

# Contextualizing Developmental Reading Through Information Literacy

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**ABSTRACT:** *This study focused on a redesigned reading program that integrated project-based activities through the contextualization of reading and information literacy strategies using library databases. Students completing the new reading curriculum were compared to students who had completed a traditional reading curriculum to assess for differences in information literacy and reading skills, course completion, persistence, and gateway course registration. Students in the contextualized reading curriculum outperformed students in the textbook curriculum on information literacy skills, and both groups grew in reading strategies. Further, the contextualized group—comprised of students who scored at one or more levels below college ready—were on par with the textbook group—comprised of students only one level below college ready—in completion, semester-to-semester persistence, and subsequent course registration.*

*It is difficult for skill and drill models to provide the literacy skills necessary for college-level tasks.*

According to widely publicized national data, more than half of the students who enroll in college place into developmental courses, and students who take developmental courses have lower rates of persistence, successful college-level course completion, and graduation (Bailey, Jeong, & Cho, 2010; Complete College America, 2012; Jenkins & Cho, 2011). In their research at one university, Chambers Cantrell et al. (2013) noted that students in developmental reading were more likely to be less assured in their abilities as readers than those who were not placed into developmental courses. Because reading courses are often taught in a drill and skill approach that is teacher centered, students may not be successful in transferring skills needed for college-level reading (Armstrong & Newman, 2011; Grubb, 2013). It is difficult for skill and drill models to provide the literacy skills necessary for college-level tasks, like the power to retrieve, read, and analyze information appropriate to a given task and the ability to connect ideas across different types of texts (Gruenbaum, 2011). These skills can be acquired through a focus on students becoming adept at determining which reading strategies to use for the numerous types of reading tasks encountered in college-level courses (Holschuh, 2013) and transitioning students to an “increased proficiency in navigating and negotiating

literacies for different purposes” (Paulson & Armstrong, 2010, p. 6).

Reading instruction implemented in a manner other than a skill and drill approach can better serve the needs of students preparing to read college texts (Armstrong & Newman, 2011; Caverly, Nicholson, & Radcliffe, 2004; Perin, Bork, Peverly, & Mason, 2013). A focus on providing a developmental curriculum that shifts from the remediation of basic skills to the application of skills through a relevant, meaningful, contextualized curriculum may better prepare students academically and emotionally for college-level tasks and beyond (Perin, 2011). Contextualization, which is teaching basic skills in a disciplinary context, has been shown to increase the transfer of those skills in subsequent content areas (Fernandes, Leite, Mouraz, & Figueiredo, 2013; Perin, 2011). Contextualization further offers students an authentic reading experience that is relevant to their academic and personal needs, and this authenticity can lead to the transfer of skills within different academic content and contexts (Voge, 2011).

Connecting basic reading skills within a disciplinary context is also stressed in the national literacy standards and can be accomplished through the use of a library database system (National Governors Association and Council of Chief State School Officers, 2010). Victor, Otto, and Mutschler (2013) defined information literacy (IL) as skills that students need in college-level classes to “identify and navigate relevant sources of information” (p. 154). Students who become adept at learning how to approach discipline-specific tasks through structured searches of information, self-directed choices in reading materials, and strategies to synthesize information can see increases in their self-confidence, independence, IL skills, and critical reading skills (Booth, Lowe, Tagge, & Stone, 2015; Hoffmann & Adams, 2012; Ma Lei, Dawson, Hofmann, Titus, & Carlin, 2014; Mazella, Heidel, & Ke, 2011; Wong, 2011). Because underprepared students may not possess the skills needed for research and reading at the college-level, collaboration between library and reading instructors can serve these adult learners through the contextualization of reading and research skills that will prepare students for the academic tasks awaiting them in college-level curriculum (Cooke, 2010).

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The perceived ineffectiveness of developmental education has led to demands for program changes from policymakers and college stakeholders, especially in developmental courses. The problem with some of these programmatic changes is that evidence regarding the success of these programs is limited; it is suggested that before these programs are fully implemented, colleges take time to pilot new programs for their effectiveness (Saxon, Martirosyan, Wentworth, & Boylan, 2015). The reading curriculum for the present study was successfully piloted for 2 semesters before moving to full implementation with all developmental reading courses. Additionally, our research on contextualization builds on Perin's (2013) work by including a comparison group consisting of other developmental students.

Therefore, the purpose of this study was to examine differences in student success between students participating in a new contextualized reading curriculum and students participating in a traditional textbook-driven developmental reading curriculum. Specifically, the two curriculum types compared were (a) a developmental reading program that integrated a contextualized reading curriculum with IL and (b) a traditional textbook-based developmental reading curriculum that was used by most reading faculty in developmental education. Student success was the outcome of interest. This outcome was measured through multiple variables including (a) pre/posttest scores, (b) successful developmental reading course completion, (c) persistence, and (d) registration in subsequent gateway courses.

## Method

### Research Design

This study followed a quasiexperimental design, specifically an untreated control group design with dependent pretest and posttest samples (Shadish, Cook, & Campbell, 2002). Groups participating in this study were formed naturally because students self-selected into reading classes that fit their needs. The comparison group consisted of the traditional textbook course taught during the previous fall semester. The treatment group consisted of those students enrolled in a reading curriculum that integrated novels and library databases in four to six contextualized assignments that included a variety of readings from numerous library databases students might encounter in discipline-specific courses such as English, humanities, history, psychology, or sociology. Students developed their reading strategies for articles from newspapers, biographies, encyclopedias, reports, and journals via a new contextualized reading curriculum developed by library and reading faculty. A professional learning community for all reading faculty met once a month during the pilot phases of the program, and during this time facilitators shared research-based curriculum decisions and project-based assignment examples to

prepare instructors for full implementation of the new curriculum. A mandatory 2-day summer institute for reading and library faculty exposed faculty to the new contextualized curriculum design; during the full implementation phase, biweekly meetings for reading faculty addressed concerns and particulars of upcoming assignments.

### Participants

Participants for this study attended a community college in a suburban community located in the southwestern United States that has an annual enrollment of approximately 19,000 students. Approximately 2,800 students participated in a developmental course during Fall 2014. Chi-squared analyses of institutional enrollment numbers resulted in no statistical differences by gender ( $p = .76$ ) or ethnicity ( $p = .62$ ) from Fall 2014 to Fall 2015.

All new students to the college participate in three mandatory experiences. The first experience is taking the College Board's Accuplacer<sup>®</sup> test for

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## *Facilitators shared research-based curriculum decisions and project-based assignment examples to prepare instructors for full implementation of the new curriculum.*

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English, reading, and math course placement. Once students have taken the placement test, they are instructed to register for and attend a mandatory orientation. Students participate in a mandatory group advisement session during the orientation. At this time, students learn about course options available to them. Developmental reading courses include full semester, late-start, fast track, hybrid, and learning community options. Per the college's standard practice, students choose the option that best suits their needs.

For the Fall 2015 semester, students who tested two levels below college-level reading (Accuplacer<sup>®</sup> score from 20 to 55) and registered for any fast-track six-credit course as well as students who tested one level below college-level reading (Accuplacer<sup>®</sup> score from 56 to 73) and registered for the three-credit developmental reading course participated in the new contextualized developmental reading curriculum. The comparison group consisted of only students who tested into the highest-level developmental reading course and who enrolled in a three-credit developmental reading course using a

traditional textbook curriculum during the Fall 2014 semester. These courses were taught using the default textbook. In all, 280 students participated in the new contextualized developmental reading curriculum during Fall 2015, whereas 221 students participated in the textbook-based curriculum during Fall 2014.

### Instrumentation

Pre- and posttests with an accompanying grading rubric were previously developed by library faculty at the college and administered in composition courses utilizing an embedded librarian. These same tests and rubrics were used in the new contextualized reading courses with the permission of the library department. The tests were scenario based with three short essay questions to assess student IL skills. Because these tests only measured IL skills, three more questions (e.g., How will you know if your approach to reading the article was successful?) developed by reading faculty were added to each scenario to assess student strategy-use before, during, and after reading. To minimize pretest sensitization, different scenarios were used for the pre- and posttests. No changes were made to the essay questions and scoring rubrics to maintain consistency in the way students' tests were scored. For both tests, faculty instructed students to take as much time as needed to write their answers.

Using the rubrics, students were scored as "developing" (1 point), "competent" (2 points), or "excelling" (3 points). Library faculty used the IL rubric regularly, and through repeated use by library faculty, the rubric had been found to be useful in measuring IL skills. The reading strategies rubric was developed specifically for this study. To increase validity, input from two reading faculty was sought to evaluate the appropriateness of the rubric's scoring descriptions for determining the level of reading skills before, during, and after reading a text.

Based on their respective areas of expertise and for the sake of consistency, the same library faculty and reading faculty scored their respective portions of the pre- and posttests. Pretests were given during the second week of the semester, with posttests given during week 16. Randomly selected pretests were scored a second time at the end of the semester in order to assess the intrarater reliability of the IL and reading strategies scores. Randomly selected posttests from the previous semester were scored a second time the following semester to ensure consistency in scoring. Scores were consistent, achieving 100% intrarater reliability.

Once the fall semester was complete, the college's department of institutional research (IR) provided the researcher successful course completion data (grade of "C" or higher) disaggregated by curriculum group. When the 45th day of the spring semester was complete, fall to spring semester persistence data and student registration data in college gateway courses

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was provided. The three courses identified as gateway courses for this study were first and second semester college writing course (ENG 101 and ENG 102) as well as the college critical reading course (CRE 101).

### Analytic Strategy

Descriptive statistics were calculated for all variables. Prior to running inferential tests, statistical assumptions were tested. A mixed ANOVA was used to compare the pre- and posttest scores across the two curriculum types. For the remainder of the outcome variables, chi-squared tests were used to compare differences by curriculum type.

## Results

### Information Literacy

The mean scores for the pre- and posttest IL subquestions completed by students in the contextualized curriculum and the traditional textbook groups can be seen in Table 1. A mixed

**Table 1**  
*A Comparison of Mean Scores in Information Literacy Strategies by Curriculum Type*

Curriculum	Information Literacy Sub Questions Pre Test		Information Literacy Sub Questions Post Test		Mean Difference
	M	SD	M	SD	
Contextualized	4.72*	1.04	5.92	1.20	1.20
Textbook	4.57*	1.06	4.97	1.11	0.40

Note.  $N = 301$ . Contextualized group,  $n = 197$ . Textbook group,  $n = 104$ . \*There was no statistically significant difference in pretests scores by curriculum type,  $t(299) = 1.18, p = .24$ .

ANOVA was conducted to compare the effects of curriculum type—the redesigned contextualized curriculum and traditional textbook curriculum—on the difference in IL pre- and posttest scores. Levene’s tests indicated homogeneous error variances and the covariance matrices were considered equal also as given by Box’s M test. The normality assumption was met. The main effect for curriculum type,  $F(1, 299) = 28.79, p < .001, \eta^2_{\text{partial}} = .09$ , and IL scores,  $F(1, 299) = 86.02, p < .001, \eta^2_{\text{partial}} = .22$ , were both statistically significant. The interaction, curriculum type by IL scores, was also statistically significant,  $F(1, 299) = 21.28, p < .001, \eta^2_{\text{partial}} = .07$ ; that is, the mean difference in IL pre- and posttest scores was statistically higher in the contextualized pilot group than in the traditional textbook group. Thus, approximately 7% of the variability observed in the pre- and posttest scores in IL was explained by the type of curriculum used.

### Reading Strategies

The mean scores for the pre- and posttests reading strategies subquestions by curriculum type can be seen in Table 2. A mixed ANOVA was conducted to compare the effects of curriculum type on

the pre- and posttest scores were statistically different (i.e., increased) regardless of the curriculum type. In other words, both groups’ reading scores increased at a statistically significant level from the pretest to the posttest.

**Table 2**  
*A Comparison of Mean Scores in Reading Strategies by Curriculum Type*

Curriculum	Reading Strategies Sub Questions Pretest		Reading Strategies Sub Questions Posttest		Mean Difference
	M	SD	M	SD	
Contextualized	5.17*	1.06	6.51	1.30	1.34
Textbook	5.00*	1.10	6.38	1.33	1.38

Note.  $N = 301$ , Contextualized group,  $n = 197$ , Textbook group,  $n = 104$ . \*There was no statistically significant difference in pretests scores by curriculum type,  $t(299) = 1.31, p = .19$ .

### Course Pass Rates and Semester-to-Semester Persistence

There was no statistically significant difference in pass rates between students participating in the contextualized reading course redesign and the traditional textbook reading course, with  $\chi^2(2) = 1.47, p = .48$ . Passing rates are provided in Table 3.

There was no statistically significant difference,  $\chi^2(1) = 0.81, p = .37$ , in the proportion of students persisting from fall to spring semester between students completing the textbook curriculum group ( $N = 198$ ) and students completing the contextualized curriculum group ( $N = 241$ ). Displayed in Table 4 are the differences in persistence rates between the two

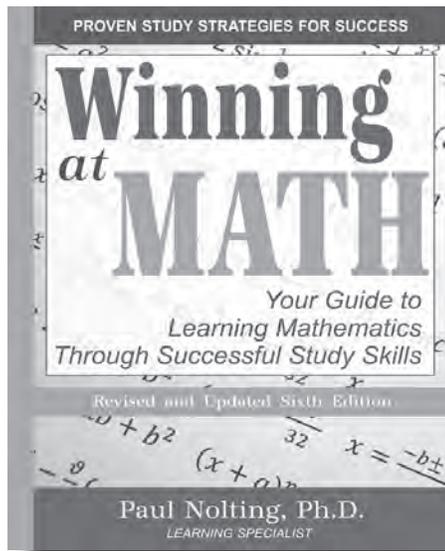
the difference in reading strategies pre- and posttest scores. Levene’s tests indicated homogeneous error variances and the covariance matrices were considered equal, also as given by Box’s M test. The normality assumption was met. The main effect for curriculum type,  $F(1, 299) = 1.83, p = .18, \eta^2_{\text{partial}} = .01$  was not statistically significant. The main effect of reading strategies pre/posttest scores,  $F(1, 299) = 213.16, p < .001, \eta^2_{\text{partial}} = .42$ , was statistically significant. The interaction effect, curriculum type by reading strategies scores, was not statistically significant,  $F(1, 299) = 0.06, p = .81, \eta^2_{\text{partial}} = .001$ . Thus,

**Table 3**  
*Successful Course Completion (Grade C or higher) by Curriculum Type*

Successful Course Completion	Fall 2015 Contextualized Redesign		Fall 2014 Traditional Textbook Curriculum		$\chi^2(2)$	p
	n	%	n	%		
“C” or higher (passing)	223	79.6	182	82.4	1.47	.48
“D” or “F” (not passing)	18	6.4	16	7.2		
Withdrawal (no grade)	39	13.9	23	10.4		

Note.  $N = 501, p < .05$

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groups. This information leads to the conclusion that persistence cannot be attributed to curriculum type.

#### Gateway Course Registration

There was not a statistically significant difference in the proportion of students registering for gateway courses between those students who completed the textbook curriculum and those who completed the contextualized redesign,  $\chi^2(1) = 0.79, p = 0.38$ . A total

102, and/or CRE 101 the semester following course completion. Therefore, in this study, curriculum type cannot be attributed to gateway course registration differences.

### Discussion

#### Pre- and Posttest Scores

This study compared differences in pre- and posttest scores between students participating in a fully contextualized developmental reading program redesign during Fall 2015 and students who participated in a traditional textbook curriculum during Fall 2014. On the IL section of the scenario-based pre/posttest, students in the contextualized curriculum increased their mean score a total of 1.20 points from the pretest ( $M = 4.72, SD = 1.04$ ) to the posttest ( $M = 5.92, SD = 1.20$ ). Students taking the traditional textbook curriculum increased their mean score 0.40 points from the pretest ( $M = 4.57,$

statistically significant compared to those in the traditional textbook curriculum.

These results are similar to research conducted by Armstrong and Newman (2011) regarding increasing student preparedness through authentic textual experiences. A contextualized curriculum that allows students the chance to locate, select, and read a variety of texts appropriate to a given project task leads to an increase in IL skills that are necessary for college-level tasks. Additionally, the recursive nature of contextualizing IL strategies throughout the developmental reading course corroborates research conducted by Fleming-May, Mays, and Radom (2015), in which at-risk students improved their research skills after attending numerous library sessions. It should be noted that, at this college most developmental reading instructors utilize library sessions in their courses, even when teaching the traditional textbook curriculum. But it appears that library sessions taught in the traditional textbook curriculum did not have much of an effect on pre- and posttest scores for the course. This corroborates literature discussed by Brent (2013) that points to the importance of recursive teaching of IL skills; when students use learn IL skills recursively, they are able to use those skills in a more sophisticated manner.

Although statistically significant differences in reading strategies scores were not present by curriculum type, statistically significant differences were present in reading strategies between the

$SD = 1.06$ ) to the posttest ( $M = 4.97, SD = 1.11$ ). The curriculum group a student belonged to led to statistically significant gains in IL scores and accounted for approximately 7% of the variability observed. Specifically, students in the contextualized curriculum had greater gains in IL skills that were

Table 4

Subsequent Spring Semester Persistence (45th day records) by Curriculum Type

	Contextualized Curriculum		Textbook Curriculum		$\chi^2(1)$	$p$
	$n$	%	$n$	%		
Subsequent Semester Persistence						
Yes	206	85.5	163	82.3	0.81	.37
No	35	14.5	35	17.7		

Note.  $N = 439, p < .05$

of 115, or 58%, of the 198 students who completed the traditional textbook curriculum registered for ENG 101, ENG 102, and/or CRE 101 during the semester immediately following completion of the course. In all, 150 (62%) of the 241 students who completed the contextualized redesign registered for ENG 101, ENG

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pre- and posttest scores across both groups. Reading strategies scores from the pretest ( $M = 5.11$ ,  $SD = 1.07$ ) to the posttest ( $M = 6.47$ ,  $SD = 1.31$ ) increased across curriculum groups. Considering the dramatic shift in teaching requirements from a textbook-based remedial curriculum to IL with the contextualized curriculum, the curriculum developers had hoped reading strategies skills during the first semester of full implementation would demonstrate equivalent gains to those observed in the traditional course, and this did occur.

Student growth in both groups was statistically significant in reading strategies from the pretest to the posttest. Even though student growth in reading strategies was nearly the same between the traditional textbook curriculum and the contextualized curriculum, researchers believed the results were encouraging because the contextualized group contained students testing two or more levels below college ready as well as those testing one level below college ready. The traditional group only included those one level below college ready. In addition, the contextualized curriculum group demonstrated statistically significantly greater growth than the traditional group in their IL strategies; therefore, based on the two types of strategies measured, overall students benefitted most from a contextualized curriculum.

Some researchers have advocated for abandoning the skill and drill model of developmental textbooks and advocating the use of authentic textual experiences to prepare students for college-level reading tasks (Armstrong & Newman, 2011). This research, which did utilize a comparison group of developmental students, can contribute to the small body of research regarding developmental courses utilizing contextualization (Perin, 2011). The contextualized curriculum in the present study provided students the opportunity to think about the task before them and learn the IL and reading strategies tools needed to critically search for, select, read, and analyze texts appropriate to the given task. Statistically significant growth in reading and IL skills was a testament to students learning how to effectively search, select, and read appropriate articles for a given task in a contextualized environment.

### Successful Course Completion

There were no statistically significant differences in course completion rates between the contextualized redesign group ( $N = 280$ ) and the traditional textbook group ( $N = 221$ ). Nearly 80% of the students participating in contextualized redesign and approximately 82% of the students participating in the traditional textbook curriculum passed the course with a C or higher. According to Complete College America (2012), only 62% of developmental students complete remediation, and according to

Bailey et al. (2010), 46% of students referred to remediation complete their developmental course sequence; the numbers for both groups in this study are higher. The contextualized curriculum redesign included fast track courses for students testing two or more levels below college ready, therefore the success rate for the redesign group also meant that nearly 80% of all students testing into developmental reading for Fall 2015 successfully completed remediation in 1 semester. The success rates for both groups in the study were also commensurate with the college's passing rate for 100-level courses (79%).

### Semester-to-Semester Persistence

Statistically significant differences were not found when comparing differences in fall to spring persistence rates between the traditional textbook group and the contextualized redesign group. In all, 82% of students who completed the traditional textbook course persisted to the next semester, whereas 86% of those students who completed

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*All students taking developmental reading courses at this college persisted at a higher rate than the general student population.*

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the contextualized redesign course persisted to the spring semester. Although persistence rates can be attributed to numerous factors (Bergman, Gross, Berry, & Shuck, 2014), it is of interest that persistence rates for both groups in the study were higher than fall to spring persistence rates for students in the Fall 2014 general population at the college (66%). Although no persistence data were present for students withdrawing from the Fall 2015 contextualized courses, counting withdrawn students as nonpersists would still produce higher persistence rates (74%) than students in the general population (66%). This study is consistent with Crisp and Delgado's (2014) results on persistence, showing developmental students with higher persistence rates than nondevelopmental students. Although the type of remediation at this college did not have a statistically significant impact on persistence, it can be said that all students taking developmental reading courses at this college persisted at a higher rate than the general student population.

### College Gateway Course Registration

According to Bailey et al. (2010), only 40% of students who complete their reading sequence finish a gateway course with 3 years. Although there were

no statistically significant differences in subsequent semester gateway course registrations between students in the contextualized redesign and those in the traditional textbook curriculum in the present study, a slightly higher percentage (62%) of students in the contextualized curriculum registered for ENG 101, ENG 102, or CRE 101 than those who completed the textbook curriculum (58%). The percentage of students in both groups registering for gateway courses the following semester is encouraging when compared with Bailey et al.'s (2010) findings.

Achieving the Dream colleges implementing new strategies for helping students to become more successful in developmental courses have yielded modest increases in registration for gateway courses (Rutschow et al., 2011). Results from Rutschow et al. (2011) are a reflection of small-scale program changes that reached only 10% of students in a target population. However, for the present study, students in both groups are representative of the majority of students participating in developmental reading courses at the study institution that particular semester. The contextualized redesign also reflects a more diverse group of developmental reading students than the traditional group because participants in the contextualized redesign included students testing two or more levels below college ready as well as students testing one level below college ready. Therefore, even no difference between the two groups is encouraging because the contextualized curriculum group students ostensibly might have been expected to fare more poorly.

### Limitations

The primary limitation to this study was that students self-selected into developmental reading courses depending on their Accuplacer<sup>®</sup> test scores and the schedule that fit their academic and personal needs. Random assignment into the two curriculum types was not possible, as is generally true of educational studies, but we did take steps to mitigate selection bias, such as the use of a pretest and a comparison group "to make it easier to examine certain threats to validity" (Shadish, Cook, & Campbell, 2002, p. 138).

Another limitation was that courses were not offered concurrently. The traditional course was offered in the Fall 2014 term. The contextualized course was offered in the Fall 2015 term. The traditional course was no longer offered in the Fall 2015 term. Although we found no statistically significant differences between the pretest scores of participants across curriculum types, there may have been differences in other variables that might have had an influence on posttest results. Indeed, we acknowledge that the contextualized group did differ, as students in this group were those who tested one or more levels below college ready, whereas the traditional group had students who tested only one level below college ready. Nonetheless, within the

contextualized group, we were unable to separate those who were in the fast-track group, from those who were only one level below college ready.

A final limitation is that during the full implementation phase for this study, 12 reading faculty and 10 library faculty taught the contextualized reading curriculum. Although all instructors participated in ongoing faculty development and were provided with detailed lesson plans and course materials, researchers could not account for teaching expertise, and there was no way of knowing how instructors chose to implement the curriculum on a daily basis. Therefore, any differences in what happened in the classroom may have resulted in inconsistencies in pre/posttest scores, reading course completion, persistence, and gateway course registration.

## Implications for Policy and Practice

In this study, a reading program eschewed a traditional remedial skill and drill textbook and adopted in full a contextualized format through the use of library databases. This change led to statistically significant increases between IL pre- and posttest scores. Further, although growth in reading strategies skills for students in the contextualized format were nearly identical to the traditional textbook, the savings in textbook costs to the students, utilization of authentic texts, and growth in IL skills provided sufficient justification to continue the contextualized reading program. We find it encouraging that the contextualized group, comprised of students who scored at one or more levels below college ready, were on par with the textbook group, which was comprised of students only one level below college ready, in completion, semester-to-semester persistence, and subsequent course registration. In sum, we found that the use of library databases provided students the opportunity to become adept in a resource they will be required to use in subsequent courses. Boylan (2002) pointed to the importance of students learning skills that will guide them to choose appropriate strategies for specific tasks, and this contextualized curriculum design followed that teaching strategy. Curriculum developers and administrators can point to this research to support a contextualized curriculum that saves students money and is sustainable for future semesters at minimal cost to the college.

The contextualized curriculum in this redesign integrated project-based assignments through the collaboration of reading and library faculty. The format for the classroom environment provided expertise from two faculty members—one reading and one library—and contributed to an environment that encouraged group collaboration using authentic texts. The success of this collaboration led to a substantial increase in IL skills for students who tested into developmental courses. Student success

programs, developmental educators, administrators, and library staff can use this research along with other studies that support previous library research regarding recursive sessions to bring more opportunities for shared teaching in the classroom (Brent, 2013; Fleming-May et al., 2015). Recursive information literacy sessions could be included in developmental courses that are part of corequisite or paired course models to teach important information literacy skills for college-level coursework. For those who might not be ready or able to fully implement a contextualized curriculum, a first step may be providing library staff time to conduct an in-class workshop to familiarize students with the college's library database system and learn its benefits.

## Implications for Future Research

Scaled up developmental education reading programs using contextualization are scarce (Perin, 2011). This developmental reading redesign incorporated all stand-alone developmental reading courses. After the first semester implementing the new program,

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*The savings in textbook costs to the students, utilization of authentic texts, and growth in IL skills provided sufficient justification to continue the contextualized reading.*

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students in the contextualized curriculum showed statistically significant advances in IL test scores and nearly identical growth in reading strategies scores when compared with students in the traditional curriculum. Completion, persistence, and registration into college gateway courses did not differ statistically between the contextualized reading program group and the traditional group. According to Jaggars, Hodara, Cho and Xu (2015), research regarding acceleration and developmental education is limited. Because the contextualized group included students in a fast-track curriculum, this research can support developmental course models that accelerate students through the program at a faster pace.

Although this research included the test scores from fast-track courses for students who scored two or more levels below college ready, the researchers were unable to look specifically at the growth of these fast-track students as they were combined with test scores from courses for students testing one level below college ready. Further research separating out fast-track courses would be an important contribution during this time when many colleges are implementing accelerated developmental course

models. In addition, the researchers suggest that future research may want to include a comparison of developmental student success rates in college gateway courses and persistence to completion.

## Conclusion

Students benefitted from participating in a contextualized curriculum which integrated IL and reading strategies. Students in the contextualized curriculum courses showed statistically significant differences in scores on the IL section of the pre- and posttests when compared with students in the textbook-driven curriculum. Students in both groups showed statistically significant differences between pre- and posttest reading strategies scores. Although differences in the reading strategies portion of the pre- and posttest yielded nearly identical results between the two groups, the contextualized curriculum group consisted of students who tested one or more levels below college ready, indicating the students who accelerated through their developmental reading curriculum in 1 semester were doing so successfully. This same group that included students one or more levels below college ready was also able to be on par with the textbook-driven courses, which consisted solely of students testing one level below college ready, in student completion, persistence, and gateway course registration. Even with only 1 semester of full implementation, researchers see promise in a developmental curriculum that contextualizes reading and information literacy skills into authentic material relevant to discipline-specific courses. The success of a purposeful, recursive integration of information literacy skills into a developmental reading course, especially for students testing well below college ready, represents an important finding for students most at risk.

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