

Summative Evaluation Report

A Captivate interactive Self-Instructional Tutorial How to use Universal Reader

Aixia Zhang
MIT 530
May 3, 2007

Table of Contents

Executive Summary	3
Introduction	3
A. Context	3
B. Evaluation Objectives	4
Process	4
A. Methodology	4
1. Evaluation Model	4
2. Implementation Process	5
B. Data Collection	5
C. Data Analysis and Findings	5
Transfer evaluation	6
Post-test	6
Discussion	7
A. Interpretation of the findings	7
B. Conclusion	7
Appendix A-Reaction	8
Appendix B- Transfer	8
Appendix C-Post-test	8
Appendix D-SPSS	8

Executive Summary

This summative evaluation report is developed based on the self-instructional module “how to use Universal Reader”, which was designed to make Universal Reader easily accessible and comfortable to use for life skill I students with learning/cognitive disability at Ashley High School, NC. The report covers three main sections: **introduction**-- the context and evaluation objectives; **process**— methodology, data collection, and data analysis; **discussion**-- interpretation of findings and relevant conclusions. The purposes of the summative evaluation are: (1) to assess effectiveness of the self-instructional module in enabling students to learn to use Universal Reader, (2) to determine whether the module is successful in get students engaged to use Universal Reader to read on their own.

The summative evaluation for this module was conducted on the basis of Kirkpatrick’s Four-Level Model. Questionnaires and post-test were created for collecting quantitative and qualitative data about reaction, learning, and transfer. All data collected was analyzed by using SPSS 13.0 software. Mean, standard deviation, and frequency were used to analyze the reaction evaluation data and transfer data. Based on the data analysis and findings(see **details** in data analysis), I made some interpretations of findings and relevant conclusions. Through the summative evaluation, the module is very successful for target learners at Ashley High School. To extend use of the module beyond the school, the summative evaluation for the module need to be conducted widely and deeply.

Introduction

A. Context

The instructional package is a captivate-assisted self-instructional tutorial about “how to use Universal Reader” with the four levels of **the Instructional Transaction Theory (ITT)**. **Level I** of the tutorial consists of an introduction to the Universal Reader (UR). The students will get a brief introduction to the UR software, the basic functions, and basic use of the program along with a demonstration. **Level II** follows the introduction; the students will follow along as the simulation takes them through the UR program while mimicking the actions of the tutorial. **Level III** will require the student to interact with the program and move to the next step with minimal prompting. For example the student will need to open the UR program before the tutorial moves on to the next level. **Level IV** will be completely independent the student will be asked to complete a variety of tasks related to the UR program. The student will have two chances to get an answer correct, if they do not get an answer correct after the second try the tutorial will pull them back to level II. Once they have completed level II again, the student will then have another opportunity to try level IV.

The target audiences for this tutorial are Life Skills 1 students at Ashley High School. These students follow the occupational track at school and have IEPs that require special conditions to be met during instruction. One such condition is read aloud. Students have to rely on at least a human reader to read curriculum materials, tests, and assignments. They have difficulty in reading and are with cognitive disability, taking up 10% of school population. Currently, they do not feel that they need to improve reading skill for daily living. Their learning preference is hands-on and auditory and their reading level is just at 1st grade level. Because they find it difficult they don’t read on a regular basis. Luckily, most students have the basic computer skills required by this self-instructional tutorial, including how to use mouse and to distinguish between the two different sides and functions.

Instructional Objectives of the tutorial are:

- 1 The learners will be able to demonstrate navigating Universal Reader by performing the required steps
- 2 The learners will choose to use Universal Reader to read material to them.

The formative evaluation is also build into our tutorial the three questions were asked: (1) which button on the mouse would you use to highlight? (2) To highlight a sentence which step would you

choose? (3) To open a new computer program you will. Three students were selected for the one on one evaluation. All three students are around the same cognitive ability and were chosen with the same comfort levels around computers. The small group evaluation was conducted the same way as the one-on-one evaluations. The only difference was that the instructor was walking around the computer lab instead of sitting with each student. The computers had the Universal Reader tutorial pre-set. This was done to save time and to be sure the tutorial could be used on the computers before the students got there. The twelve students were chosen by availability and the observations were conducted during their elective period. They all were from the life skills 1 course of study. Amongst the group there were varying comfort levels when using computers but each student seemed genuinely interested and excited about this new program through information collected.

The Universal Reader program and basic functions were explained to the students. It was also explained that this program would be used in place of a person the next time text needed to be read to them.

Implementation Site: the site of implementing the summative evaluation for the self-instruction module, Ashley High School, has the equipment needed for the target learner to complete the module. The school has 5 computer labs with 28 computers each. Each classroom has 3-4 desktop computers. Each computer is installed Universal Reader software and relevant software such as captivate, screen reader, and has Internet connection. Anywhere there is a computer each target learner has access. In the school there are 2 laptop carts available and each is equipped with 15-20 computers, which is used for the instructors to conduct specific instruction or evaluation activities. Concern about and emphasis on the target learners' reading ability among the instructors requires them to improve their reading level to grade level with the technology, thereby an identified need presented. In addition, the school administration is very impressed with the module developed by using the Captivate, which can not only prompt the learners' own efforts on reading level but also relieve the workload of the instructors reading aloud to the learners. So, the school administration is very supportive to evaluate the self-instruction module for ultimate and continuous use with the learners with reading disability among the school.

B. Evaluation Objectives

Summative evaluation objectives of the self-instructional tutorial are: (1) to assess effectiveness of the self-instructional module in enabling students to learn to use Universal Reader, (2) to determine whether the module is successful in get students engaged to use Universal Reader to read on their own. These two main objectives will be assessed through collecting, analyzing, summarizing, and interpreting data on three levels of Kirkpatrick's model:

1. Reaction: To find out acceptance level about this self-instruction module by the learners after using this module.
2. Learning: To determine the degree of knowledge and skills gained for using the Universal Reader from the self-instructional tutorial.
3. Transfer: To determine if after the completion of instruction the participants can read using the Universal Reader and improve their reading level.

As for results evaluation, it can not be done within the school system due to complexity of measures and difficulty of collecting data once students graduated.

Process

A. Methodology

1. Evaluation Model

Kirkpatrick's Four-Level Model is used to conduct summative evaluation for this self-instructional module, which is composed of Reaction, Learning, Transfer, and Results. *Reaction* refers to how well the participants like this module and consists of measuring their feelings and attitudes. This level is measured by analyzing the reaction survey that filled out by the participants using the module for more than three months; *Learning* is defined as knowledge and skills that were

understood and absorbed by the participants, and measured by the post-test comparing the pretest in the formative evaluation; *Transfer* is the succession and development of learning level, more difficult to be measured than the reaction and learning level. The evaluation level determines the degree of the participants using the module in non-class situations. There are a couple of brief questions designed for measuring this level; *Results* is the fourth level of Kirkpatrick's four levels, referring to impacts on the individuals and/or the school. After the summative evaluation, impacts in small scope could be measured. For results of the module in the big scope, it will be measured by extending use of the module in more target audiences or bigger system.

2. Implementation Process

The summative evaluation was implemented in the computer lab at Ashley High School. One of my team in MIT 500 class, who is working at Ashley High School, was asked to deliver and take back questionnaires and post-test. There were 30 participants with reading disability chosen to complete questionnaires and post-test for the summative evaluation on April 16. This module to be evaluated was designed for students with reading disability at Ashley High School and has been used among the students for more than three months. Also the module and hardware/software related have been in place and accessible to students at the school. So reaction and transfer questionnaires, and post-test for learning were distributed directly to the target participants in the class, passing over the implementation self-instructional process for the module on site. The entire process, which students was completing the questionnaires and post-test, was administrated on site by the instructors, to ensure the validity and liability of data. The participants had a seat separate from each other and did the evaluation independently. The instructor on site is responsible for monitoring and getting response back.

B. Data Collection

In response to Kirkpatrick's four levels of evaluation, evaluation data, transfer data, and learning data were collected for the summative evaluation for the module based on analysis of four levels. Questionnaires and Survey are the data collection instruments used to find out what large numbers of people think and feel about the module, and use the module well. The reaction evaluation questionnaires (Appendix A) was developed to collect the feelings of the participants about the module by answering a couple of questions with a scale of 5 to 1, 5 being strongly agree and 1 being strongly disagree. A couple of questions for transfer evaluation (Appendix B) were designed to collect data for the degree of students transferring one situation to another situation. Post-test for learning evaluation (Appendix C) was developed in the form of objective questions regarding how to navigate Universal Reader. The post-test was intended to measure the degree of knowledge and skills the participants gained from using the module.

C. Data Analysis and Findings

Thirty copies of questionnaires and post-test were delivered to the target learners. Of the thirty copies administrated, twenty-seven valid responses were taken back for a 90% return rate. Each item of questionnaires was measured by a rating on a five-point Likert scale where 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, and 1=Strongly Disagree. Each item of post-test came with single choice from two choices: Correct and Wrong. Correctly performed test item was marked with C; and incorrectly performed test item was marked with W. Reaction, transfer and learning data from twenty-seven respondents were analyzed using SPSS version 13.0 software. Frequency, mean and standard deviation of in descriptive statistics procedures were chosen to analyze learners' reactions on the self-instructional module, learners' transfer ability, and to analyze learning performance on the basis of post-test data. (See Appendix D)

Reaction evaluation

It can be seen from the table above that all participants agreed that the module is easy to access and to follow; 85% respondents thought that the module is easy to understand; 80% respondents thought that the module is very helpful to learn how to use Universal Reader; about 75% participants enjoy using the module and are satisfied with it. The value of standard deviation from mean for each item is smaller than +1, which indicates that data dispersion is normal.

Transfer evaluation

Assessment Items	SA	A	N	D	SD	M	SD
This module is easy to access	11 (40.7%)	16 (59.3%)	0	0	0	4.41	.501
This module is easy to understand	13 (48.1%)	10 (37.0%)	4 (14.8%)	0	0	4.33	.734
This module is easy to follow	13 (48.1%)	14 (51.9%)	0	0	0	4.48	.509
I enjoy using this module	11 (40.7%)	10 (37.0%)	4 (14.8%)	2 (7.4%)	0	4.11	.934
The module is very helpful to learn how to use Universal Reader	11 (40.7%)	11 (40.7%)	4 (14.8%)	1 (3.7%)	0	4.19	.834
I am satisfied with this module	6 (22.2%)	14 (51.9%)	4 (14.8%)	3 (11.1%)	0	3.85	.907
I would rather use Universal Reader to read on my own than have teacher read to me	10 (37.0%)	12 (44.4%)	3 (11.1%)	2 (7.4%)	0	4.04	1.091
My read level is improved with using Universal Reader	6 (22.2%)	15 (55.6%)	5 (18.5%)	1 (3.7%)	0	3.96	.759
I would like to have other relevant self-instructional module on the computer	10 (37.0%)	10 (37.0%)	5 (18.5%)	2 (7.4%)	0	4.04	.940

With the limit of time and facilities, the three items in the above table are not complete assessment items for transfer evaluation for this module and were designed to measure awareness and tendency of transferring learning of the module. 81.4% respondents would rather use Universal Reader to read on their own instead of having teacher read after using the module; 11.1% respondents are in the neutral position; only 7.4% respondents still like having teachers read to them. For the third item, 74% respondents would like to have other relevant self-instructional module on the computer. 77.8% respondents thought that they can improve reading level through using Universal Reader, 18.5% respondents are not sure, and only 3.7% respondents disagreed that using Universal Reader can improve their reading level. Anyway, a majority of respondents have a high awareness and tendency to transfer knowledge and skills gained from the module.

Post-test

Items	Correct	Wrong
How to open U Reader program	23(85.2%)	4(14.8%)
How to open documents to read	27(100%)	0
Which button on the mouse would you use to highlight?	27(100%)	0
To highlight a sentence which step would you choose?	25(95.2%)	2(7.4%)
Which icon you would click when you want it to read	27(100%)	0
Which icon you would click when you want it to pause reading	27(100%)	0
Which icon you would click when you want it to stop reading	27(100%)	0

Which icon you would click when you want it to resume reading	27(100%)	0
Which icon you would click when you want it to start over reading	27(100%)	0

With simple and single variables, only frequency was used to analyze nine objective test items related to using Universal Reader. Of nine test items, 2 items were not performed correctly by all respondents. For the item “how to open U Reader program”, 14.8% respondents got wrong answer; for the item “which step chosen to highlight a sentence”, just 7.4% respondents answered incorrectly.

Discussion

A. Interpretation of the findings

A twenty-seven sample chosen above is enough to represent all target learners defined in the previous paragraph at Ashley High School. The data findings above from the sample show that the module is effective and efficient in directing target learners to learn to use Universal Reader software and is very applicable to the target learners at the school. The data findings of post-test revealed that 90% of respondents could navigate successfully Universal Reader by using the module. However, before the module presented almost none of the learners can use Universal Reader software available at the school. Effectiveness of the module could be evidenced fully according to test items based on the complete steps of navigating Universal Reader. In addition to post-test, reaction data findings and transfer data findings evidenced effectiveness and efficiency of the self-instructional module to some degree. 75% and up of respondents agreed the positive description of the module. But with the limited number and the small scope of variables tested they still need validating further in the later time.

As to impact evaluation, it was evidenced by the results of the questions in “transfer evaluation” table. A majority of respondents would rather use Universal Reader to read on their own instead of having teacher read, would like to have other relevant self-instructional module on the computer, and improved reading level after using Universal Reader. It can be seen from the results that if the module is used continuously among the school, the administration will be not concerned about lack of teachers reading to the target learners any longer and the teachers will have extra time towards other classroom activities instead of reading to the learners. This is potential impact of the module on teacher individual and the school organization. Of course, real impact will be obtained by the relevant survey among the school and through extending use of the module among the large target population. Existing data findings are not enough to evaluate the actual impact of the module.

B. Conclusion

First, reaction data findings revealed that a majority of respondents are stratified with and enjoy using the module. Second, the results of post-test indicated that a majority of respondents could demonstrate navigating Universal Reader after using the module. This conforms to original intention of the module for the target learners. Third, transfer data findings showed to some extent that a majority of respondents had a high tendency to transferring their knowledge and skills gained from learning the module. These results shed light on effectiveness of the module that used among the school as well as efficiency.

The summative evaluation for the module is just applicable to the scope of the Ashley High School. To confirm effectiveness of and extend the use of the module among the whole like learners, the Kirkpatrick’s summative evaluation for the module need to be conducted widely and deeply by increasing the number and variety of sample beyond this school.

Appendix A-Reaction

Assessment Items	SA	A	N	D	SD
This module is easy to access					
This module is easy to understand					
This module is easy to follow					
I enjoy using this module					
The module is very helpful to learn how to use Universal Reader					
I am satisfied with this module					

Appendix B- Transfer

Assessment Items	SA	A	N	D	SD
I would rather use Universal Reader to read on my own than have teacher read to me					
My read level is improved with using Universal Reader					
I would like to have other relevant self-instructional module on the computer					

Appendix C-Post-test

Test Items	Correct	Wrong
How to open U Reader program		
How to open documents to read		
Which button on the mouse would you use to highlight?		
To highlight a sentence which step would you choose?		
Which icon you would click when you want it to read		
Which icon you would click when you want it to pause reading		
Which icon you would click when you want it to stop reading		
Which icon you would click when you want it to resume reading		
Which icon you would click when you want it to start over reading		

Appendix D-SPSS (Frequencies)

Easytoaccess

Statistics

Easytoaccess

N	Valid	27
	Missing	0
Mean		4.41
Std. Deviation		.501
Percentiles	100	5.00

Easytoaccess

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4	16	59.3	59.3	59.3
5	11	40.7	40.7	100.0
Total	27	100.0	100.0	

Easytoundestand**Statistics**

Easytoundestand

N	Valid	27
	Missing	0
Mean		4.33
Std. Deviation		.734
Percentiles	100	5.00

Easytoundestand

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3	4	14.8	14.8	14.8
4	10	37.0	37.0	51.9
5	13	48.1	48.1	100.0
Total	27	100.0	100.0	

Easytofollow**Statistics**

Easytofollow

N	Valid	27
	Missing	0
Mean		4.48
Std. Deviation		.509
Percentiles	100	5.00

Easytofollow

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4	14	51.9	51.9	51.9
5	13	48.1	48.1	100.0
Total	27	100.0	100.0	

Enjoyingthismodule**Statistics**

Enjoyingthismodule

N	Valid	27
	Missing	0
Mean		3.59
Std. Deviation		1.394
Percentiles	100	5.00

Enjoyingthismodule

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	11	40.7	40.7	40.7
4	5	18.5	18.5	59.3
5	11	40.7	40.7	100.0
Total	27	100.0	100.0	

Helpfultolearn**Statistics**

Helpfultolearn

N	Valid	27
	Missing	0
Mean		3.96
Std. Deviation		1.091
Percentiles	100	5.00

Helpfultolearn

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	4	14.8	14.8	14.8
3	4	14.8	14.8	29.6
4	8	29.6	29.6	59.3
5	11	40.7	40.7	100.0
Total	27	100.0	100.0	

Satisfaction**Statistics**

Satisfaction

N	Valid	27
	Missing	0
Mean		3.56
Std. Deviation		1.155
Percentiles	100	5.00

Satisfaction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	8	29.6	29.6	29.6
3	2	7.4	7.4	37.0
4	11	40.7	40.7	77.8
5	6	22.2	22.2	100.0
Total	27	100.0	100.0	

Preferusingthemoduleinstead Statistics

Preferusingthemoduleinstead

N	Valid	27
	Missing	0
Mean		4.04
Std. Deviation		1.091
Percentiles	100	5.00

Preferusingthemoduleinstead

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	2	7.4	7.4	7.4
3	3	11.1	11.1	18.5
4	12	44.4	44.4	63.0
5	10	37.0	37.0	100.0
Total	27	100.0	100.0	

Readinglevel

Statistics

Readinglevel

N	Valid	27
	Missing	0
Mean		3.37
Std. Deviation		1.115
Percentiles	100	5.00

Readinglevel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	7	25.9	25.9	25.9
3	9	33.3	33.3	59.3
4	5	18.5	18.5	77.8
5	6	22.2	22.2	100.0
Total	27	100.0	100.0	

Transferthismodule

Statistics

Transferthismodule

N	Valid	27
	Missing	0
Mean		3.85
Std. Deviation		1.134
Percentiles	100	5.00

Transferthismodule

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	5	18.5	18.5	18.5
3	4	14.8	14.8	33.3
4	8	29.6	29.6	63.0
5	10	37.0	37.0	100.0
Total	27	100.0	100.0	

**Frequencies
Openprogram****Openprogram**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	23	85.2	85.2	85.2
W	4	14.8	14.8	100.0
Total	27	100.0	100.0	

Opendocuments

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Highlightbutton

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Howtohighlight

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	25	92.6	92.6	92.6
W	2	7.4	7.4	100.0
Total	27	100.0	100.0	

Readicon

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Pauseicon

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Stopicon

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Howtoresumereading

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	27	100.0	100.0	100.0

Howtostartover

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid C	20	74.1	74.1	74.1
W	7	25.9	25.9	100.0
Total	27	100.0	100.0	