Reading Takes You Places: A Study of a Wired Summer Reading Program

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This study investigates effects of a web-based summer reading program on the reading behaviors and attitudes of adolescents. The study takes place in an American high school, grades nine through twelve. A purposive random sample of 288 students and eleven teachers ensured representation of students from each of three ability groupings. Data were collected through student surveys and teacher interviews. Findings show that students expressed satisfaction with the program, but it did not meet the needs of low achieving students. Mixed responses from teachers point to the need for consensus about the purpose of a summer reading program.

Does Summer Reading Matter?

The "summer effect" on student achievement is well-researched. "The long summer vacation breaks the rhythm of instruction, leads to forgetting, and requires a significant amount of review when students return to school in the fall." (Cooper, 2003, p. 2) Research findings have consistently reported that: 1) student learning declines or remains the same during the summer months; 2) the magnitude of the change differs by socio-economic status (Malach and Rutter, 2003).

A meta-analysis of thirty-nine studies (Cooper et al., 1996) examined the effects of summer vacation on standardized test scores. Findings indicate that summer learning loss equaled at least one month of instruction as measured by grade level equivalents on standardized test scores. Family income emerged as the best predictor of loss in reading comprehension and word recognition. On some measures many children from middle-class and affluent families showed gains in reading achievement over the summer, but all income levels showed lower reading comprehension scores, and disadvantaged children showed the greatest losses, with a loss of three months of grade-level equivalency during the summer months each year, compared

with an average of one month loss by middle-income children when reading and math performance are combined.

Alexander and Entwisle (1996) reported that the achievement gap between rich and poor children, as measured by test scores, increases throughout the elementary years. The difference between high- and low-income children's reading scores on the California Achievement Test, as a percent of the standard deviation of scores, grew from 68 percent in first grade to 98 percent in third grade, and to 114 percent in eighth grade. The "faucet theory" (Entwisle, Alexander, & Olson, 2000) suggests that opportunities to learn and access educational resources are turned on during the school year for all students. As a result, learning gains made during the school year are remarkably similar for students from different social and economic backgrounds (Entwisle, Alexander and Olson, 1997; Heyns, 1978; Murnane, 1975). However, when school is not in session during the summer and the faucet is turned off, there are inequalities in educational opportunities and outcomes (Alexander, Entwisle, and Olson, 2001; Cooper et al., 1996). Children with special educational needs (Sargent & Fidler, 1987), or those who speak a language other than English at home, may experience a greater negative effect from an extended period without practice.

What Does the Research Say About Effective Summer Reading Practices?

Heyns (1978, p. 153) studied the effects of summer reading for sixth and seventh graders for two years and concluded:

1. The number of books read in summer is consistently related to academic gains.
2. Children in every income group who read six or more books in summer gained more in reading achievement than children who did not.
3. The use of the public library during the summer is more predictive of vocabulary gains than attending summer school.
4. The major factors determining whether a child reads over the summer were: Whether the child used the public library; the child's sex (girls read more than boys); socioeconomic status; and the distance from home to a library.

"More than any other public institution, including the schools, the public library contributed to the intellectual growth of children during the summer. Moreover, unlike summer school programs, the library was used by over half the children and attracted children from diverse backgrounds." (Heyns, 1978, p. 77).

Reading research that studies the effects of free voluntary reading (FVR) informs this study since summer reading is a type of type of FVR called extensive reading, whereby students read independently and there is minimal accountability. Table 1 shows research findings that compare results from reading comprehension test scores of students who participated in in-school free reading with scores of students who participated in traditional approaches, i.e., direct instruction and assigned reading.

Table 1: Results of Reading Comprehension Tests: In-School Free Reading Compared to Traditional Approaches

Duration	Positive	No Difference	Negative
Less than 7 months	8	14	3
7 months-1 year	9	10	0
Greater than 1 year	8	2	0

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These results are categorized as those free reading programs that had a positive effect, a negative effect, or no effect. "Two findings clearly emerge from these data: Firstly, in-school free reading programs are consistently effective. In 51 of 54 comparisons (94 percent), readers do a well as or better than students who were engaged in traditional programs." (Krashen, 2004, p. 2) In the cases of no difference, free reading emerges as just as good as traditional instruction, which confirms that free reading results in literacy growth. Secondly, studies that last longer show more positive results (Krashen, 2004).

Free voluntary reading has a strong positive effect on second language learners (Elley & Mangubhai, 1983; Elley, 1991; Elley,1998; Mason & Krashen, 1997) and results in more reading and better writing (Anderson, Wilson & Fielding, 1988; Postlethwaite & Ross, 1992; Kim, 2004). FVR studies in second and foreign language confirm that those who read more do better on a variety of language acquisition tests (Stokes, Krashen, & Kartchner, 1998; Lee, Krashen, & Gribbons, 1996; Salyer, 1987; Janopoulous, 1986; Kaplan & Palhinde, 1981; Gradman & Hanania, 1991; Constantino , Lee, Cho & Krashen, 1997).

Other benefits of FVR address aliteracy, or the lack of motivation to read. The work of Csikszentmihalyi (1991) defines flow as the state of deep but effortless involvement in an activity. Reading "is currently perhaps the most often mentioned flow activity in the world" (Csikszentmihalyi, 1991, p. 117), indicating that FVR is enjoyable. Lastly, studies support the finding that those who read more, know more (Ravitch & Finn, 1987; West & Stanovich, 1991; Filback & Krashen, 2002).

The Context for the Study

Traditionally, summer reading in American high schools consists of grade-specific lists of book titles and a required written assessment. In a survey of summer reading lists from 57 high schools in Connecticut, Williams (2002, p. 2) found, "High school tradition…dictates the reading of canonical literature during the school year. In an increasingly multicultural world, is the literary canon broadening to include nonwhite cultures? Surely, … multicultural literature is being added to summer reading choices. My study contradicts that assumption." (Williams, 2000, p. 2) This study also found that while about one-third of titles were published from 1990 to 2000, young adult titles comprised only 18% of all list titles. Prior to this study, Barnstable High School (BHS) summer reading lists fit Williams' profile. The English Department published grade-level reading lists that emphasized the classics. Each of the lists contained about twenty titles with short annotations. Students were required to read at least three books from the list,

write about each book read, and submit their writings for a grade. Teachers did not believe the assigned projects ensured that students were really reading the books. Many students did not hand in the three required projects. Some teachers were not happy with starting the new school year with a graded requirement. There were divergent conceptions of the purpose of summer reading among members of the department. Some thought it should be rigorous and academic, building on the curriculum and holding students accountable for their reading. Others saw it as an opportunity to motivate students to read by encouraging them to read for enjoyment after a school year filled with mandated reading.

The chair of the English Department charged the school librarian and five English teachers to revise the summer reading lists. The committee decided to shift their thinking to conceptualizing a summer reading program and agreed upon research-based guidelines to define the purpose of summer reading:

1. Choice is an important element in reading engagement (Schraw, et al., 1998).
2. Student projects accommodate multiple intelligences (Gardner, 1993) and thinking styles (Sternberg, 1997) by offering students options to writing.
3. Research "…results suggest that schools can encourage children to read more by also requiring them to complete a short writing activity based on their summer reading activities…." and that students who fulfilled teacher requirements by writing about their summer book "… are predicted to read more books than their classmates who did not complete these activities (Kim, 2004, p. 185).
4. Reading responses that reflect activities students enjoy in their leisure time are grounded in the aesthetic stance of transactional theory (Rosenblatt, 1978).
5. The purpose of summer reading is reading for fun, rather than for academic purposes, to encourage student to read more.

Research also guided the design of the program. "Virtually all Net Gen students were using computers by the time they were 16 to 18 years of age… Among children ages 8 to 18, 96 percent have gone online. Seventy-four percent have access at home, and 61 percent use the Internet on a typical day." (Jones, 2002) In a study that altered text instructions in an assignment to a graphic layout, there were fewer refusals to do the assignment and post-test score increased. (Prensky, 2001) Since the net generation is not only attracted to image-rich environments, but is more comfortable with them, the committee decided that the summer reading program would be web-based with colorful graphics.

The results of the committee's work is a summer reading website that is available at http://www.barnstable.k12.ma.us/bhs/Library/SummerReadingProgram.htm. (Since this is a working website, there may be changes not noted in this article.) The theme of the program is *Reading Takes You Places.* There are 12 book lists; some are genre-centered but modified for broader appeal, e.g., science fiction includes time travel and fantasy. *Take the Fast Lane: Quick Reads*, includes mostly young adult titles. *Sprint to Campus: Books for the College-Bound* contains modern, as well as traditional classics. *Run with a Winner: Best Sellers* includes titles recommended by students in the survey administered by the school librarian. *Visit Someone Else's World* includes books about strong adolescent protagonists who overcome extraordinary challenges, and includes multicultural themes. *Traveling Together: Relationships* includes stories about friendships, romance, and family. *Sailing Through Stormy Days: Books That Make You*

Laugh addresses teachers' concern about the gravity of English curriculum readings. *Tour the Real World: Non-fiction* addresses boys' reading preferences and *Student and Staff Pix* reflects recommended titles, tagged with this icon,  . Titles by Brazilian authors, coded in green font, address the needs of Portuguese-speaking students.

Reading lists mimic commercial web pages, such as amazon.com, with an annotated featured title and book cover image. A link to NoveList directs students to find "more books like this one." Get Books links to the school library catalogs and a public library collaborative network. Links to Borders and Barnes & Noble offer students opportunities to purchase books.

Reading Reponses invite students to choose activities that mimic what leisure time activities and include blogging

A typology, shown in Table 2, was used to analyze the website to determine it use of innovative content and design. (Pavlik, 2006)

Table 2: Typology

	Repurposed Content utilizing a traditional media design or model.	**Original Content based on a traditional media design or model.**
Traditional Media Design	**Type I:** **The least expensive and risky. Content previously developed, tested and proven to have an audience and formatted for the web** ▪ Summer reading introduction, requirements ▪ Reading lists, annotations	**Type III:** **Creation, distribution or protection of original content, whether text or multimedia, but adhering to a traditional media design** ▪ Reading Responses: 40 Novel Ideas; How to Judge a Book by its Cover
Designed for New Media	**Type II:** **Content repurposed adapted to features unique to online or digital media environment.** ▪ Links to school library catalog ▪ Link to online regional public library catalog ▪ Reading Responses: 40 Novel Ideas; How to Judge a Book by its Cover ▪ Featured title ▪ NoveList	**Type IV:** **Original content features designs and capabilities unique to a digital, interactive media system** ▪ Reading responses: Blogs; university summer reading programs ▪ Amazon.com, Barnes & Noble, Borders ▪ Ask-a-librarian email

The BHS summer reading website retained some traditional content (Type I) and media design (Type III). Most elements, however, represented adaptation of repurposed content that was unique to a digital environment (Type II) and original content unique to an interactive digital environment (Type IV).

The Study

Background

This study examines the effects of a web-based summer reading program on adolescents' reading behaviors and attitudes. What can we learn about student reading? Who benefits from it? The site for the study was Barnstable High School, Hyannis, Massachusetts. The population of the town is 40,949. The median household income is $46,811, higher than the national median of $41,994 (U. S. Census Bureau, 2000). BHS serves 2,000 students; 92 percent of the population is white. The largest minorities include African Americans (almost 3 percent) and Hispanic/Latinos (almost 2 percent). The school's mission statement encourages "…traditional and innovative methods to engage the different learning styles of our students. We will prepare graduates to take responsibility for their own learning." (Barnstable High School Program of Studies, 2004, p. 3) The school is administered by a Principal, an Assistant Principal, and five Housemasters who oversee the daily operations of five self-contained houses. There are three ability groupings of students: College Prep 1 (CP1) are low achievers who tend to be reluctant readers with low reading and standardized test scores; CP2 are average achievers and; Honors students. The BHS library strives to be an integral part of teaching and learning through strong collaborations between the school librarian and classroom teachers.

Methodology

The purposive random sample consisted of 288 students from the three ability groups and eleven English teachers. The researchers surveyed students and interviewed teachers. Close-ended questions gathered information such as age, gender, and class level. Half of the questions were open-ended to encourage students' direct and honest response about their reading behaviors and attitudes. Survey items focused on respondents' book selection behaviors, reading achievements, attitudes towards an online reading program, and the number of books they read. A total of 550 questionnaires were distributed; 288 were returned, with a returning rate of 52 percent. Five questionnaires were not useable, resulting in 283 valid questionnaires. Eleven interviews with English teachers explored their views about summer reading and their perception of the effectiveness of the online summer reading program. Each interview was 20 to 30 minutes and was tape recorded and transcribed verbatim.

Findings and Discussion

Survey Participants Profile. Of 283 participants, 53 percent were male, and 47 percent were female. CP1 students comprise 15 percent; 47 percent are CP2 students; 38 percent are Honors students. This corresponds to ratio of the school population. Ninth graders comprise 29 percent; tenth graders, 37 percept; eleventh graders, 21 percent; and twelfth graders, 13 percent.

Summer Reading Participation. Ten percent of students reported they did not participate in the program. In total, 14 percent of the male respondents and 4 percent of the female

respondents did not participate (Figures 1 and 2). Of the 27 students who reported non-participation, 78 percent were male and 22 percent were female. CP1s accounted for 52 percent; 48 percent were CP2s and none were Honors. Non-participants by grade level were: 6 ninth graders, 8 tenth graders, 8 eleventh graders, and 5 twelfth graders.

Figure 1: Profile of Non-Participants by Ability Level

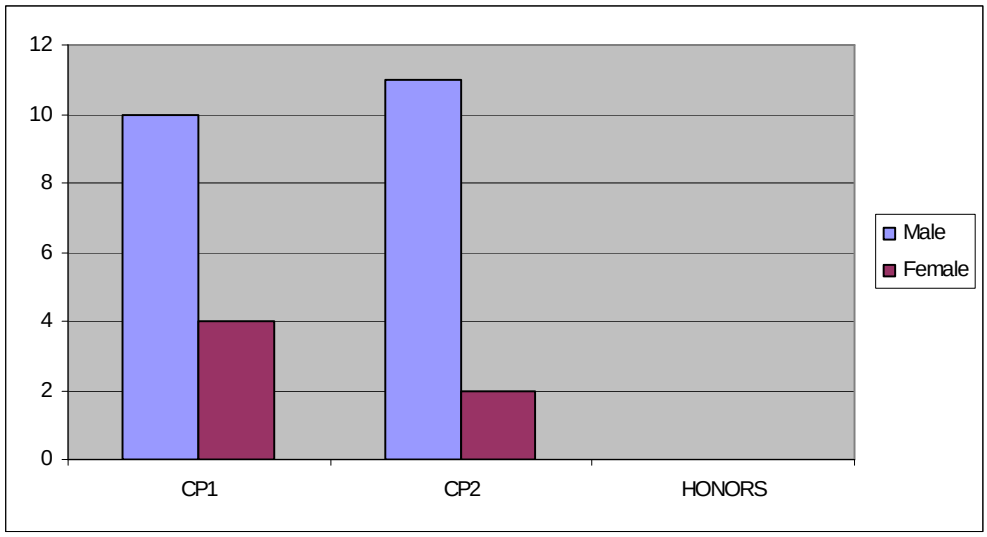
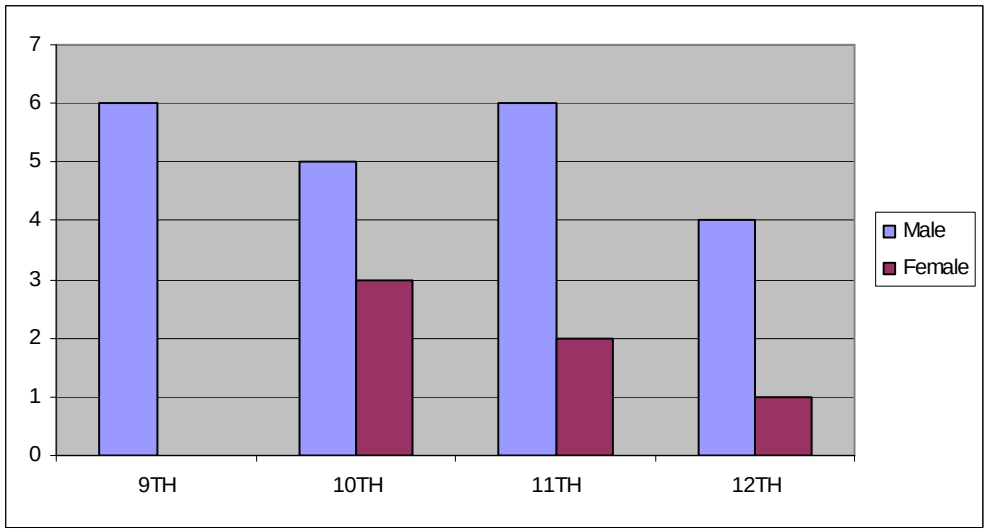
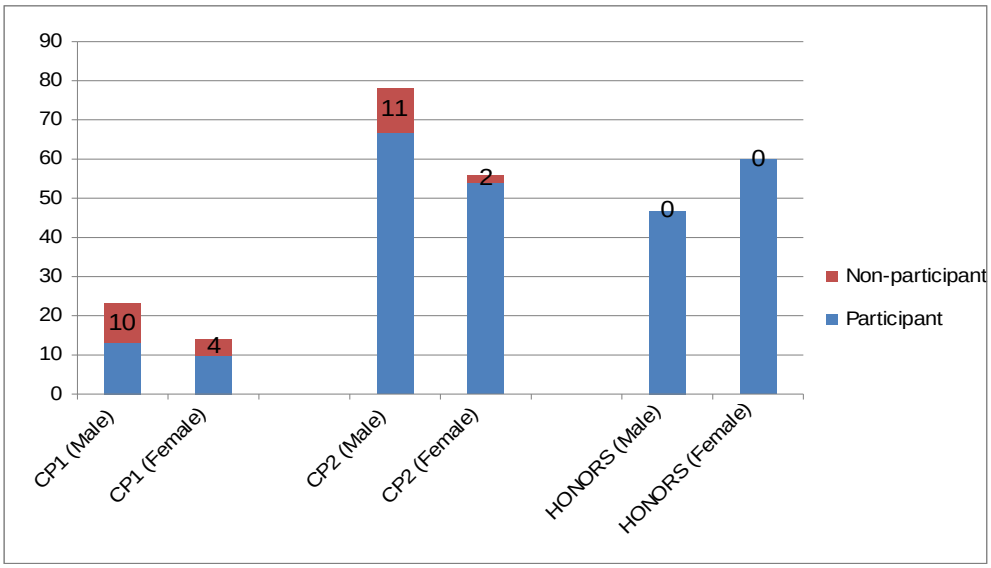


Figure 2: Profile of Non-Participants by Grade Age



Analysis showed that CP1 students had the highest non-participating rate. One third of CP1 respondents (14 out of 42) did not participate, while only ten percent of the CP2 respondents (13 out of 134) and none of the Honors students did not participate. (Figure 3)

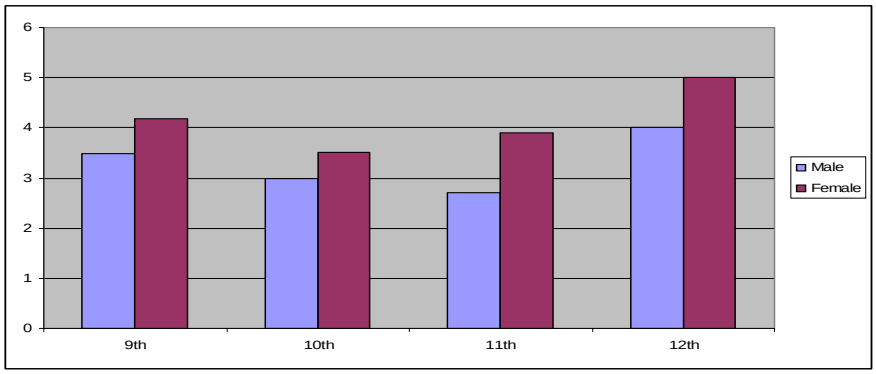
Figure 3: Analysis of Participants and Non-participants



Grade 11 and grade 12 students had a higher rate of non-participation (14 percent each), compared with grades 9 (7 percent) and 10 (8 percent). Most non-participants said they did not like reading or did not comment; two said they did not have computers and Internet access. Trends emerging from the data indicate that male students have a higher non-participating rate than girls (21 to 6). This is consistent with studies that acknowledge the significance of gender in reading activities**.** Secondly, ability level (i.e., CP1, CP2, and Honors), rather than biological age, seems to be a better indicator of students reading behavior: the higher the ability level, the better the participation.

Amount of Books Read. Students reported a total of 922 books read in summer, with a mean of 3.26 books per student. Gender and reading level differences emerge again. On average, female students read more books than males (3.79 books to 2.77 books). CP1s read the least, with an average of 1.2 books per student, when compared with 3.1 books for CP2s and 4.2 books for Honors students. Grade level is not significant in terms of the number of books read. The ratio across the four grades is 3.85 to 3.27 to 3.3 to 4.47 books. The higher rate in grade 12 is explained by exceptions: 3 twelfth grade students reported a comparatively large number of books read: 10, 20 and 22 books respectively, increasing the mean of the twelfth grade. When excluding these three students, the mean drops to 3.13 books per student, which is similar to the rest of the grades. On average, girls continued to read more than boys throughout the four grades. (Figure 4)

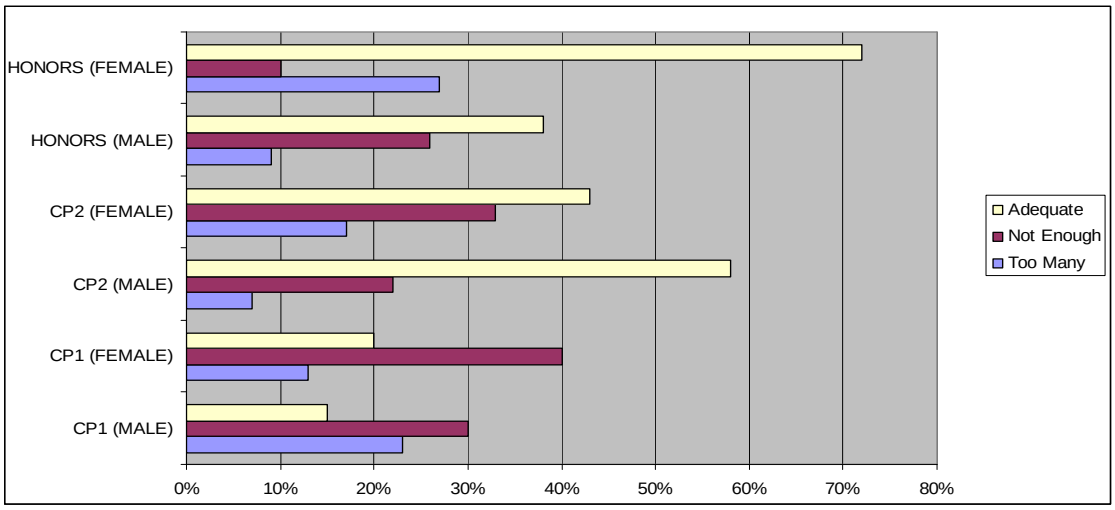
Figure 4: Amount of Books Read by Grade and Gender



Online Book Lists. Regarding the multiple, non-grade specific reading lists, almost half (46 percent) reported there were adequate choices. Thirteen percent thought there were too many choices while 24 percent thought there were not enough choices, and 17 percent did not answer this question. On average, students appreciated the variety of books because "Different people like different books." Students who requested "more choices" preferred more specific categories such as "boy/girl books," or "sports books." Students who wanted fewer choices commented that too many choices confused them and that "it was hard to choose [from such an amount of books] and find [the book]." More girls than boys gave positive feedback—adequate choices: 53 percent to 46 percent.

Honors and CP2 students in general were positive about the book list choices. Nearly half of the Honors students and half of the CP2 students reported the book list choices were adequate. However, only 18 percent of the CP1s agreed. They seemed unhappy with online lists. More than one third reported there were not enough book choices, and 18 percent of CP1 students reported that there were too many book choices. (Figure 5)

Figure 5: Student Satisfaction with Book Lists



For CP1s who said there were not enough book choices, most chose books outside of the existing book lists while the rest did not mention any extra efforts. Those who said there were too many book choices stated that it was just too hard for them to choose and to find books.

When asked how they liked the non-grade specific lists, 66 percent expressed satisfaction. A similar pattern appeared across all three levels: 50 percent of CP1 students, 60 percent of CP2 students, and 68 percent of Honors of students. Satisfaction rates from girls (62 percept) and boys (57 percent) did not show a significant difference. Four percent of students indicated they prefer grade-specific lists; 6 percent of students did not mind whether or not the list was grade-specific; 25 percent did not answer this question, and 5 percent gave unclear or invalid answers. No CP1 students preferred the grade-specific lists, and only 3 percent of CP2 students and six percent of Honors students preferred the old list.

Access to the online reading lists depended on internet access. Print lists were available in the school library and in town bookstores. Students could access the internet throughout the summer in their village public libraries. Thirteen percent of students did not answer the question about access to computers during the summer; 79 percent reported access. Nine percent (2 CP1, 14 CP2, and 7 Honors students) reported that access to the Internet was a problem because they "needed a ride to the public library [to use the Internet]" and they preferred "a print version of the lists." No significant gender difference was found regarding computer access.

Book Selection Behaviors. Respondents reported a total of 922 books read in the past summer. They reported 630 titles used for reading projects. Thirty-two of the titles were not included in the analysis because of illegible handwriting, incomplete or incorrect titles, or respondents' inability to recall titles. Five hundred and ninety eight books were then classified into three categories—realistic and historical fiction (70 percent), fantasy and science fiction (16 percent), and non-fiction (12 percent). The significant differences between realistic/historical fiction and the other two categories may be explained partly by students' reading preferences or by lists themselves, which contain more realistic/historical fiction. Among the 12 book lists only one was devoted to non-fiction, and another list to fantasy/science fiction. The books they had read but not used for projects (290 books) may also affect the findings if students chose different types of books for non-project reading. It is interesting to note 60 percent of non-fiction titles were reported by boys.

Students reported the two most important factors affecting book selection were "self reading interest" and "recommendation by friend/family/teacher." No gender difference was found, but reading level emerged as a factor. While "self reading interest" was the top concern for most CP2 and Honors students, CP1 students mostly preferred "recommendation by friend/family/teacher," followed by "self reading interest." The three book lists students used most to browse are *Run with a Winner: Best Sellers*, and *Take the Fast Lane: Quick Reads*, and *Student and Staff Pix.* No significant gender difference was found except for ranking order: most boys' top choice was Quick Reads; the top choice of girls was Best Sellers. No difference was found across CP1, CP2 and Honors.

Obtaining Books. Students browsed the lists, but only 9 percent used the "Get Books" feature. (There was a similar pattern across the three levels—11 percent of CP1, 8 percent of CP2, and 9 percent of Honors students.) The top three methods for obtaining books were

purchasing the books from a local bookstore (40 percent), borrowing the books from a public library (38 percent), or having the books already at home (36 percent). Fifteen percent of the respondents borrowed books from the school library, 13 percent from a friend or a relative and 7 percent purchased books online. No obvious gender or grade-level difference was found.

While the BHS Library provided multiple copies for many titles, public libraries and friends were more convenient providers of books. (The school library is not open during the summer.) For students who borrowed books from the school library, they preferred browsing the bookshelves and talking to the librarian. Using the online catalog was not among their top choices. They may not know how to use the catalog, or they may prefer that someone else find the books for them (as in a local bookstore or the public library). Regarding purchasing online, only 18 students did so. This is probably because most high school students do not have access to credit cards. Their preference for browsing may be another factor that boosts their use of a local store over a virtual one. Finally, it was evident that students' book selection was shaped by existing, available books when they chose to read books that they owned already.

Reading Activities. Another important feature of this web-based reading program is the provision of over 40 project choices that contain a variety of language- and art-based activities. Some examples include "Write an epilogue and/or prologue to the book, describing events that could have taken place before and after the plot of the book," "Describe what you think happened to the main character after the book ended." and "blogging." Students' responses varied: 38 percent had positive feedback about the new choices. They thought it was "fun," "helpful," "great," and "creative." Twenty eight percent reported that they did not like the new project choices for various reasons such as "it was time-consuming," "it was boring," and "it was easily cheatable." Eight percent gave mixed responses such as, "it was interesting, but some were boring" and "some were good, but some were really weird." Twenty two percent did not comment. Similar patterns were found across the three levels and between the genders. Within each level, the rate of approval was still higher than disapproval. CP2 students had the highest rate of approval among the three levels (47 percent) compared with 32 percent of CP1 and Honors students respectively. Surprisingly, none chose to blog. This feature has been revised by teachers for the second year of the program.

Reading Experiences. On average, students agreed that a web-based summer reading program enriched their reading experiences. More than half enjoyed the freedom to browse and select among a variety of book lists. Students reported some of their most rewarding achievements from the program. They read more books than they had read last summer. Because of the variety of book choices, students were more likely to find what was of interest to them, and so read more than in previous years. Students reported that they learned a variety of things, i.e., "vocabulary," speed, and to "critically analyze a book." What is most encouraging is that students commented that they read and write with more confidence. Some supportive statements included "I read faster," and "I read books with better vocabulary and writing composition than in past years." The most encouraging statement was made by a CP1 student, who said, "I feel I can read anything now."

Another achievement students identified was learning how to solve or deal with challenges, such as "gaining self-esteem," "reading disability," "friends that smoke and drink," "time management," "think stuff through before acting," "time management," "not to give up

even when time is hard," and "be respectful." Books seemed to provide them with new insights to cope with challenges or understand some issues better. Students commented that they learned "something about their community and family." One wrote that he learned to "stay close with family members no matter what happened," and another that he got to know some of his mom's interests because of the books they shared.

Another key benefit reported by CP2 and Honors students (but not CP1 students) was gaining new knowledge from the "stuff" or "facts" in the books, such as "Civil War history," "globalization," "different cultures," different literary genres, and new authors. Although CP1 students expressed the same appreciation for learning life lessons from books, they did not acknowledge the value of the information. Perhaps the books they chose tended to be less information-loaded, but more inspirational. Perhaps they did not know how to extract information from books because of their limited reading ability; or perhaps they did not see this element as an achievement.

Another common achievement was "fun." Many students commented that this summer reading experience was different and fun because of the variety of books and project choices. Some students felt more enthusiastic about summer reading because the books they chose were highly interesting to them. One student commented, "I couldn't put the book down… the book was really exciting." Students liked "sharing what they learned with friends." They talked about the books they read and collaborated with each other for some projects such as interviewing and book cover making.

They also acknowledged that they learned to find better websites. Interestingly, the example they referred to was the high school's summer reading website.

Responses from Teachers. Teachers had mixed responses about the benefits of the program. Generally, they agreed that students "seemed" to read more this past summer given the amount of reading projects they turned in. They found the completion rates of projects were better than in previous years. Several teachers believed the variety of choices contributed to this change. "Overall," Teacher A commented, "I think more kids read because there was a little more freedom… I have a student read a whole author. They found something by him that they enjoyed, so they picked up something else by him. That aspect for me was triumphant." However, teachers also pointed out the possibilities of repetition and cheating—students might have read the books before and students could do some projects, like redesigning the book cover, without reading the books. "I think one of the issues with having so many activities is there were some you could definitely tell had read the book, and there were some that you couldn't… but I'm looking for a way to hold students accountable for reading," Teacher J commented. Quite a few teachers expressed the same concern: "Students can just go to a bookstore or a library to pull out a book, look at its book cover, and then redesign one." The projects students turned in might not be a valid indicator of students' reading interests or the amount of books they actually read.

Teachers' concerns are not unfounded: comparatively higher project completion rate can be deceiving given the grading structure. The assessment of projects focused on completion rather than quality. Students who turned in three projects received 100 points; two projects yielded 70 points; and one project yielded 50 points. Some teachers complained that this was problematic. Teacher D commented:

> That kind of grading [by the amount of projects turned in, but not by the quality of the projects] has been really disrespectful to the student because the student is upset—'I spent days on my three projects and I really want you to pay attention to it.'… I've seen things that are spectacular, an A quality work, but I've also seen things that are embarrassing. It's been really hard for me to grade it appropriately. I don't think it's fair that you give one student full credit when that child has not worked as hard as the other person… and I can see some students really did not do their work. They just found the easiest projects to do.

Another problem many teachers identified was a practical one: their professional role as an English teacher. As English teachers, their major duties are to teach students to read and write better, and they are trained to assess students' reading and writing performance. "Many kids chose the artistic option," Teacher T commented, "I think art is wonderful, but I'm an English teacher, and I want something more geared toward writing… How do I check that they've read something if I have to evaluate some expressions [art works] that I have no background at all? It's what you know and what you don't know as a teacher."

Would this program, in the long run, benefit more students than the traditional one? The responses were diverse. Some teachers were suspicious and insisted there be more guidelines. They believed that reading should be a learning-oriented matter and students should be reading "appropriate" books in order to learn. The variety of choices this web-based reading program provided, in their view, could cause great confusion and did not really change students' reading behaviors or reading achievements. They had a few impressive projects produced by some motivated readers. "They will probably just do well in any reading-related thing," Teacher D commented. On average they did not see any drastic leap or drop. The program was, to them, simply "different." Honors students were still avid readers, CP1 students still did not read, and CP2 students still "just did the job."

Some teachers, however, held the belief that students should be given choices to read any materials that interest them. They did not mind that students read something they had read before because readers might have different reactions reading the same book at different times. They did not mind if students were reading books below their reading level because "reading on one's own" builds confidence in developing their own reading skills. These teachers believed that the freedom this new web-based reading program gave students would, in the long run, if not immediately, encourage students, especially unmotivated students, to be more creative and independent in thinking and learning.

Implications for Further Research and Best Practice

Emerging from these findings is a snapshot of students' reading behaviors and their perceptions of the benefits, or accomplishments, associated directly or indirectly with summer reading. The findings point to more differentiation in summer reading to meet the diverse needs of students, particularly with regard to ability levels and gender. Among the most challenging findings are the unmet reading needs of boys and the program's weak effect on reading attitudes

and behaviors of low-achieving students, who are more likely be disadvantaged, to drop out of school and to score poorly in state standardized tests.

A surprising finding of the study is the low use of technological aspects of the online summer reading program. Students did not take advantage of the online catalogs for the school library collection or for the regional network of public libraries. Nor did they use virtual bookstores, preferring to visit local town stores. They also did not take advantage of blogging as a reading response. These elements that represented content unique to a digital environment and design that enabled interactivity were not used by "digital natives" who are accustomed to websites with these features. Students did, however, take advantage of browsing the lists in a digital environment that facilitated navigation. This raises a question for further study: How can the interactivity of a digital environment provide motivation, mentoring, and social interaction between teacher and student, and among students and their peers, as part of the design of an online summer reading program?

The benefits or achievements of summer reading differed as perceived by students and teachers. Some teachers, based on students' performance as expressed in the reading response projects, did not see students benefit from this new summer reading program. The issue of the purpose is a factor: divergent views of academic vs. recreational reading. Traditional views of summer reading, including concerns about the quality of books read and the importance of grading and accountability, seem to emanate from deeply held convictions about learning and assessment that are rooted in schooling. Less traditional views embrace the reading research that targets motivation as key to reading. It is interesting to note that students identified life lessons and new insights into personal challenges through reading, and that reading was fun. Their comments acknowledge that reading is more than an intellectual experience; it is a private and personal experience. Evaluation of these personal aspects can be difficult and subjective. Most of the time teachers only have access to students' reading outputs, e.g., their submitted projects. These projects, however, do not reflect the latent effects of reading, i.e., how individuals might benefit from reading in different ways. This points to the need to provide materials and structures that help students grow, not only cognitively, but psychologically, emotionally, and socially, through their reading experiences.

Findings indicate that summer reading is an important component of school library services and should be more fully explored and evaluated. Can there be consensus or compromise about the purpose of summer reading? What is the role of the school librarian in negotiating a defined purpose? Should school libraries provide services through the summer months? Can these services be provided in an interactive, digital environment instead of, or in addition to, face-to-face support for reading that can be achieved through activities such as summer reading clubs and camps. How can school libraries collaborate with public libraries which, along with bookstores, are a major source of books for summer reading?

The strong rationale for summer reading must continue to drive rigorous research to develop multiple models of summer reading programs that address diverse student needs. To this end, research-base reading practices, aided by technology, are critical to successfully addressing questions raised by this study. Findings about the importance of reading in the social, psychological, and emotion well-being of adolescents, as well as its academic benefits, invite further research to clearly define a research-based purpose for summer reading programs.

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