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September 30, 2012
EDCI 577-002
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Project III: Evaluation of an Instructional Product

The Product

MyReadingLab is an online learning program designed to assist students to improve their reading skills and their ability to apply those skills to better comprehend authentic readings. There are different learning paths that are available for instructors to choose based on the level taught. For example, a student at the 4th to 6th grade reading level is already assessed by a standard reading test administered by the school, typically a junior or community college, and placed in a reading class for the 4th to 6th grade level. MyReadingLab also tests students in an opening pre-test which helps the students to see their strengths and areas for improvement in reading. The pre-test is a reading selection on a variety of subjects that are typical to a college freshman. The student is asked questions about the reading that allow the program to identify specific reading skills the student are using or not. After the pre-test, which consists of approximately 40 questions, the student receives an individualized study plan based on the results.

Depending on the student, the study plan contains one to twenty-seven interactive modules. These are available to the student to learn, practice, and apply the isolated skill. The module has four parts:

- 1) The first part is text detailing the reasons for the skill, what the skill is, and examples of how and where the skill is used.
- 2) The next part contains a video which thoroughly explains the concept and applications of the particular skill by using images, color blocking, diagramming, and audio readings.
- 3) The third part is a practice section in which students can practice applying the skill to new readings which are mostly selections from actual textbooks that are at an appropriate reading level for the students. The students have multiple practice sets to achieve mastery, and the students can access the video or text to help them as they practice. Most students report that they pay more attention to the video and explanations while they are working on the practice sets. Finding the answers to the questions by referring back to them is helpful and gives them a structure. From the designers' point of view, this is a positive effect as the action of going back to the learning materials helps to reinforce the learning. Before the students can move on from part three, a mastery level determined by the instructor must be reached. The recommended mastery level is 85%.
- 4) The last part of the module is a comprehension test. The student is given multiple sets of 10-15 question tests and a reading selection from a textbook that is at an appropriate reading level to determine if the student has mastered the skill.

The students have not successfully completed a module until they pass the test portion. There are multiple sets of test questions for the student to accomplish this. The student can review the learning materials (part 1 & 2) but not while they are taking the test. The students can go back to the practice section as well until the sets are exhausted. After all of the practice and test sets are exhausted and

mastery has not been achieved, the instructor is sent an alert. This alert is designed to indicate that further intervention and instruction is needed.

MRL is used as homework for traditional courses to reinforce in class work. However, it is also used for a specific lab in developmental reading courses for the same purposes but often without the same instructor. It is also used in self-study programs and in purely online courses.

The Evaluation

Sheldon Brown Consultants was contacted by Rio Hondo Community College in Rio Hondo, CA to evaluate MyReadingLab (MRL) to evaluate whether or not it is the most effective program for the developmental reading students. Rio Hondo has a lab component for all of their developmental reading courses. The students spend two hours a week in the lab. The lab time is scheduled as a one hour course twice a week or for two hours on Saturday.

MRL costs \$25 a student. Between 1600 and 2000 students take a developmental reading course at Rio Hondo per year. The students are being asked to pay an additional fee for the course to cover the cost. Rio Hondo Community College would like evidence to show MRL's efficacy to assure the students that the program is worth the cost, to persuade the instructors that they need to incorporate the program into their courses, and the administration that the training costs are necessary to give the students the best learning program available.

Pearson conducts its own evaluation of all of its technologies using the Newman (2010) *Conducting and Reporting Product Evaluation Research: Guidelines and Considerations for Educational Technology Publishers and Developers* which are the guidelines that have been adopted by the Software and Information Industry Association (SIIA). While this approach has a sound method, it does not address the reaction of the end user nor does it offer a long term study in the form of results. Newman (2010) states that the "focus is on publisher-developer sponsored or supported studies" (p. 4.), and that the research is geared towards the publisher and the educator and not the student.

For Rio Hondo Community College, the associates at Sheldon Brown Consulting decided that the Kirkpatrick and Kirkpatrick (2006) Four Levels Model will be a better evaluation program for this specific school's needs. Through the Newman guidelines, the efficacy can be shown, but this does not take into account student reaction or the long term results or ROI of the program. The administrators at Rio Hondo want to conduct an evaluation from the students' perspective.

To begin the evaluation, Sheldon Brown's associates established an advisory board to set the goals of the evaluation. The advisory board consists of two reading instructors, the department chair, the Humanities dean, and two students. The agreed upon goals for the online instruction are:

- 1) Students are engaged with the learning material.
- 2) Students find the program easy to use.
- 3) Students can see improvement in their skills and ability to read.
- 4) Students do better in their course and understand the material better.
- 5) Students can transfer these skills to other college courses immediately.

- 6) Students do better in subsequent courses, because their reading skills have improved.
- 7) Students find reading more enjoyable and begin to read more for pleasure.
- 8) The number of students completing their course of study at Rio Hondo increases, because they have benefited from using MRL in their developmental reading courses.

Level 1: Reaction

Evaluating reaction or Level 1 is an interesting challenge with students at this level. Many students do not want to be in a developmental reading class, and they do not react well to any instruction as the task of reading at all is difficult and can be demoralizing. The advisory board was used to help craft the questions in a way that will best measure their reaction to the material while taking into consideration that “enjoying” the learning material is not a goal. The questions are designed to measure an overall appreciation for the program and to measure goals 1 through 4. A Linkert scale from 1 to 5 was decided upon to give a more accurate measurement of the students’ reaction. 1 indicates the best and 5 the worst in outcomes. (Appendix A)

Reporting:

The reaction survey will be completed by the students immediately after they complete the first module at the end of the first week of implementation. The reaction survey will be used again immediately upon the completion of the second module at the end of the second week.

The scores will be computed and averaged. It is agreed upon that the results will be positive for an overall score of 4 and above. If a score below 4 for the group is established, then the implementation of the program will be reconsidered.

Level 2: Learning

Using a control group and a test group of students is recommended and can easily be facilitated with this evaluation. With the advisory board, it was agreed upon that for the control group and for the test group, eight different intermediate reading instructors – four for each group -- are chosen to have their students take a pre-test at the beginning of the learning modules and post-test at the end. A general class is made up of between 20 and 25 students. It was also agreed that at least two classes from each instructor will give a broad enough sampling of students and that having four instructors for each group would mitigate possible effects that different teaching styles may have on learning and subsequent test scores. A total of eight instructors and total of between 320-500 students would be participating.

With the advisory board, it was decided that the test group will begin to use MRL at the end of the third week of class so that a comparison could be made by the test group. Until the third week, the lab will consist of the traditional workbook practice. There is some minor computer use to look up websites and for activities, but the majority of the “lab” work is workbook practice. The control group will continue to use the workbooks. The learning modules will be used for two weeks, and the pre-tests and post-tests will be based on those two skills and concepts. All instructors will cover those two skills and concepts in their classes during the same two week period, and they all use the same textbook. One skill/concept a week, and one skill/concept per week in the lab.

The learning modules that were chosen for the evaluation were “Main Idea” and “Inference,” as these are two main skills that are taught at the beginning of the semester.

Reporting:

The pre-test and post-test will be given scores of up to 100%. There are approximately nine questions for each pre-test and post-test, and the tests will come directly from the MRL bank of tests but will not have been included in the students’ modules. The results for both the pre-test and post-test will be compiled and an average score for each group will be reported. The results from pre-test to post-test will be calculated for each group and an average increase will be computed. Then the two groups’ average increases will be compared.

The advisory board will determine what increase will prompt a re-evaluation of implementation.

An example of a pre-test for main idea is attached (Appendix B) as well as an example of a post-test (Appendix C). These are examples of actual tests from MyReadingLab.

References:

Kirkpatrick, D. and Kirkpatrick, J. (2006). *Evaluating Training Programs, 3e*. San Francisco, CA: Berrett-Koehler.

Pearson Education. *MyReadingLab*. Retrieved from: <http://myreadinglab.com/>

Newman (2010) *Conducting and Reporting Product Evaluation Research: Guidelines and Considerations for Educational Technology Publishers and Developers*. Software & Information Industry Association (SIIA). Retrieved from: http://siaa.net/presentations/education/SIIA_EvaluationGuidelines_EdTech

APPENDIX A

Name:

Date:

Course:

Instructor:

Module:

How do easily were you able to logon and find the modules?	1 Very easily	2 Somewhat easily	3 Neutral	4 Difficult	5 Not able to navigate
In part 1 of the module, did the reading recording help you to learn the material better?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
In part 2, did the videos and animations help you to learn the concepts and skills?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Do you think these kind of learning modules can help you understand the material better?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Did the videos, animations, and listening to the readings hold your attention?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Did you prefer these types of online activities over the workbook practice?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Did you understand the material more so than in the workbook?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
In part 3, did you find that you went back to watching the videos while you were doing the learning modules?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
In part 3, did you find the readings were like other readings from your other courses?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Were you able to use some of the skills and strategies you learned in the reading lab in your other courses?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
In part 4, were you prepared to take the tests because of your practicing the skills?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all
Overall, do you think that using the reading program helped you improve your reading skills?	1 Yes	2 Somewhat	3 Neutral	4 Not really	5 Not at all

Are there any additional comments you would like to tell us?

Do you think that the program is worth an additional lab fee? Why or why not?
