



Are Self-Perception Measures Used in School Library Research Transferable to the Context of Public Library Summer Reading Programs?

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Abstract

Several instruments previously validated for use in school library research were tested for their appropriateness in the context of public libraries' summer reading programs for youth. The researchers were also interested in whether the connection between perceived competence in one's own information skills and perceived competence in one's own reading skills, as found in school library research, might also exist for participants in public library summer reading programs. In addition, a separate research question explored whether youth participants connected the summer reading program to increased confidence and improvement in their reading abilities. Findings suggest that reliable measures that can be used in the context of both school and public libraries may be beneficial for future collaboration and coordination in youth programming both in and out of school. Findings also suggest that summer reading programs foster self-perceptions of improved reading ability.

Introduction

Public libraries serve the general public, all of the members of the community, adults and children. School libraries have a different public, the members of the school community, mainly teachers and students. The public library has a more general focus, while a school library is mandated to support the school's curriculum and standards and to address the academic needs of the school's population. School libraries are located within a larger organization, a school, and are generally open only during school hours. Public libraries are independent facilities, open days, evenings, and weekends. Typically, children are required to use the school library; in contrast, use of the public library is voluntary.

A number of similarities exist between school and public libraries. Both are dependent mainly on public funds, and reading is a strong focus of their activities. In a number of communities, distinguishing between school and public libraries has become increasingly difficult; in fact, in some communities public libraries are situated either within school buildings or on school campuses so that librarians can serve both institutions. Sometimes, librarians from school and public libraries work together to coordinate youth programming both in and out of school (e.g., on weekends), skill-building activities (e.g., inquiry skills), and resource use and sharing (e.g., interlibrary loan, support for homework assignments).

When school and public libraries collaborate, they often demonstrate success in making the most of their shared assets and resources (Murvosh 2013). Children benefit when such collaborations can take place. One of the challenges of conducting research into those benefits, however, is finding out whether measures used in one context are suitable for use in another. This study builds on the results of prior research on children's perceptions of their own competence and autonomy support in reading and information literacy in school libraries. We have explored and extended the use of these instruments in a summer reading program (SRP) in a public library context.

Background

Motivating Factors

Research indicates that, as students enter middle school, their motivation to read begins to decline (Aarnoutse and Schellings 2003). This finding would portend that attracting middle school students to join and participate in reading programs and activities can be challenging, both in and out of school. Research that identifies those elements that can contribute to middle school students' reading participation would be important and valuable in the design of such programs and activities.

Research has revealed a number of important factors that contribute toward motivating participation. Numerous studies have found that the presence of certain critical motivational factors can stimulate student interest and engagement in reading activities. For example, research has demonstrated that students value having autonomy (i.e., choices) about their reading materials, topics, and related assignments when participating in reading programs (e.g., Pitcher et al. 2007; Ivey and Broaddus 2001).

Some research has also indicated a connection between autonomy (choice) in summer reading and a decrease in the "summer slide" phenomenon, that loss in reading and math that students (particularly those from higher-poverty neighborhoods) experience when not engaged in learning activities during the summer months. For example, Erin T. Kelly and C. Andrew Aligne (2015) found that summer reading correlated with improved reading scores and may limit summer reading loss. Richard L. Allington and Anne McGill-Franzen (2013) found that providing high-poverty children with books (with even modest self-selection) for summer reading resulted in improved reading achievement, instead of the typical summer reading loss.

In addition to the presence of meaningful choices (i.e., autonomy support), access to interesting texts and receiving appropriate rewards and specific praise are motivating and appear to positively influence student engagement in reading activities (Cambria and Guthrie 2010;

Torgesen et al. 2007). Intrinsic reading motivation has been shown to be associated with greater reading attainment (Wang and Guthrie 2004); extrinsically motivated reading has shown little to no correlation with improved reading skills (e.g., Logan, Medford, and Hughes 2011).

Self-Determination Theory

Our research is grounded in one of the most prominent and tested theories of motivation: self-determination theory (SDT). SDT is the result of nearly four decades of work by researchers Edward L. Deci and Richard M. Ryan at the University of Rochester (e.g., Deci and Ryan 1985, 2000). This theory contends that the need for competence, autonomy, and relatedness underlies human behavior and that satisfaction of this need contributes to the development of intrinsic motivation. Jere Brophy expressed this concept in the following way: “The prototype of self-determined behavior is intrinsically motivated action that entails curiosity, exploration, spontaneity, and interest in one’s surroundings. We engage in intrinsically motivated actions because we want to” (1998, 7).

In an educational context, both the goals for learning and the context contribute to self-determination. SDT theory builds on the earlier work of researchers who have explored need for competence and autonomy (e.g., Harter 1978; White 1959) and has been used in hundreds of studies and in educational contexts and clinical settings (e.g., Reeve and Deci 1996; Deci, Koestner, and Ryan, 1999; Vansteenkiste et al. 2004).

A sub-theory of SDT, cognitive evaluation theory (CET), suggests that feelings of competence alone are not sufficient to result in intrinsic motivation (Deci and Ryan 1985). Individuals must also feel that their behavior is self-determined, and, for this feeling to be evoked, people need social/contextual supports for autonomy (Ryan and Deci 2000). The concept of autonomy—one’s ability to self-regulate—has often been referred to as *independence* (Williams and Deci 1998). Feelings of autonomy along with perceived competence contribute to intrinsic motivation and to overall well-being. Opportunities for choice and self-direction have been shown to enhance intrinsic motivation because of their positive impact on autonomy (Deci and Ryan 1985). These constructs (independence, choice, self-direction) appear to be highly relevant to the SRP context. This paper explores the viability of measuring the SRP participants’ perceived autonomy-supportiveness of their youth-services librarians.

SDT also holds that a sense of relatedness in interpersonal settings contributes to intrinsic motivation. In an education study, for example, students who perceived their teachers to be uncaring or cold were observed as less intrinsically motivated (Ryan and Grolnick 1986). Relatedness issues, however, were not addressed in the study reported in this paper.

Finally, from a theoretical perspective, it is important to note that, unlike theories that propose that extrinsic or non-intrinsically motivated behavior is detrimental to learning, SDT recognizes that extrinsically motivated action may occur along a continuum. At one end of this continuum is complete external regulation (no self-determined behavior); in this circumstance the individual feels compelled to comply to avoid punishment or attain a reward. At the other end of the continuum is integration; in this case, the individual not only values the activity but engages in the activity because it is congruent with his or her sense of self and is perceived as self-determined.

Studying whether library programs and services foster feelings of independence and support autonomy in young people is important for addressing goals and standards set forth by both the school and public library professional organizations that emphasize children's and adolescents' effective and independent use of ideas and information, literacy, and critical-thinking skills. SDT—in particular, the components of perceived competence and autonomy support—formed the basis of instruments developed, validated, and used in our prior motivation research and in the present study.

Access to validated and freely available instruments and tools, such as the Perceived Competence in Information Skills instrument (PCIS), Perceived Competence in Reading instrument (PCR), and Perceived Autonomy Support instrument (PAS), allows librarians to identify ways in which they can support students' self-determination for reading and inquiry, and have been demonstrated in the school library context (Arnone, Small and Reynolds 2010; Reynolds and Arnone 2009). This study not only seeks to validate the use of these instruments in a public library setting but also to explore whether these benefits are transferable to the public library youth-services context, specifically to public librarians who plan and administer summer reading programs for youth.

Research Goals and Questions

One of the primary goals of this exploratory research was to confirm whether the PCIS instrument that had been validated with students in a middle school library context would also be reliable in a public library context when administered to summer reading program participants. The PCIS was based on a general four-item perceived-competence instrument from a family of validated questionnaires used in SDT research by Edward Deci and associates (Arnone, Small and Reynolds 2010). In a 2009 study by Marilyn P. Arnone and Rebecca Reynolds, a significant relationship was found between the more domain-specific seventeen-item PCIS and the general perceived-competence four-item measure ($r = .74$, $p < .001$), contributing to the PCIS's construct validity. The PCIS also had high reliability (Cronbach's $\alpha = .93$). If the PCIS were found to be reliable in this second context (public library SRPs), the PCIS could also be used to explore the connections between free voluntary reading and students' confidence in information skills, as well as their perceived reading competence.

This study also sought to find connections between perceived competence in information-literacy skills and participants' perceptions of the social context of "autonomy-supportiveness" in public library summer reading programs. Autonomy-supportiveness, an essential factor for intrinsic motivation, is described as the extent to which a librarian is perceived to encourage choice and foster a student's sense of independence (Deci and Ryan 1985). In the middle school study, the researchers used the PAS measure that is also from the family of SDT questionnaires; the PAS was modified slightly for the current study.

In this article, we focus on the following research questions:

1. Can a measure of perceived competence in information skills used in a school library context be reliable in a public library context? Will reliability be compromised if the same measure were reduced from seventeen to ten items?

2. Is there a relationship between perceived competence in information skills and perceived competence in reading ability when these instruments are administered in the public library context of a summer reading program?
3. Does participation in a summer reading program in a public library affect participants' perceptions of their reading ability?
4. Is a measure of perceived autonomy support adapted from a measure used with students in a school library study reliable when used with participants in a summer reading program in a public library context?

Methods

Participants

Voluntary participants were sixty-nine boys and girls from two county-wide public library systems, located in the eastern United States (central New York state) and in the Midwest (northeastern Ohio). After dropping surveys that were less than 5 percent complete (i.e., the subject exited at the beginning), the final data set contained sixty participants. These participants were enrolled in their respective county's 2012 summer reading program and were scheduled to enter middle school grades six through nine in the fall of 2012.

Data Collection and Procedures

Child participants were surveyed at the completion of their summer reading programs so as not to interrupt the flow of the summer reading experience. Within a month of completing the survey, one-third of participants (n=22) also participated in a telephone interview. All participants signed informed consents.

To prepare for the study, twenty librarians successfully completed CITI (Collaborative Institutional Training Initiative) Certification to ensure that they understood concepts associated with the protection of human subjects during research. Via online survey software, the *Summer Reading Program Participant Survey* was completed in one sitting (approximately thirty minutes), and participants were allowed to complete the survey either at their public library or at home.

Instruments

Introduction

The *Summer Reading Program Participant Survey* included several instruments that are described in this section. While the full study included measures related to free voluntary reading and reading curiosity, data collected from interviews with participants, and survey data from participants' parents, this article focuses on the validation of three instruments as described below.

Perceived Competence in Information Skills

The Perceived Competence in Information Skills (PCIS) instrument (Arnone, Small, and Reynolds 2010) was used to gather children's perceptions of their ability to find and use information. Since the PCIS significantly correlates with actual information-literacy skills, it serves as a proxy instrument for actual competence. This correlation is important because participation in SRPs is voluntary and, therefore, should not be associated with "testing," an association that can undermine confidence and motivation. Through this survey, the study participants could share their perceptions about their abilities without feeling like they were being assessed.

The original seventeen-item scale used in previous research had a reliability coefficient of .93 and was reduced to ten items in the current study. Because participants would be responding to several measures within the complete questionnaire, it was critical to capture constructs with as few items as possible so as not to cause fatigue and adversely affect completion rates.

The PCIS instrument uses a five-point Likert scale for responses ranging from *not at all true* to *very true*. Each item began with "I feel confident in my ability to" with three sample items shown below. Participants responded to all items in the PCIS in a single block. Examples of actual items are:

- Know when a topic is too broad or too narrow for a research paper or project.
- Use technology tools to help organize information I find.
- Know when it's important that information be up-to-date.

The full revised ten-item PCIS instrument is in Appendix A.

Perceived Competence in Reading

In the school library study (Arnone and Reynolds 2009), perceived competence in reading ability was measured by a single item that was significantly correlated to perceived competence in information skills ($r = .41, p < .01$). In the current study, the Perceived Competence in Reading instrument (PCR) was expanded to four items. The PCR was based on the general four-item perceived competence instrument from the family of validated questionnaires used in self-determination theory (SDT) research and applied to the domain of reading. The items contain statements based on a five-point Likert scale ranging from *not at all true* to *very true*. The items were interspersed throughout a questionnaire that also included items related to free voluntary reading and reading curiosity. The obvious similarity of the items listed below was masked by the fact that no items representing this same construct appeared one after the other. The items from this instrument are:

- I am confident in my reading ability.
- Compared to other kids my age, I think I am a pretty good reader.
- I am satisfied with how well I am able to read.
- I am able to meet the challenges of reading well.

Perceived Autonomy Support

The Perceived Autonomy Support (PAS) instrument is a six-item five-point Likert scale ranging from *not at all true* to *very true*. It was used to gather student input about the librarians who supported the SRPs. Examples of items on the PAS instrument include:

- My librarian tried to understand my interests before suggesting what books and materials I might like.
- My librarian encouraged me to ask questions.
- I feel that my librarian understood me during the summer reading program.

The PAS used in previous research by Marilyn P. Arnone, Rebecca Reynolds, and Todd Marshall (2009) had a reliability coefficient of .94 and was adapted for use in a public library context by changing the term *school librarian* to *librarian* and by making reference specifically to the summer reading program.

The complete PAS instrument used in this study is in Appendix B.

Personal Experience in SRP

The seventeen items in the Personal Experience in the SPR questionnaire required participants to describe their experiences specifically in the summer reading program, in contrast to the PCIS and PCR, which had required participants to think about their general competence in information skills and reading ability, respectively. For example, instead of responding to general statements about their perceived reading ability, in this personal experience questionnaire we asked specifically if the summer reading program helped participants gain more confidence in their reading ability. Statements were again presented in a five]’/.-point Likert scale ranging from *not at all true* to *very true*. Examples of items are:

- I enjoyed the summer reading program at my public library.
- I feel like it was really my choice to participate in the summer reading program.
- I feel that I am a better reader now than I was before the summer reading program.

Analysis and Results

Factor analysis using principal component method, Cronbach’s alpha test, and Pearson correlation calculations was used to determine answers to the four research questions posed earlier. This section is organized around each of those questions.

Research Question 1: *Can a measure of perceived competence in information skills used in a school library context be reliable in a public library context? Will reliability be compromised if the same measure were reduced from seventeen to ten items?*

One important goal of the study was to determine if the PCIS, originally designed to measure perceived competence in information skills in a school library context, could also be used reliably in a public library context with participants in a summer reading program. Also of

interest was determining whether the instrument was still reliable if the number of items were reduced from seventeen to ten because a PCIS with fewer items would be favorable in situations in which researchers plan to administer a number of measures, and would reduce the potential for participant fatigue. Table 1 shows the descriptive statistics for the ten items that represent this construct followed by table 2, reliability statistics for the reduced-item version.

Table 1. PCIS scale statistics.

Mean	Variance	Std. Deviation	# of Items
40.8750	33.820	5.81554	10

Table 2 indicates the overall alpha for the ten items. Cronbach’s alpha is .83, which indicates an acceptable level of internal consistency for the reduced version of the instrument. In the study with school library students (Arnone, Small, and Reynolds 2010), the reliability was .93, but that study had a large sample size (n=1,264) and consisted of seventeen items as opposed to ten. Thus, .83 is deemed an adequate result, especially considering the relatively small sample size in the current study.

Table 2. PCIS reliability statistics.

Cronbach’s Alpha	# of Items
.832	10

Table 3 shows that all items positively correlate with the combined score, with the exception of #6 (“Use technology tools to help organize new information I find”), which showed only a weak positive correlation. The removal of item #6 would increase the alpha by only one point; therefore, removing item #6 proved to be unnecessary. The ten items combined are a good representation of perceived competence in information skills.

Table 3. PCIS item-total statistics.

	Scale Mean If Item Deleted	Scale Variance If Item Deleted	Corrected Item-Total Correlation	Cronbach’s Alpha If Item Deleted
1. Know when a topic is too broad or too narrow for a research paper or project.	37.1071	28.534	.536	.816
2. Formulate smaller (more specific) questions that help me narrow down my big (broad) research topic.	37.0357	28.653	.420	.827

3. Choose the best sources of information for my particular research topic.	36.7500	27.027	.643	.805
4. Locate information on my research topic in sources like books, databases, encyclopedias, and Web sites.	36.4464	28.433	.572	.814
5. Determine whether the information I find is appropriate for my information need.	36.7500	26.336	.707	.798
6. Use technology tools to help organize new information I find.	36.7143	29.844	.270	.843
7. Evaluate the truth of information that I find in books, web sites, magazines, and in media.	37.0893	26.665	.519	.819
8. Know when it is important that information be up-to-date.	36.8750	25.093	.700	.797
9. Give proper credit for sources I use when preparing a bibliography for a research paper.	36.6071	29.079	.444	.824
10. Write a research paper in my own words, adding my own ideas to new things I learn.	36.5000	29.382	.475	.822

This result suggests that the PCIS measure can be used reliably in a public library context, thereby answering the first research question positively.

Research Question 2: *Is there a relationship between perceived competence in information skills and perceived competence in reading ability when these instruments are administered in the public library context of a summer reading program?*

To answer this question we had to determine if the items used to capture perceived competence in reading ability were adequate to represent the construct. Table 4 refers to the brief scale for perceived competence in reading; the scale included a total of four items. The questionnaire also includes items for factors related to reading curiosity and free voluntary reading. Table 4 indicates that items 1, 3, 8, 15 are highly loading on factor 1, which can be labeled as perceived competence in reading. The PCR is the instrument of interest in this paper. The four items are:

Item 1: I am confident in my reading ability.

Item 3: Compared to other kids my age, I think I am a pretty good reader.

Item 8: I am satisfied with how well I am able to read.

Item 15: I am able to meet the challenges of reading well.

Factors 2 and 3, are harder to define and, while not pertinent to the analysis reported in this paper, are interesting and worth noting. Items 2, 7, 9, 10, 16 are loading on factor 2 (thought to be reading curiosity); items 6, 10, 11, 13 are loading on factor 3 (thought to be free voluntary reading). However, these factors appear to share some common features. The possibility that features of curiosity may be inherent in free voluntary reading would be an interesting topic of exploration for future research.

Table 4. Rotated component matrix for survey that included PCR questions.

	Factor		
	1	2	3
8. I am satisfied with how well I am able to read.	.830		
15. I am able to meet the challenges of reading well.	.815		
1. I am confident in my reading ability.	.770		.462
3. Compared to other kids my age, I think I am a pretty good reader.	.753		
7. I like to read about new things.		.756	
16. Reading helps me satisfy my curiosity about different topics.		.748	
10. Reading helps satisfy my curiosity.		.670	.515
2. I like to read.	.429	.654	
9. I read whenever I can.	.433	.639	
6. I like to read books that I choose for myself.			.780
11. I enjoy reading what I want.			.769
13. I am very curious when I start a new book.		.486	.580

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 5 shows the mean, variance, and standard deviation for the PCR scale.

Table 5. PCR scale statistics.

Mean	Variance	Std. Deviation	# of Items
17.9661	8.378	2.89450	4

The PCR indicates a fairly high level of internal consistency using Cronbach’s alpha (.877) as seen in table 6.

Table 6. PCR reliability statistics.

Cronbach’s Alpha	#N of Items
.877	4

Table 7 shows that each item is internally consistent with composite scores, thus contributing to the overall reliability of the PCR and the usefulness of each item.

Table 7. PCR item-total statistics.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach’s Alpha if Item Deleted
1. I am confident in my reading ability.	13.3390	5.124	.844	.811
3. Compared to other kids my age, I think I am a pretty good reader.	13.6949	4.457	.738	.846
8. I am satisfied with how well I am able to read.	13.3729	5.134	.650	.875
15. I am able to meet the challenges of reading well.	13.4915	4.909	.745	.838

The brief four-item PCR instrument does capture the construct of perceived competence in reading and can be reliably used in a public library setting with summer reading program participants. With this information, we could explore whether the significant relationship between perceived competence in information skills and perceived competence in reading that was found in the school library study would also be found in the current study with youth participants in public library summer reading programs.

Table 8 shows a statistically significant moderate correlation between perceived competence in reading (PCR) and perceived competence in information skills (PCIS) with a Pearson correlation coefficient of .576.

Table 8. PCR and PCIS correlations.

		PCR	PCIS
PCR	Pearson Correlation	1	.576**
	Sig. (2-tailed)		.000
	N	58	56
PCIS	Pearson Correlation	.576**	1
	Sig. (2-tailed)	.000	
	N	56	56

Correlation is significant at the 0.01 level (2-tailed).

With r squared = .33, this result suggests that approximately one-third of the variation in summer reading program participants’ perception of their information skills ability may be attributed to beliefs about their reading ability in general, not controlling for other potential contributors. This result answered the second research question while supporting the findings of the school library study that reported that students who perceive themselves to be good readers appear to have an easier time finding, evaluating, and using information (information-literacy skills).

Research Question 3: *Does participation in a summer reading program in a public library affect participants’ perceptions of their reading ability?*

With respect to the third research question, the Personal Experience in the SPR instrument asked participants to respond to statements about their specific summer reading program experience. Several of these statements related to perceived reading improvement and participants’ confidence about reading as a result of the summer reading program. Not all students responded to every item; therefore, total responses for each item are noted. Percentages are based on the number of participants who responded to each item.

Summer reading program participants responded to statements using a five-point Likert scale ranging from *not at all true* (1) to *very true* (5). One item stated, “I feel that I am a better reader now than I was before the summer reading program.” About 74 percent (n=43) of 58 respondents agreed that the statement was at least somewhat true for them with 36 percent (n=15) responding that it was very true for them. If participants in summer reading programs feel that their reading ability has increased as a result of their participation in the program, it could be suggested that summer reading programs foster not only free voluntary reading and increases in perceived reading ability, but also have other benefits. SRPs may contribute to the overall development of information literacy, a finding that will be of keen interest to both public and school librarians, as well as classroom teachers, reading specialists, and other educators.

In response to the item, “I believe that reading over the summer is valuable to my overall reading improvement,” 85 percent (n=51) of 58 participants responded positively with 55 percent (n=33) agreeing that the statement was *very true*. In addition to participants’ perceiving their summer reading experience as valuable for reading improvement, the majority of participants in the summer reading program also increased their confidence in reading. Specifically, when asked to respond to the statement, “After reading books over the summer, I have more confidence in my

ability to read well,” 84 percent (n=47) of 56 participants responded positively with 57 percent (n=32) agreeing that the statement was *very true*.

Question 4: *Is a measure of perceived autonomy support adapted from a measure used with students in a school library study reliable when used with participants in a summer reading program in a public library context?*

The final research question investigated the reliability of the Perceived Autonomy Support scale (PAS), which was slightly adapted for use in summer reading programs by changing the term *school librarian* to *librarian* and making reference to the summer reading program. Table 9 shows the descriptive statistics for this measure.

Table 9. PAS scale statistics.

Mean	Variance	Std. Deviation	# of Items
26.0172	17.245	4.15275	6

In table 10 it can be seen that at .762 the PAS internal consistency is acceptable for exploratory research. In the school library study, however, the PAS had much higher reliability, likely due to the large number of participants in that study. Considering the relatively small number of participants in the present study, we posit that, given a larger sample in a public library context, the reliability would be improved. Table 10 indicates that each item’s score positively correlates with the combined score, although the correlation with item #3 is notably weak. However, eliminating this item would improve Cronbach’s alpha from .762 to only .771. Therefore, the instrument can remain intact.

Table 10. PAS item-total statistics.

	Scale Mean If Item Deleted	Scale Variance If Item Deleted	Corrected Item-Total Correlation	Cronbach’s Alpha If Item Deleted
1. I feel that my librarian gave me choices and options when I was looking for books to read.	21.6379	13.217	.379	.760
2. I feel that my librarian understood me during the summer reading program.	21.4483	14.392	.520	.737
3. My librarian seemed to be confident in my ability to make good decisions about my reading.	21.3276	15.663	.305	.771
4. My librarian encouraged me to ask questions.	22.1207	10.459	.633	.689

5. My librarian really listened to me when we discussed books and other reading materials.	21.7586	10.748	.649	.683
6. My librarian tried to understand my interests before suggesting what books and materials I might like.	21.7931	10.799	.623	.692

Limitations and Discussion

This correlational study sought to explore the use of multiple instruments used in school library research in the context of public libraries' summer reading programs for youth. It also explored connections between perceived competence in information skills and perceived competence in reading ability. Of particular interest was whether summer reading program participants connected summer reading and the summer reading program to improvement in their personal reading ability. Limitations of the study include its small sample size and the volunteer nature of participation. Given a larger sample size, the reliabilities of instruments may increase; therefore, testing these measures with a larger sample is recommended.

This study demonstrates that instruments used in a school library setting may also prove useful to public libraries for assessment of youth-related programs. It also replicated the finding that PCR (Perceived Competence in Reading) and PCIS (Perceived Competence in Information Skills) instruments are significantly correlated. We also found that a majority of summer reading program participants believe their reading competence was positively affected by their participation in a public library summer reading program. This is a valuable finding for public librarians who design these programs, as well as for educators, including school librarians, who seek ways to combat summer learning loss, which tends to be greater in at-risk students (e.g., Cooper et al. 1996).

The PAS (Perceived Autonomy Support) instrument had reasonable reliability for an exploratory study in an out-of-school context and so may prove to be a useful assessment with modifications to better address the reality that several individuals often work together to coordinate summer reading programs. One of the problems with the instrument may have been that, while often several public library staff members attend to summer reading participants, the PAS assumes that respondents interact with only one person (the librarian), as is typical in a school library.

Demonstrating the applicability of school library measurement, focused on such variables as perceived competence (in information skills and reading) and autonomy supportiveness, to a public library context is beneficial to both schools and their wider communities. While there are many differences between the missions, programs, and services of school libraries and public libraries, school and public librarians can (and often do) work together to coordinate youth programming both in and out of school (e.g., on weekends), skill-building activities (e.g., inquiry skills), and resource use and sharing (e.g., interlibrary loan, support for homework assignments). In a number of communities, distinguishing between school and public libraries has become increasingly difficult; in fact, in some communities public libraries are situated on school

campuses so that librarians can serve both institutions. Instruments that measure such factors as perceived competence in information skills and in reading, and perceived autonomy support are becoming essential to both institutions.

As a result of this study, we recommend that school librarians invite their colleagues from the public library's summer reading programs to schools to help coordinate and promote these programs. Given the consistently strong relationship discovered between perceived reading ability and perceived competence in information skills in both contexts, school and public librarians need to recognize that students participating in SRPs may maintain or even increase not only their reading skills but also their information skills over the summer as a result of their participation in the SRP. Future research exploring the impact of SRPs on both information skills and reading benefits potentially opens up avenues of collaboration for both groups.

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Works Cited

- Aarnoutse, Cor, and Gonny Schellings. 2003. "Learning Reading Strategies by Triggering Reading Motivation." *Educational Studies* 29 (4): 387–409.
- Allington, Richard L., and Anne McGill-Franzen. 2013. *Summer Reading: Closing the Rich/Poor Reading Achievement Gap*. New York: Teachers College Press.
- Arnone, Marilyn P., and Rebecca Reynolds. 2009. "Empirical Support for the Integration of Dispositions in Action and Multiple Literacies into AASL's Standards for the 21st Century Learner." *School Library Media Research* 12. <www.ala.org/aasl/sites/ala.org/aasl/files/content/aaslpubsandjournals/slr/vol12/SLMR_EmpiricalSupport_V12.pdf> (accessed January 13, 2016).
- Arnone, Marilyn P., Rebecca Reynolds, and Todd Marshall. 2009. "The Effect of Adolescents' Psychological Needs Satisfaction upon Their Perceived Competence in Information Skills and Intrinsic Motivation for Research." *School Libraries Worldwide* 15 (2): 115–34. <<http://surface.syr.edu/cgi/viewcontent.cgi?article=1095&context=istpub>> (accessed January 13, 2016).
- Arnone, Marilyn P., Ruth V. Small, and Rebecca Reynolds. 2010. "Supporting Inquiry by Identifying Gaps in Student Confidence: Development of a Measure of Perceived Competence." *School Libraries Worldwide* 16 (1): 47–60. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1755656> (accessed January 13, 2016).
- Brophy, Jere. 1998. *Motivating Students to Learn*. Boston: McGraw-Hill.

- Cambria, Jenna, and John T. Guthrie. 2010. "Motivating and Engaging Students in Reading." *NERA Journal* 46 (1): 16–29.
- Cooper, Harris, et al. S. 1996. "The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review." *Review of Educational Research* 66 (3): 227–68.
- Deci, Edward L., Richard Koestner, and Richard M. Ryan. 1999. "A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation." *Psychological Bulletin* 125 (6), 627–68.
- Deci, Edward L., and Richard M. Ryan. 1985. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum.
- . 2000. "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior." *Psychological Inquiry* 11 (4): 227–68.
- Harter, Susan. 1978. "Effectance Motivation Reconsidered: Toward a Developmental Model." *Human Development* 21 (1): 34–64.
- Ivey, Gay, and Karen Broaddus. 2001. "'Just Plain Reading': A Survey of What Makes Students Want to Read in Middle School Classrooms." *Reading Research Quarterly* 36 (4): 350–77.
- Kelly, Erin T., and C. Andrew Aligne. 2015. "Stories to Stop the Summer Slide: Books to Prevent Summer Learning Loss among Low-Income Students." Poster presentation at Pediatric Academic Societies Meeting, April 25. San Diego, CA. <www.abstracts2view.com/pas/view.php?nu=PAS15L1_1160.8> (accessed January 13, 2016).
- Logan, Sarah, Emma Medford, and Naomi Hughes. 2011. "The Importance of Intrinsic Motivation for High and Low Ability Readers' Reading Comprehension Performance." *Learning and Individual Differences* 21 (1): 124–28.
- Murvosh, Marta. 2013. "Partners in Success: When School and Public Librarians Join Forces, Kids Win." *School Library Journal* (January 1). <www.slj.com/2013/01/programs/partners-in-success-when-school-and-public-librarians-join-forces-kids-win/#> (accessed January 13, 2016).
- Pitcher, Sharon M., et al. 2007. "Assessing Adolescents' Motivation to Read." *Journal of Adolescent & Adult Literacy* 50 (5): 378–96.
- Reeve, Johnmarshall, and Edward L. Deci. 1996. "Elements of the Competitive Situation That Affect Intrinsic Motivation." *Personality and Social Psychology Bulletin* 22 (1): 24–33.
- Reynolds, Rebecca, Marilyn Arnone, and Todd Marshall. 2009. "Perceived Competence and Reading Enjoyment as Contributors to Information Skills and Digital Technology Knowledge." *ASIST 2009: Proceedings of the 72nd ASIS&T Annual Meeting, Volume 42*. <www.asis.org/Conferences/AM09/open-proceedings/papers/35.xml> (accessed January 13, 2016).

- Ryan, Richard M., and Edward L. Deci. 2000. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25 (1): 54–67.
- Ryan, Richard M., and Wendy S. Grolnick. 1986. "Origins and Pawns in the Classroom: Self-Report and Projective Assessments of Children's Perceptions." *Journal of Personality and Social Psychology* 50 (3): 550–58.
<http://selfdeterminationtheory.org/SDT/documents/1986_RyanGrolnick_JPSP.pdf> (accessed January 13, 2016).
- Torgesen, Joseph K., et al. 2007. *Academic Literacy Instruction for Adolescents: A Guidance Document from the Center on Instruction*. Portsmouth, NH: RMC Research Corporation, Center on Instruction.
<www.centeroninstruction.org/files/Academic%20Lit%20Instr%20for%20Adolescents%20Guidance%20Doc%20COI.pdf> (accessed January 14, 2016).
- Vansteenkiste, Maarten, et al. 2004. "The 'Why' and 'Why Not' of Job Search Behaviour: Their Relation to Searching, Unemployment Experience, and Well-Being." *European Journal of Social Psychology* 34 (3): 345–63.
- Wang, Judy Huei-Yu, and John T. Guthrie. 2004. "Modelling the Effects of Intrinsic Motivation, Extrinsic Motivation, Amount of Reading, and Past Reading Achievement on Text Comprehension between U.S. and Chinese Students." *Reading Research Quarterly* 39 (2): 162–86.
- White, Robert W. 1959. "Motivation Reconsidered: The Concept of Competence." *Psychological Review* 66 (5): 297–333.
- Williams Geoffrey C., and Edward L. Deci. 1998. "The Importance of Supporting Autonomy in Medical Education." *Annals of Internal Medicine* 129 (4): 303–308.