A STUDY OF THE INSTRUCTIONAL EFFECTIVENESS OF
Bien dit! Level 1 ©2013

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ABSTRACT

To help school students develop better French language skills and knowledge, ***Holt McDougal*** has published, ***Bien dit! ©2013*** for grades 6 to 12. The Inter-Active Reader supports the Common Core with a variety of authentic and informational selections at three levels of difficulty.

The study focuses only on ***Bien dit! Level 1***. In order to evaluate the program's effectiveness, *Holt McDougal* contracted with the *Educational Research Institute of America* (ERIA) to conduct a year-long study to test the program's effectiveness of the program with students in grades 9, 10, and 11.

A test was designed to assess students' French language understanding, knowledge, and skills. The ***Bien dit! Level 1*** program had not been previously used in the schools by any classes.

The results showed that the students enrolled in classes using ***Bien dit! Level 1*** made statistically significant gains over the course of the academic year-long study. The results also showed that the ***Bien dit! Level 1*** program proved effective with both higher and lower pretest scoring students with both groups showing statistically significant gains. The lower pretest and higher pretest scoring students both made large effect size gains and the lower pretest scoring students made larger effect size gains than did the higher pretest scoring students.

Overview of the Study

This report describes a year-long study during the 2013-2014 academic year to determine the impact of the ***Bien dit! Level 1 ©2013*** program. The program presents French language and culture in context, allowing for an authentic language experience for students. The approach also provides in-depth cultural knowledge, relevant instruction, and realistic language interactions for students.

Holt McDougal school publishers contracted with the ***Educational Research Institute of America (ERIA)*** to conduct a year-long efficacy study to determine the program's impact on student learning. For this study ***Bien dit! Level 1 ©2013*** was the primary instructional program in the study classes.

The program is described by the publisher on the Holt McDougal web site as follows:

> *Students are introduced to the diversity of the French-speaking world through culture that is presented in context alongside daily instruction. Resources such as News and Networking take students beyond the classroom and get them invested in culture. Because every student learns differently, Bien dit! was built to make differentiating instruction seamless. Students drive their own practice through ample opportunities to learn at a self-determined level. Through a wide variety of interaction, activities, and frequent recycling, Bien dit! gets students communicating. The latest interactive technology allows students to monitor their own progress and achieve greater results. HMH French Vocabulary apps let students learn and practice French words and phrases anytime, anywhere. And with the HMH French Vocabulary Online System, teachers can create custom flashcards for students to access via the app.*

Research Questions

The following research questions guided the design of the study and the data analyses:

1. Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of high school students?
2. Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of lower performing as well as higher performing high school students?

Design of the Study

The program's efficacy was evaluated using a pretest/posttest design. The study took place during the 2013/2014 academic year with six different teachers in five schools in three different states. Each of the six teachers used the program for the full academic year with several classes. The classes included students in grades 9, 10, and 11.

Before the program instruction started, students were administered a comprehensive test designed to cover the content of the ***Bien dit! Level 1*** textbook and other program materials. A similar posttest was used at the end of the study. Both the pretests and post-tests were administered by the teachers. All tests were returned to ERIA for scoring and analyses.

Timeline and Program Use

The teachers used the ***Bien dit! Level 1*** textbook and other program materials as their primary instructional program. The teachers reported using the program an average of 4 days per week and from 40 to 45 minutes per day over the entire academic year. Pretests for the year-long study were administered about the middle of September, 2013 and posttests were administered the middle of June, 2014.

Description of the Research Sample

Table 1 provides the demographic characteristics of the 5 schools included in the study. It is important to note that the school data does not provide a description of the make-up of the classes that participated in the study. However, the data does provide a general description of the school and, thereby, an estimate of the make-up of the classes included in the study.

Table 1
Schools Included in the Study: Demographic Characteristics

School	State	Location	Grades	Enrollment	% Minority	% Free/Reduced Lunch
1	PA	Suburban	6-12	948	43%	12%
2	CA	Urban	9-12	2157	84%	13%
3	CA	Urban	9-12	2794	94%	10%
4	CA	Suburban	9-12	3271	54%	10%
5	MN	Suburban	10-12	1469	70%	12%
AVERAGES				2128	69%	11%

Description of the Assessment

The pretest and posttest used in the study were developed to assess standards-based French language knowledge and skills. Based on these standards a 50 item multiple-choice assessment was developed focusing on the skills, strategies, and knowledge necessary for effective understanding and performance of the French language skills and understanding taught in the ***Bien dit! Level 1*** program.

Table 2 provides the statistical results for the administration of the pretest and the post-test. The KR 20 reliability and the Standard Error of Measurement for the post-test indicates both the pretest score results and the posttest score results were reliable for arriving at decisions regarding the achievement of the students to whom the tests were administered. The lower pre-test reliability indicates the students were guessing more often on the pretest, thus lowering the test reliability. Since this was the student's first learning exposure to French the higher level of guessing on the pretest was expected.

Table 2
Pretest and Post-Test Test Statistics

Test	Reliability*	SEM**
Pretest	.66	3.11
Post-test	.86	2.95

Reliability computed using the Kuder-Richardson 20 formula.
*** SEM is the Standard Error of Measurement.*

Data Analyses

Standard scores were developed in order to provide a more normal distribution of scores. The standard scores were a linear transformation of the raw scores. A mean raw score was translated to a mean standard score of 300 and the standard deviation of the raw scores was translated to 50. Standard scores were then used for the statistical analyses.

Data analyses and descriptive statistics were computed for the standard scores from the ***Bien dit! Level 1*** assessments. The ≤.05 level of significance was used as the level at which increases would be considered statistically significant for all of the statistical tests.

The following statistical analyses were conducted to compare students' pretest scores to posttest scores:

- A paired comparison *t*-test was used to compare the pretest mean standard scores with the posttest mean standard scores for all students.
- The students were split into two groups based on pretest scores. Paired comparison *t*-tests were used with the group that scored higher and the group that scored lower on the pretest to determine if the program was equally effective with students who had lower and higher pretest scores.

Descriptive statistics were also used to compare pretest and post-test standard test scores for the total group as well as the higher and lower pretest score groups.

An effect-size analysis was computed for each of the paired *t*-tests. Cohen's *d* statistic was used to determine the effect size. This statistic provides an indication of the strength of the effect of the treatment regardless of the statistical significance. Cohen's *d* statistic is interpreted as follows:

.2 = small effect
.5 = medium effect
.8 = large effect

Data Results and Analyses

Total Group Analysis

Researchers at ERIA conducted a paired comparison *t*-test to determine if the difference from pretest standard scores to posttest standard scores was statistically significant. For this analysis, researchers were able to match the pretest and posttest scores for 325 students. Students who did not take both the pretest and the posttest were not included.

Table 3 shows that the average standard score on the pretest was 264, and the average standard score on the posttest was 336. The increase was statistically significant (≤.0001). The effect size was large.

Table 3
Paired Comparison *t*-test Results
Pretest/Posttest Comparison of Standards Scores

Test	Number Students	Mean Standard Score	SD	t-test	Significance	Effect Size
Pretest	325	264	26.9	28.638	≤.0001	2.05
Posttest	325	336	41.7			

Higher and Lower Scoring Students

An additional analysis was conducted to determine if students who scored lower on the pretest made gains as great as those students who scored higher on the pretest. For this analysis students were ranked in order on the basis of their pretest standard scores. The group of 325 students was divided into two approximately equal sized groups of 162 and 163 students. The first group included those students who scored lower on the pretest with a mean of 244 with scores ranging from 205 to 259. The higher scoring group scored an average standard score on the pretest of 285 with scores ranging from 259 to 368.

Pretest-to-posttest comparisons are shown in Table 4 for the lower and higher pretest scoring students. Scores were analyzed using a paired comparison *t*-test to determine if both groups made significant gains.

For both the higher and the lower scoring group, the average scores increased statistically significantly, (≤.0001). The effect size for both the lower and higher scoring pretest groups were large. Despite the similarity in both statistical effects and effect sizes it is interesting to note that the lower pretest group increased 84 standard score points and the higher pretest scoring group increased 58 standard score points.

Table 4
Paired Comparison *t*-test Results for Pretest/Posttest Standard Scores
for the High- and Low-Scoring Pretest Groups

Test Form	Number Students	Standard Score	SD	t-test	Significance	Effect Size
Lower Scoring Group						
Pretest	162	244	11.9	25.228	≤.0001	2.83
Posttest	162	328	40.2			
Higher Scoring Group						
Pretest	163	285	21.1	17.170	≤.0001	1.74
Posttest	163	343	42.0			

Figure 1 provides a pretest-to-posttest comparison of the standard scores of lower and higher scoring pretest students. The lower scoring pretest group increased their scores more than the higher scoring pretest group closing the difference gap from a 41 standard score difference at pretesting to a 15 standard score point difference at post-testing. It should also be emphasized that both groups made statistically significant growth over the full-year study.

Figure 1
Standard Score Increases for Lower and Higher Pretest Score Students
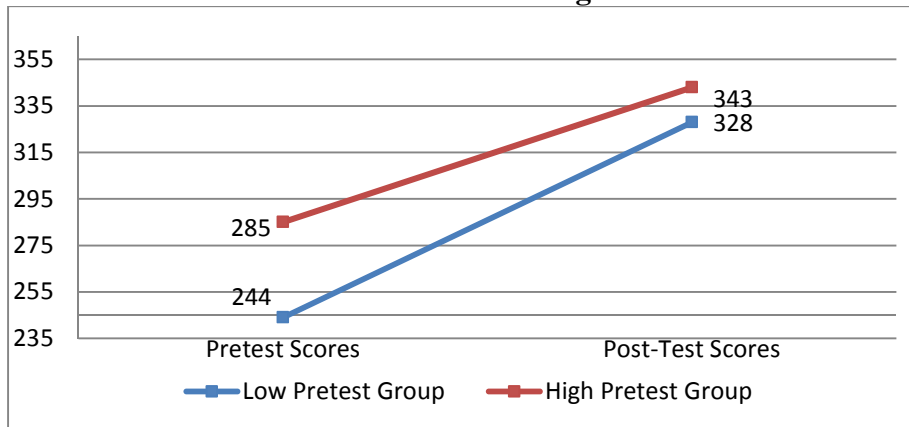
Conclusions

This study sought to determine the effectiveness of ***Bien dit! Level 1 © 2013,*** a high school program published by Holt McDougal. The study was carried out with classes at grades 9, 10, and 11. The teachers were using the program for the first time and received no special instruction in using the program.

Two research questions guided the study:

1. Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of high school students?
2. Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of lower performing as well as higher performing high school students?

Question 1: Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of high school students?

A test designed to assess the French language skills and knowledge was developed to assess students at the beginning and end of the academic year. Statistical analyses of students' scores showed that the students increased their scores statistically significantly. The effect size was large.

Question 2: Is ***Holt McDougal's Bien dit! Level 1*** effective in improving the French language skills and knowledge of lower performing as well as higher performing high school students?

Statistical analyses of higher and lower pretest scoring students' scores showed that for both the lower and higher pretest scoring students the increase was statistically significant. For both the lowest pretest scoring students and the higher pretest scoring students the effect size was large.

On the basis of this study, both research questions can be answered positively.

- ***The Holt McDougal's Bien dit! Level 1 textbook program is effective in improving the French language skills and knowledge of high school students.***
- ***The Holt McDougal's Bien dit! Level 1 textbook program is effective in improving the French language skills and knowledge of lower performing as well as higher performing high school students.***