to completing the study and getting the $100. By the end of the second week, she had successfully altered her daily schedule. As shown in Table 6, which compares her daily and weekly schedules during month 1 with those during month 2, the change in Judy's schedule necessitated specification of new variables: *reading, play, conversations with parents,* as well as *reflecting*. Judy decreased the amount of time spent on Electronics from 43.5 hrs per week to 3.5. The amount of time devoted to homework increased from 2 hrs per week to 7. Much of this increase consisted of reading her textbooks, which she reported she had never done before because her homework consisted almost entirely of worksheets, the answers to which she could find in her texts without having to read them. She also began reading novels that she checked out of the school library, averaging an hour a day for an average weekly total of 7 hrs. Judy increased her journal writing from 1.75 hrs per week to 5.25. These changes are further illustrated in Figures 1 and 2. By the end of the third week, her journal entries were not only longer, but were also more descriptive, as the example below shows:

> **Judy (week 3, month 2):** I asked Mom tonight at dinner if I could get a cell phone for my birthday, which is on June 14. She said that we can't afford it. So many of my friends have cell phones, and I don't understand why their parents can afford it and we can't. I mean, we're not POOR or anything ... I don't think. I told Mom that I could use the phone to keep in touch with her, but she just smiled and shook her head. End of conversation. I'll ask Dad this weekend. Maybe he can be persuaded. When I have my own kids, I'm going to make sure that I have plenty of money so that I can get them the things they want. I don't think Mom understands how important it is for me to have a cell phone when all my friends have them. This makes me very sad and upset.

Equally interesting was the fact that Judy began spending more time with friends, engaging in group play activities that were not structured or organized by adults. These included such activities as bike riding, Frisbee, spending time in a nearby park, and what she referred to as "dress up," which consisted of the girls getting together in her or a friend's bedroom, helping one another apply makeup, putting on their best clothes, borrowing mothers' high heels, and role playing.

In addition, Judy reported spending more time with her parents and talking to them about daily events, the news, and future plans. Her reports were confirmed by her parents at the end of the study. Reported time with parents went from an average of .5 hrs per week to an average of 3 hrs per week, a six-fold increase.

Although journal writing was initially identified as the means of stimulating and assessing self-reflection, Judy's daily log indicated that by the third week of month 2, she was spending, on average, 1.5 hrs per day just "thinking." When asked what she thought about during these periods, she stated that she thought about her friends, conversations that they had had, things she wanted to tell them in future conversations, a book she was reading, events at school, conversations with her parents, and so on.

At the beginning of the study, Judy's grades had averaged a C+. Beginning in the third week of month 2, her grades began to improve, with more Bs on tests and quizzes and 2 As. By the third week of month 3, all of Judy's reported grades were As and Bs, and at the end of the study, her overall grade-point average was B+. This improvement in academic performance appeared to have a positive effect on Judy's self-concept, as reflected in the following journal entry, dated just a few days before the conclusion of the study:

> **Judy (week 4, month 3):** I got my science test back today and got a B+ on it. Even though I had studied hard for the test, I was surprised because I'd never gotten anything higher than a C in that class before. I never thought I was any good in science. My teacher told me that I missed an A by just 7 points! What's funny is that I was really happy to get the B+, but when he told me that I had come so close to an A, I felt kinda bad because I thought that if I had just studied a little harder I would have had that A. What's even funnier is that I never thought that much about grades. As long as I was passing I thought I was doing ok, and Mom and Dad never complained or anything. But over the last few weeks I've been spending more time on school, and my grades are better than they used to be. And what's really funny is that I LIKE getting good grades. They make me feel good. Would it be possible for me to get all As if I study really hard? What would that be like? Would I be able to get into a good college? I never really thought about that before. Would Mom & Dad be able to pay for it? And what would I do there ... and after? SO MANY QUESTIONS!!!

Conclusion

Case studies like this one do not provide generalizable results, and there is no way of knowing with certainty whether the lives of these 3 participants mirror the lives of other young people in similar circumstances. Nevertheless, they do allow for interesting observations that are suggestive.

Of immediate importance is the finding that Judy's grades improved significantly during the course of the study, which supports the prediction of social cognitive theory linking self-reflection and academic performance. Her daily logs indicated that she successfully reduced the amount of time devoted to TV, music, telephone, and computer and that she also successfully adjusted her schedule to make use of the hours that were freed up as a result. Part of this time was used for reading, engaging in conversations with parents, and play with friends, but a large amount of time, averaging 13.25 hrs per week, was given to journal writing and "thinking." Review of the journal entries and weekly meetings suggested that these latter activities did, indeed, evidence self-reflection, which appears to have emerged within the context of the study parameters rather than spontaneously.

Though it is tempting to conclude that journal writing encouraged Judy to engage in self-reflection because it suggests that this activity might serve as a valuable tool for teachers and parents of young adolescents, such a conclusion may be hasty. Judy's interview indicated clearly that it was the lack of stimulation that led to self-reflection. Her journal entries were a means of occupying her time and appeared to be manifestations of self-reflection more than a stimulant for self-reflective behavior. If this assessment is correct, it suggests that there is no simple means—i.e., asking middle school children to take up personal journals—of encouraging self-reflection.

This point was strengthened during the debriefing at the end of the study. Judy stated that, initially, she had no idea how to structure her time and felt helpless. Part of the difficulty was that, in the past, when her parents saw that she had idle time, they recommended or structured activities for her. The parents confirmed this and, when queried, indicated that they felt that they were not being "good parents" if their daughter was not engaged in numerous activities. However, Judy stated that the imposed constraints of the study forced her to structure her time. Being able to do so successfully made her "feel good," perhaps owing to a sense of independence and self-reliance that may have resulted. Both are especially important for young adolescents because of their status in a transitional period during which they are beginning to establish their own identities. A variety of studies showed that students want more control over many facets of their lives as they mature, especially with regard to school work (see Midgley & Feldlaufer, 1987). Fraser and Fisher (1983) found that the developmental needs of young adolescents lead them to seek opportunities for greater control over their school activities. Yet as Midgley and Feldlaufer reported in their study of seventh grade students, classroom structures are seldom hospitable to these needs. Judy's response to self-reflective activities suggests that the fairly rigid structure imposed on her decision making by both the school and her parents restricted her development into an independent person capable of regulating her own life. If this conclusion is accurate, it has implications for teachers and parents and their interactions with middle school children. Parents, for example, may want to reduce the number of structured activities (e.g., music lessons, soccer) and give their young adolescents more freedom in deciding and organizing their own activities.

What also seems clear is that Judy's previous schedule, with more than 40 hrs per week devoted to Electronics, left no time for anything related to school and little time for Judy herself. This conclusion is congruent with Healy's (1990) assessment that young people today are overburdened with programmed activities that require little thought and which, as a result, have negative effects on cognition. Although it is impossible to generalize from a single case study, Judy's experience, as well as simple logic, suggests that academic performance can be improved across the board by reducing the amount of time children spend watching television, listening to music, talking on the phone, and engaging in parent-organized and structured activities. Larger, more detailed studies are needed to explore this issue.

Also interesting was the disconnect between parents' and childrens' perceptions of the amount of time they spent conversing. Daily logs during month 1 revealed that all participants had little contact with adults outside of school, including their parents. Inquiries during a weekly meeting indicated that the participants wanted to have more time with parents but that they did not believe this was possible, owing to their schedules and the time constraints imposed when both parents worked long hours, as was the case in this study. Contrary to the popular notion that young adolescents want to distance themselves completely from their parents, the participants in this study wanted more time with parents, not less. Even though the parents indicated at the beginning of the study that they spent considerable amounts of time with their children, the participants' logs demonstrated otherwise. In the case of Judy, however, when she reduced the amount of time devoted to Electronics, she unconsciously approached her parents in an effort to fill the void. This had the positive effect of motivating her parents, likewise unconsciously, to adjust their schedules so as to give her more time. It also appears that as Judy became more self-reflective, the substance of her conversations with parents changed, moving away from simple summaries of daily events to more substantive discussions of relationships, goals, and aspirations.

Judy's parents expressed surprise during the debriefing that the month 1 log showed little contact with their daughter and pleasure with the change that occurred in months 2 and 3. In what may be an unusual expression of honesty, Judy also voiced her pleasure with the change and stated that she wanted and needed her parents' guidance at age 14 (at the end of the study) just as much as she had at age 10. As children mature, parents tend naturally to become less involved in their daily activities; this is an important part of preparing children for independence and adulthood. Yet as Giannetti and Sagarese (1997) noted, because they are in a transitional period, middle school children long for independence even as they long simultaneously for the close parental nurturing that characterized their childhood. The rapid social and developmental changes that occur during young adolescence can be both exhilarating and frightening for many children, and this is a time when more parental guidance may be necessary, not less. Guidance, of course, is not the same as control, a distinction that many parents may not easily grasp. Judy's expressed desire for such guidance may be anomalous, but, on

the other hand, it could reflect the sentiment of many young adolescents struggling with significant changes in their lives. Again, a larger study is needed to explore this finding more fully.

Finally, as Judy's journal entry above suggests, the self-reflection allowed by a revised schedule seemed to lead to a greater sense of agency and self-efficacy. This entry (as well as other, similar entries) and the debriefing at the end of the study indicated that Judy felt more in control of her academic achievement and that she also was making progress in constructing a sense of self in relation to school, family, and her future. Sense of self is a critical factor in maturation and is necessary for goal setting. Was Judy bored at any time during the study? Yes, and frequently. However, this study suggests that boredom may play an important role in self-reflection and agency, provided young people have options available to relieve boredom while simultaneously engaging them in activities that encourage self-reflection.

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Appendix 1
Questions for Parents

1. How many books would you say you have in the house? (average = 15)

2. How many days per week do you engage in reading unrelated to work for more than 30 minutes? (average = .3)

3. How many days per week do you make quiet time for yourself and or your child? (average = 0)

4. On a scale of 1–5, with 1 being low and 5 being high, how important do you feel it is to set limits on the amount of time your child watches TV or plays on the computer? (average = 1.5)

5. On a scale of 1–5, with 1 being low and 5 being high, how important do you feel it is to have conversations with your child about daily events, feelings, goals, and academic progress? (average = 5)

6. On a scale of 1–5, with 1 being once a week and 5 being daily, how frequently do you have such conversations with your child? (average = 5)

7. On a scale of 1–5, with 1 being low and 5 being high, how important do you feel it is that your child have time alone with nothing to do? (average = 1)

8. On a scale of 1–5, with 1 being low and 5 being high, how frequently do you reflect on daily events, feelings, goals, and aspirations? (average = 2)

TABLE 1. Representative Weekday Schedules Based on Daily Logs

Time	Amy's Activities*	Jason's Activities	Judy's Activities**
6:30–7 a.m.	dress, breakfast, elec***	dress, breakfast, elec	dress, breakfast, elec
7–7:30 a.m.	transit	transit	transit
7:30 a.m.–2:30 p.m.	school	school	school
2:30–3 p.m.	transit	transit	transit
3–3:30 p.m.	elec	homework	elec
3:30–4 p.m.	transit	transit	transit
4–6 p.m.	soccer	baseball	soccer
6:30–7 p.m.	transit	transit	transit
7–7:30 p.m.	dinner	dinner	dinner
7:30–8 p.m.	homework	elec	elec
8–8:30 p.m.	elec	homework	elec
8:30–9 p.m.	elec	elec	homework
9–11 p.m.	elec	elec	elec

**Amy also had dance lessons each WF from 6–7 p.m.*
***Judy also had piano lessons each TF from 6–7 p.m.*
****elec=electronics*

TABLE 2. Representative Saturday Schedules Based on Daily Logs

Time	Amy's Activities	Jason's Activities	Judy's Activities
7:30–8:30 a.m.	dress, breakfast, elec*	dress, breakfast, elec	dress, breakfast, elec
8:30–9 a.m.	transit	elec	elec
9–11 a.m.	soccer	elec	elec
11:30 a.m.–12 p.m.	transit	elec	elec
12–12:30 p.m.	lunch, elec	elec	lunch, TV
12:30–1 p.m.	elec	lunch, TV	transit
1–1:30 p.m.	elec	elec	soccer
1:30–2 p.m.	transit	transit	soccer
2–2:30 p.m.	dance	baseball	soccer
2:30–3 p.m.	transit	baseball	soccer
3–3:30 p.m.	elec	baseball	transit
3:30–5 p.m.	elec	baseball	elec
5–6 p.m.	elec	transit	elec
6–11 p.m.	dinner, elec	dinner, elec	dinner, elec

**elec=electronics*

TABLE 3. Representative Sunday Schedules Based on Daily Logs

Time	Amy's Activities	Jason's Activities	Judy's Activities
8:30–9 a.m.	dress, breakfast, elec*	dress, breakfast, elec	dress, breakfast, elec
9–9:30 a.m.	transit	transit	elec
9:30 a.m.–12 p.m.	church	church	lunch, elec
12–12:30 p.m.	lunch, elec	lunch, elec	transit
12:30–1 p.m.	elec	elec	music
1–1:30 p.m.	elec	elec	music
1:30–2 p.m.	elec	elec	music
2–2:30 p.m.	elec	elec	music
2:30–3 p.m.	elec	elec	music
3–3:30 p.m.	elec	elec	transit
3:30–5 p.m.	elec	elec	elec
5–6 p.m.	elec	elec	elec
6–11 p.m.	dinner, elec	dinner, elec	dinner, elec

**elec=electronics*

TABLE 4. Average Hours Spent on School and Other Activities Per Weekday

Subject	School	Extracurricular	Homework	Electronics
Amy	7	3	0.5	4
Jason	7	2	0.5	3.5
Judy	7	2	0.5	4

TABLE 5. Average Hours Spent on Extracurricular Activities and Electronics on Weekends

Subject	Extracurricular	Electronics
Amy	3	10.5
Jason	3	10.7
Judy	2	11.7

TABLE 6. Comparison of Judy's Average Weekday and Weekly Schedules for Month 1 and Month 2

Activity	Month 1 Weekday	Month 1 Weekly	Months 2 & 3 Weekday	Months 2 & 3 Weekly
School	7	35	7	35
Extracurricular	2	10	2	10
Electronics	4	21.5	0.5	3.5
Homework	0.5	2	1	7
Reading	0	0	1	8.25
Journal	0.25	1.75	0.75	5.25
Play	0	0	0.5	8
Conversations with Parents	0.1	0.5	0.5	3
Reflecting	0	0	1.5	8

FIGURE 1. Judy's Month 1 Allocation of Time: Hours per Day

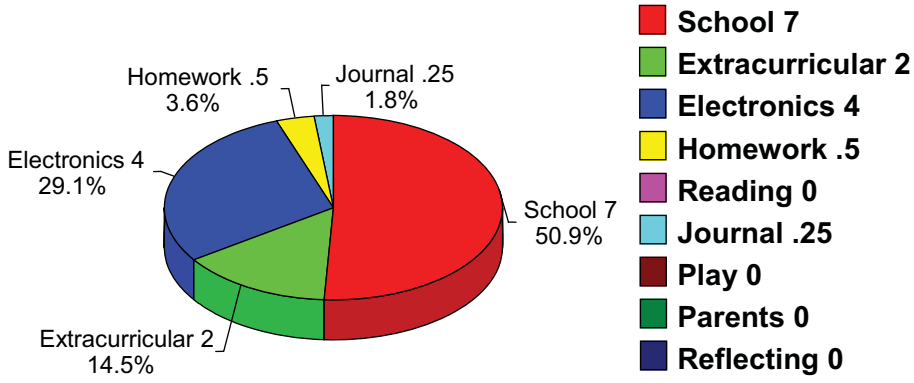

FIGURE 2. Judy's Month 2 Allocation of Time: Hours per Day