Effects of Combined Repeated Reading and Question Generation Intervention on Young Adults with Cognitive Disabilities

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The University of Iowa

Abstract: The combined repeated reading and question generation procedure is a reading intervention designed to target both fluency and comprehension for students with disabilities. Previous research has demonstrated the effectiveness of the intervention for school age children with learning disabilities. This study extended the research by utilizing the program with three postsecondary learners with severe learning disability and mild mental retardation. In the context of a multiple baseline across participants design, the results indicate that the program may be an effective intervention to improve fluency and comprehension for young adults with cognitive disabilities.

Reading is an area of primary academic skill deficit for young adults with cognitive disabilities (NALLDC, 1999). Traditionally, postsecondary education programs for adults with disabilities have an emphasis on functional skills that prepare them for work and independent living without focusing on reading (Scanlon & Lenz, 2002). As a result, the limited reading proficiency for individuals with disabilities will persist throughout their adulthood and affect all aspects of life (Vogel, 1998). For example, individuals struggling with reading tend to have lower incomes and higher rates of unemployment (Baydar, Brooks-Gunn, & Furstenberg, 1993). Limited reading proficiency may also affect their quality of life and general well-being (Chhabra & McCardle, 2004). Therefore, reading should be an essential instructional goal of postsecondary education for adults with disabilities (National Adult Literacy Summit, 2000).

However, research in the area of reading at postsecondary level is sparse and unable to guide practice (Scanlon & Lenz, 2002). Scanlon and Lenz’s survey of the adult literacy education directors in the United States indicates that reading instruction for learners with disabilities at postsecondary level is predominantly driven by prescribed curriculum, not teachers’ knowledge of effective practice. In addition, only a few of the reported interventions provided by adult literacy programs were validated by research. The results of the survey highlight the critical needs of research in the area of reading for this population.

Researchers have developed a number of reading interventions and materials for school-age students, however, it may not be appropriate to implement these interventions with learners at postsecondary level (Carnine, 1993). On the other hand, there is some evidence that adults with disabilities learn to read the same way that children learn and adult learners may benefit from structured and intensive reading instruction that focuses on fundamental reading skills (e.g., Lyon, 1995; Scanlon & Lenz, 2002; Vogel, 1998).

For example, one defining characteristic of poor reading ability manifested by both school-age children and young adult learners is the lack of reading fluency (NALLDC, 1999). Reading fluency, the ability to read with speed, accuracy, and proper expression, is one of the essential components of reading instruction (National Institute of Child Health...
Reading fluency is considered a predictor of comprehension achievement (Fuchs, Fuchs, & Hosp, 2001). When reading without fluency, individuals are likely to have difficulty with comprehension because they have to use an extensive amount of cognitive resources to focus on decoding individual words, thus leaving not enough capacity to comprehension (Berg & Samuels, 1974). On the other hand, increase in reading fluency does not guarantee improvement in reading comprehension (e.g., Bryant et al., 2000; Homan, Klesius, & Hite, 1993; Rashotte & Torgesen, 1985). Therefore, researchers and educators must address both fluency and comprehension when designing reading intervention for young adults with cognitive disabilities (Vogel, 1998).

The Reread-Adapt and Answer-Comprehend (RAAC) is one such intervention that may be promising for learners with cognitive disabilities at postsecondary level. The RAAC procedure is a reading intervention designed to target both fluency and comprehension for students with disabilities (Therrien, Wickstrom, & Jones, 2006). Several instructional components of the RAAC intervention are considered essential (Rosenshine, Meister, & Chapman, 1996; Therrien, 2004). First, the RAAC intervention addresses reading fluency by having students repeatedly read instructional level materials to a competent tutor who corrects decoding errors. Second, the RAAC intervention targets comprehension by having students answer a series of comprehension questions before and after reading.

Researchers demonstrated that the RAAC intervention increased decoding fluency and reading comprehension for school-age children with and without disabilities (Therrien, 2004). Hua, Hendrickson, and Therrien (2010) extended the research by utilizing the RAAC intervention with three postsecondary learners with autism spectrum disorder. The results indicate that the intervention improved fluency and comprehension for all three participants. Fluency gains exceeded the ambitious levels of growth and transferred to unpracticed passages. In addition, all participants answered more factual and inferential comprehension correctly during intervention. While the utility of the RAAC intervention has yet to be proven for young adults with cognitive disabilities, it seems to be a logical intervention for this population.

The purpose of this study was to assess the effectiveness of the RAAC intervention on reading fluency and comprehension of young adults with cognitive disabilities. Specifically, we addressed the following two questions. (1) Does the RAAC program increase students’ reading fluency on intervention passages? (2) How does RAAC impact factual and inferential comprehension?

Method

Participants and Setting

Three students diagnosed with mild mental retardation and severe learning disability participated in the study. At the time of the study, all three participants were enrolled in a postsecondary education program for young adults with learning and cognitive disabilities at a Midwestern university. The program provided an integrated collegiate experience including academic enhancement, career development, student life, and community life. The program academic coordinator referred the three students for participation in the study because of their reading difficulties.

Before the study, we administered an oral reading fluency (ORF) curriculum-based measurement (CBM) to determine individual student’s instructional reading level. The initial CBM results indicated that using the reading placement criteria recommended by Fuchs and Deno (1982) the highest instructional reading level for Linda was 1st grade, 2nd grade for Sam, and 6th grade for Paul. Table 1 presents a detailed description of each student, including age, gender, ethnicity, disability category, standardized test scores on cognitive ability, and instructional reading levels.

Nine undergraduate students enrolled in a special education methods course participated in the study as tutors. Tutors collected baseline data and implemented the intervention during the one-on-one sessions in three offices (3 m × 3 m). We conducted the experiment three times a week (i.e., Monday,
Wednesday, Friday) and each intervention session lasted for approximately 15 minutes.

Materials
We created 27 reading passages at grades 1, 2, and 6 using the procedures developed by Therrien et al. (2006). We controlled the length of the individual passages so that students reading at the 50th percentile fluency level could finish reading the passages in 1–1.25 minutes (Hasbrouck & Tindal, 1992). The average length of passages for 1st, 2nd, and 6th grade was 86, 113, and 161 words respectively. We also developed eight reading comprehension questions (four factual and four inferential) using the definition by Davey and McBride (1986):

Correct responses to factual questions can be underlined directly in the text without requiring the integration of information from multiple sentences. Correct responses to inferential questions either cannot be located in the text (i.e., cannot be underlined) or require integration of information from multiple sentences (p. 257).

Procedure
In the baseline, the tutor asked the student to read a passage aloud. As soon as the student started to read the first word of the passage, the tutor started the stopwatch. The tutor followed student reading on the tutor’s copy of the passage by recording errors with a slash through the incorrectly read word (including substitution and omissions). If the student hesitated or did not read a word within 3 seconds the tutor told the student the word, and marked it as an error on the tutor’s copy. After the student finished reading the last word of the passage the tutor stopped the stopwatch and recorded the total time. The tutor then removed the passage from the student and asked the reading comprehension questions. The tutor transcribed student’s responses on the tutor’s copy while the student answered the reading comprehension questions orally. Student responses to the comprehension questions were graded by tutor as correct or incorrect using a key of list of acceptable answers. At the end of each session, the tutor thanked the student and gave brief and generic praise (e.g., “Thank you. Good job!”).

During intervention, the tutor implemented the RAAC procedure using a checklist developed by the researchers. The tutor first gave the student a cue card that contained a list of four questions related to the structure of the narrative passages (see Table 2 for cue card questions). The tutor asked the student to read these questions with the following statement: “Before you read the story I want you to read these questions. Pay attention to what you are reading as you will need to answer these questions (the tutor pointed to the questions on the cue card).” The student then read each question aloud.

### TABLE 1
Description of Students

<table>
<thead>
<tr>
<th>Student</th>
<th>Age</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Disability</th>
<th>IQ</th>
<th>Reading Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda</td>
<td>19</td>
<td>Female</td>
<td>Caucasian</td>
<td>Severe LD</td>
<td>92</td>
<td>1st Grade</td>
</tr>
<tr>
<td>Sam</td>
<td>21</td>
<td>Male</td>
<td>Caucasian</td>
<td>Mild MR</td>
<td>65</td>
<td>3rd Grade</td>
</tr>
<tr>
<td>Paul</td>
<td>20</td>
<td>Male</td>
<td>Caucasian</td>
<td>Mild MR</td>
<td>67</td>
<td>6th Grade</td>
</tr>
</tbody>
</table>

| TABLE 2
Question Generation Prompts

How did the main character feel?
Who is the main character?
Where and when did the story take place?
What did the main character do?
How did the main character feel?
As soon as the student finished reading the questions on the cue card, the tutor gave the student a reading passage and asked the student to read the passage aloud three times using the procedures identical to those described in baseline. After each reading, the tutor corrected all the decoding errors using an explicit teaching procedure. The tutor pointed to the word that was incorrectly read and asked the student to read the word after tutor modeling (e.g., “This word is ____. What word?”). After modeling all the incorrectly read words in the passage, the tutor pointed to these words and asked the student to read it independently (e.g., “What is this word?”). This error correction procedure was repeated until the student read these words correctly without additional help. The student also received feedback on fluency, accuracy, and prosody from the tutor (see Table 3 for feedback sheet).

After the student finished reading the passage for the third time, the tutor asked the student to orally answer the generic narrative passage questions on the cue card. If the student did not know the answer or answered the question incorrectly, the tutor provided additional prompts using the following steps. Initially, the tutor prompted the student to read the passage and find the information (e.g., “Can you find the answer in the passage?”). If the prompt did not result in a correct answer, the tutor asked the student to read the sentence where the answer could be found or inferred (e.g., “Can you find the answer in this sentence?”). If the student could not answer the question correctly after reading the sentence, the tutor provided the answer orally and explained the reason. At the end of the session, the tutor asked the student to answer the passage specific comprehension questions and transcribed and scored the student responses using the same procedures as those described in baseline.

**Tutor Training**

We trained tutors to collect data and implement RAAC intervention during the two 3-hour class sessions using the explicit instruction procedure. We task-analyzed the procedure and developed a 14-step checklist. The researchers then modeled each step. After modeling, tutors practiced each step as a group with researcher’s prompts and feedback. Researchers checked individual’s mastery of the procedures during the one-on-one simulated sessions. All tutors reached 100% accuracy on the procedural checklist by the end of the training sessions.

**Experimental Design**

We used a multiple-baseline across subjects design to examine the effects of RAAC procedures on reading fluency and comprehension. This design allowed us to demonstrate the effects of the academic intervention on a skill that could not be reversed (Tawney & Gast, 1984). The baseline period for Linda was 6 sessions, for Sam the baseline was 12 sessions, and for Paul the baseline was 18 sessions. We then sequentially introduced the RAAC inter-

<table>
<thead>
<tr>
<th>TABLE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feedback Sheet Used by the Tutor</strong></td>
</tr>
</tbody>
</table>

| Level 4 | □ I read most of the story in long meaningful phrases. |
| □ I repeated or missed only a few words. |
| □ I emphasized important words or phrases |
| □ I read with expression |
| Level 3 | □ I read most of the story in 3- to 4-word phrases. |
| □ I repeated or missed only a few words. |
| □ I emphasized important words or phrases |
| □ I read some of the story with expression |
| Level 2 | □ I read most of the story in short 2-word phrases. |
| □ I repeated or missed too many words. |
| □ I did not emphasize important words or phrases |
| □ I did not read with expression |
| Level 1 | □ I read most of the story word by word. |
| □ I repeated or missed too many words. |
| □ I did not emphasize important words or phrases |
| □ I did not read with expression |
vention to individual students and measured all three participants’ reading performances concurrently. Linda received 21 sessions of RAAC intervention, 15 sessions for Sam, and 9 sessions for Paul.

Dependent Variables

The primary dependent variable was correct words per minute (CWPM). Correct words per minute was calculated by multiplying the number of words read correctly by 60 and dividing by the number of seconds taken to read the passage. We used CWPM from the terminal (i.e., third) reading of passages during intervention for comparison. We also recorded the number of words read incorrectly and the number of comprehension questions answered correctly across the experimental conditions as secondary dependent variables.

Reliability and Procedural Integrity

We checked both procedural integrity and interobserver reliability during 25% of the sessions across baseline and intervention for each participant. An independent observer evaluated tutor’s treatment integrity using a procedural checklist identical to the script used by the tutor. Procedural integrity was 100% across all tutors. The observer also independently scored student ORF and reading comprehension during the session. Interobserver agreement was calculated by total number of agreements divided by agreements plus disagreements multiplied by 100%. The mean agreement for CWPM was 92%; the mean agreement for reading comprehension was 95%.

Results

Figure 1 presents participants’ CWPM during baseline and intervention. Table 4 presents the mean CWPM and slopes across the experimental conditions. All three participants improved their ORF immediately after they received RAAC intervention. Linda’s ORF increased from a mean of 38 CWPM (range, 24 to 47) in baseline to a mean of 84 CWPM (range, 61 to 108) in intervention. Sam improved his ORF from a mean of 65 CWPM (range, 49 to 83) in baseline to a mean of 90 CWPM (range, 74 to 105) in intervention. Paul’s ORF increased from a mean of 133 CWPM (range, 102 to 154) in baseline to a mean of 162 CWPM (range, 141 to 205) in intervention.

In addition to the level changes, students’ ORF slopes changed between baseline and intervention as well. We calculated slopes in baseline and intervention using ordinary least-squares regression between CWPM and sessions. During RAAC training, Linda reversed her decelerating slope of -2.00 in baseline to an accelerating slope of 1.01. Sam improved his fluency growth with a slope of .90 in comparison to the baseline slope of .47. However, Paul’s ORF had a descending slope of -1.84 in the intervention in comparison to his baseline slope of .56.

Based on the slope values, we calculated CWPM growth per week to examine student’s progress over time. We converted the slope to a weekly CWPM growth rate by multiplying by 3.5 days as the slope value from the regression represents the average change of CWPM for every two calendar days (Fuchs & Fuchs, 1992). We compared weekly CWPM growth with normative realistic and ambitious grade level growth rates. In comparison to the normative grade level ORF growth rate recommended by Fuchs, Fuchs, and Hamlett (1989), Linda and Sam exceeded the ambitious levels of growth in intervention (see Table 5). Before intervention, Linda read with a decreasing fluency at 7 words per week; Sam’s ORF gain was 1.65 words per week. During intervention, Linda increased ORF growth to 3.54 words per week, representing .54 words above the ambitious growth rate. Similarly, Sam’s ORF growth rate was 3.16 words per week during intervention, 1.16 words higher than the ambitious ORF growth rate. Paul’s weekly ORF growth rate, on the other hand, was 1.98 CWPM in baseline and 6.42 CWPM in intervention.

Figure 2 presents total number of words read incorrectly per passage across the experimental conditions. All three students’ decoding errors decreased immediately after receiving RAAC intervention. Linda’s decoding errors decreased from an average of 16 to an average of 3.6 errors per passage in intervention. Sam’s decoding error was reduced from
an average of 8.72 in baseline to 2 errors per passage in intervention. Paul’s average decoding errors decreased from 2.39 in baseline to .2 errors per passage in intervention. Figure 3 and Table 6 present total number of factual and inferential comprehension questions an-
answered correctly by students across the experimental conditions. In general, all participants answered more factual and inferential comprehension questions correctly during intervention.

**Discussion**

Researchers suggest that the importance of reading fluency extends beyond elementary level and it is essential to include effective fluency intervention for struggling readers, regardless of their age (Rasinski et al., 2005). Furthermore, struggling adult readers also need explicit comprehension instruction using passages with controlled vocabulary and difficulty level (NALLDC, 1999). The results of the study suggest that young adults with cognitive disabilities may benefit from systematic and intensive instruction that focuses on fluency and comprehension. The RAAC intervention we implemented in the study addressed both fluency and comprehension needs of this population. Similar to the findings from previous studies (e.g., Hua et al., 2010), all three participants showed gains in oral reading fluency from reading the same passage three times. Reading fluency of the two participants also exceeded the ambitious ORF growth rate. In addition, the intervention improved all three participants’ reading comprehension on both factual and inferential questions.

This study extended the research by utilizing the RAAC intervention with learners who have cognitive disabilities at postsecondary level. In comparison to the RAAC intervention developed by Therrien and colleagues (2006), we modified the procedures in several ways. First, students read each passage three times without using a performance criterion. Second, students read passages at their individual instructional level throughout the intervention without varying passage difficulty. Results of the study indicate that repeated reading may be an effective intervention for young adults with cognitive disabilities. It enhanced reading fluency by increasing learners’ opportunities to respond and practice (Skinner & Shapiro, 1989). In addition, anecdotal observation and reports from the tutors in the study suggest that two of the participants (Linda and Sam) were motivated to read during intervention because they enjoyed knowing that they read faster after each reading. Therefore, the immediate and significant fluency gains during repeated reading may be reinforcing for learners (Vallely & Shriver, 2003). Given the long history of difficulties in the area of reading, motivation is an important factor that contributes to the successful acquisition of new skills for adults with disabilities (Deshler, Schumaker, & Lenz, 1984).

The other critical component of the RAAC

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**TABLE 4**

Mean CWPM and Slopes During Baseline and Intervention

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CWPM</td>
<td>Slope (SEE)</td>
<td>CWPM</td>
<td>Slope (SEE)</td>
</tr>
<tr>
<td>Linda</td>
<td>38 (8.95)</td>
<td>-1.99 (2.17)</td>
<td>84 (13.02)</td>
<td>1.01 (.42)</td>
</tr>
<tr>
<td>Sam</td>
<td>65 (9.73)</td>
<td>.47 (8.4)</td>
<td>90 (8.83)</td>
<td>.90 (.49)</td>
</tr>
<tr>
<td>Paul</td>
<td>133 (15.22)</td>
<td>.56 (70)</td>
<td>162 (20.12)</td>
<td>-1.84 (2.69)</td>
</tr>
</tbody>
</table>

**TABLE 5**

Correct Words Per Minute Weekly Growth

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Realistic</th>
<th>Ambitious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda</td>
<td>-6.99</td>
<td>3.54</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Sam</td>
<td>1.65</td>
<td>3.16</td>
<td>1.50</td>
<td>2.00</td>
</tr>
<tr>
<td>Paul</td>
<td>1.98</td>
<td>-6.42</td>
<td>.30</td>
<td>.65</td>
</tr>
</tbody>
</table>
The procedure we implemented in the study was the feedback from tutors. During intervention, tutors corrected all the decoding errors and practiced these words with the learners. Research syntheses of repeated reading suggest that when the intervention incorporated corrective feedback students made greater gains on reading fluency (e.g., Therrien, 2004). Tutor’s feedback on fluency, accuracy, and prosody may have also increased learners’...
success and motivation because tutors can directly and effectively address the immediate needs of learners with disabilities (Deshler, Schumaker, Lenz, & Ellis, 1984). We also focused on reading comprehension in the RAAC intervention. Researchers suggest that struggling readers benefit from interventions that help them activate prior knowl-

Figure 3. Number of comprehension questions answered correctly across experimental conditions.
edge and organize text (e.g., Mastropieri, Scruggs, & Graetz, 2003). Before each reading, we asked the students to read the questions related to the structure of the narrative passages (e.g., setting, characters, problem, solution and outcome). These questions not only provided an outline of the narrative passage but also helped students take note of the relevant information, thus enhancing comprehension monitoring during reading (Gersten, Fuchs, Williams, & Baker, 2001).

On the other hand, one student’s descending ORF slope in intervention raised concerns regarding the efficacy of the RAAC intervention with this population. There are several plausible explanations for Paul’s performance during program implementation. Among the three students, Paul was the most proficient reader. He read 6th grade level passages with an average of 133 CWPM in baseline and 162 CWPM in intervention. Some researchers (Kuhn & Stahl, 2003) speculate that fluency intervention is most beneficial for students reading below 4th grade level. Second, Paul received the least amount of intervention sessions (9 sessions). Additional intervention sessions may have resulted in an increasing trend. Last, Paul’s decreasing fluency during repeated reading may indicate that he was becoming less motivated to read because the task was not challenging. Researchers found that boredom was one of the drawbacks of repeated reading and may become aversive for older learners (Homan, et al., 1993; Rasinski, 1990).

### Limitations and Future Research

The results of this study must be interpreted within the context of its limitations. First, we did not assess the effects of the RAAC intervention on unpracticed passages. In order for the acquired reading skill to be functional, learners must be able to generalize the skill to unpracticed passages (Vallely & Shriver, 2003). It will be important to evaluate if the effects of the intervention are transferrable to texts that are novel to learners as generalization of the skills to other contents and setting is an important goal of the literacy education for young adults with disabilities (Deshler, Schumaker, & Lenz, 1984).

Second, the modest improvement and a high degree of variability of the number of comprehension questions answered correctly by students warrants further investigation of the effectiveness of the intervention on comprehension. In the study, students had limited opportunity (i.e., eight comprehension questions) to demonstrate their comprehension growth. Therefore, it is possible that students’ performances of reading comprehension were limited by the ceiling effects. In addition, future research should use more sensitive measures to examine the effectiveness of the intervention on reading comprehension (e.g., story retell- Fuchs & Fuchs, 1992).

Third, although the data of the study showed that the RAAC was an effective intervention to improve reading fluency and comprehension for postsecondary students with cognitive disabilities, only three students participated in the study. Researchers found that young adults with reading difficulties have

<table>
<thead>
<tr>
<th>Student</th>
<th>Factual Baseline</th>
<th>Inferential Baseline</th>
<th>Total Baseline</th>
<th>Factual Intervention</th>
<th>Inferential Intervention</th>
<th>Total Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda</td>
<td>3.83</td>
<td>2.83</td>
<td>6.67</td>
<td>3.86</td>
<td>3.62</td>
<td>7.48</td>
</tr>
<tr>
<td>Sam</td>
<td>3.50</td>
<td>2.92</td>
<td>6.42</td>
<td>3.93</td>
<td>3.40</td>
<td>7.33</td>
</tr>
<tr>
<td>Paul</td>
<td>2.44</td>
<td>2.61</td>
<td>5.06</td>
<td>3.33</td>
<td>2.67</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TABLE 6**

Mean Number of Factual and Inferential Comprehension Questions Answered Correctly Per Passage During Baseline and Intervention
large discrepancies of needs and proficiency levels in critical reading skill areas (Vogel, 1998). Thus, further research is warranted to determine whether other individuals with cognitive disabilities would also benefit from the RAAC intervention.

Practical Implications

The emphasis of postsecondary education for individuals with cognitive disabilities should directly contribute to meaningful outcome for the adult. Evidence suggests that literacy proficiency can enhance qualities of economic and social living for these individuals. Therefore, providing basic skills instruction using research-based intervention should be a priority for educators working with young adults who struggle with reading. The results of this study suggest that young adults with learning disabilities and mild mental retardation can benefit from an intensive reading program that addresses both fluency and comprehension (Zigmond, 1990). Teachers can improve fluency by providing students with opportunities to read connected text repeatedly while correcting decoding errors. Reviewing and answering comprehension questions related to the structure of the story during reading can also enhance reading comprehension.

The RAAC procedure we implemented in the study included features identified by research as essential components of a dynamic intervention program (Deshler et al., 1984). First, we used CBM to progress monitor student reading fluency and comprehension throughout the intervention. Second, we collected procedural integrity data to check the actual implementation of the intervention. Third, we asked the tutors to write a reflection paper every week to keep us apprised of the consumer satisfaction. This feedback loop ensured that the intervention was dynamic and responsive to the needs of the consumers of the program. Therefore, the RAAC intervention may be a promising basic literacy intervention model for young adults with cognitive disabilities.

References


Hua, Y., Hendrickson, J. M., Therrien, W. J. (2010). Effects of combined repeated reading and question generation intervention on young adults with autism and
cognitive disabilities. Manuscript submitted for publication.

Received: 19 October 2010
Initial Acceptance: 21 December 2010
Final Acceptance: 9 March 2011