



Schmidt and Carbol Consulting Group, Inc.

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# Braincloud Project: Research Report

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Student Progress Toward English Language  
Acquisition in a Sample of Thai Schools

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# Braincloud Project: Research Report

## Student Progress Toward English Language Acquisition in a Sample of Thai Schools

### Executive Summary

This research report provides an overview of the results of a yearlong effort to assess the relative English language acquisition and proficiency of Grade 1 students participating in a project lead by Braincloud. This project involves the provision of English language instruction in selected Thai schools in the Yala province of southern Thailand. The project has a broader objective which is to promote the acquisition of ASEAN English and thereby further the economic prosperity of Thailand.

Although the Thai curriculum includes all four English language domains (i.e. Speaking, Listening, Reading and Writing) it calls for young children (i.e. those in the earliest Grades such as Grade 1) to focus on Speaking and listening skill acquisition. As a result, the instructional approach adopted for the Braincloud project focuses on speaking and listening. Over time, reading and writing skills will be incorporated. The Braincloud approach uses a combination of learning resources loaded onto tablets and distance-delivered online and blended learning activities provided by native English language speakers (teachers) via a web conferencing platform.

The opinions of parents, teacher, and school directors provide a rich source of information about the Braincloud approach and its value. Parents who have been asked about the Braincloud project indicate that it is helping their children to become better English language speakers and they want the program to continue. Teachers have commented on the two-way communication that occurs between the Braincloud teacher and the students. This is in contrast to other distance learning programs that have been used in the past. School directors have observed that students are gaining in self-confidence in terms of their speaking ability.

To determine the impact of this project on the English language acquisition of students, the Schmidt and Carbol Consulting Group was contracted by Braincloud to undertake a research study and report on the results. The LAS Links Placement Test was selected and used as a measure of English language proficiency. Samples of students involved in the Braincloud project and a comparison group of students receiving a more traditional instructional approach (the Control group) were selected as subjects for the research. In order to align with the Thai curriculum and to be consistent with the instruction that had been provided only the speaking and listening skills of both groups were assessed.

The research showed that:

1. The Braincloud group outperformed the Control group on both listening and speaking tasks in spite of the fact that students in the Control Group were generally older (by as much as two years in some cases) ;
2. The differences observed between the two groups are both statistically significant (more so for Listening than Speaking; Speaking (F=19.33; p=0.0000218); Listening(F=19.33; p=0.0000218). These differences are important since they point to the impact that using native English speakers and technology can have on the acquisition of English language skills; and
3. Most students in the Braincloud group are at the beginning or early intermediate stages of proficiency (for their Grade level) as defined by the LAS Links assessment. Those in the control/comparison group are generally at the beginning stage of proficiency in terms of their listening and speaking skills.
4. In the future, it will be necessary to continue to conduct on-going research into the English language acquisition of students involved in the Braincloud project and to expand the assessment of English language proficiency to include reading and writing. This should be done at a time when these components of the curriculum have been subject to instruction and learning.

The researcher concluded that students exposed to the Braincloud approach are more likely to achieve higher levels of English language proficiency and will do so more quickly than students who are exposed to more traditional approaches to English language learning.

## Introduction

The Schmidt and Carbol Consulting Group was contracted in March 2014 by Braincloud to provide research services related to the implementation of a technology-based English language learning project in Thailand. This report includes the following sections:

- Background (i.e. the context for the Braincloud Project);
- Research design and methodology used (including a description of the instructional approaches used by Braincloud and a comparison group of students, the tests considered for possible use in the study, and a rationale for the test selected);
- Test administration (details about how the test was administered, the training involved, and accommodations that had to be made);
- Results (an overview of the test results and statistical analysis used); and
- Summary and conclusions.

An overview of the project plan for this research study (as modified due to shifts in timelines) is provided in Appendix 1.

## Background

### Context for the Braincloud Project

There have been a number of large-scale efforts globally to introduce ‘1 to 1’ computing in education. Most of these initiatives (e.g. Uruguay, Peru, Argentina, Portugal, and Turkey) have chosen to use laptop technologies. Thailand has been unique having chosen to use tablets as one of the technologies that will be used to support learning. The One Tablet Per Child (OTPC) initiative was launched in 2012 with the introduction of tablet computers beginning with their introduction to first Graders. There is a commitment, over time, to introduce tablets across the Thai education system as a way of providing equitable access to education across the county. Training for teachers in the use of the tablets has also been promised.

As a part of this initiative, Braincloud established a project involving schools in Yala province (southern Thailand). The subjects for the project are Grade 1 students who will be receiving English language instruction using a combination of resources that will be loaded onto tablets and distance-delivered online and blended learning activities provided by native English language speakers (teachers) via web conference.

### Comments from Parents, Teachers, and School Directors

An important consideration in this research project are the perceptions of parents, teachers, and school directors concerning the value of the Braincloud approach. The following paragraphs provide a brief glimpse into how the project is viewed. Although not a formal part of the research design, the opinions of parents, teacher, and school directors also provide a rich source of information about the Braincloud approach and its value. Additional comments from parents, teachers, and school directors concerning the Braincloud project and its impact are found in Appendix 2.

Comments from parents of children involved in the Braincloud project, their teachers, and school directors have been very positive. Parents who have been asked about the Braincloud project indicate that it is helping their children to become better English language speakers and they want the program to continue.

Teachers and school directors have been more specific in their comments about the strengths of the Braincloud approach. For example, teachers have commented on the two-way communication that occurs between the Braincloud teacher and the students. This is in contrast to other distance learning programs that have been used in the past. Student engagement is also a key strength of the program. Students who would otherwise not try to come to school during the monsoon rains are motivated to come to school. In addition,

teachers have commented on the importance of correct English pronunciation as an important advantage for students involved in the Braincloud project.

School directors have observed that students are gaining in self-confidence in terms of their speaking ability. Apart from the Braincloud project, students have little opportunity to practice English with native English speakers and are often shy and afraid of making mistakes when they encounter English speakers. Braincloud is helping them to overcome their reluctance to speak English. The result is that students are eager to come to class and learn English because they are enjoying learning the language.

## Research Design & Methodology

An important aspect of this research project involves determining the extent to which the Braincloud instructional approach positively impacts the acquisition of English by the students to the exclusion of other potentially intervening variables.

As is the case with most educational research studies, there are practical limitations which preclude researchers from selecting the strongest possible design. The most common limitations in educational research relate to the inability to create control groups and to randomly select students to receive variations of an instructional treatment. Control and randomization will enable researchers to arrive at more valid conclusions concerning the effect of the instructional treatment. In many cases, it may not be possible to exclude any students from receiving instruction, particularly when the instruction is for their benefit. Other common issues relate to the inability to control for intervening variables. In the case of this project these variables may include the English capability of the teachers and adults that students interact with on a regular basis and the degree to which individual students are exposed to English through their daily lives.

Another important consideration in the design of research associated with this project is to ensure that the data collected are credible in the eyes of project sponsors and educators most directly involved in the delivery of the instructional program. In other words, the research tools and methods used must have both construct and content validity. One of the challenges in this regard is that there are very few standardized English language proficiency instruments available and none of the instruments have been normed using a Thai student population. A still smaller number have been developed for use specifically with young children. There are also many vocal critics of standardized tests and what they purport to measure.

Notwithstanding these challenges and potential concerns, it should be possible, within limitations, to determine the extent to which the instructional program contributes to the English language proficiency of the students involved in the project.

### Methodology

Three research design options were originally considered for this project. These were:

- 1) One group Pre-test Post-test Design
- 2) Post-test Only Control Group Design
- 3) Pre-test Post-Test Control Group Design

After consideration of the pros and cons associated with each of the designs (a number of which are outlined in a separate document entitled *Research Design Proposal*), the second option (Post-test Only Control Group Design) was selected.

This design controls a number of potential sources of invalidity such as history, maturation, the effect of testing, regression, subject selection and interaction effects. The design can be represented by the following figure:

*Figure 1: Research Design*

Experimental Group 1	R	X	O <sub>1</sub>
Control Group 2	R		O <sub>2</sub>

In this figure R represents the random selection of participants into either the experimental (or treatment) group, X represents the treatment, and O<sub>1</sub> and O<sub>2</sub> represent the administration of the assessment or test after a period of time.

The following sections provide a brief description of the instructional approaches used in the Braincloud Project (the experimental group) and by classes in a comparison group (the Control group).

### **Instructional Approach Used in the Braincloud Project**

The English language instructional approach used in the Braincloud project is a distinct departure from traditional approaches used in Thailand. The project provides a student-centred, competency-based approach to create a learning environment that is collaborative and meaningful for the students and teachers. The use of a synchronous e-learning environment enables students to receive their English language instruction from English language speakers along with the support of high quality resources (on tablets) that are aligned with the requirements of the Thai curriculum. A modular approach is used to address the four critical areas of instruction: listening (with the support of the online teachers), reading, speaking, and writing. For young children (i.e. those in the early grades such as Grade 1), the initial emphasis is on the acquisition of speaking and listening skills.

The instructional model used in the Braincloud project requires the development of a team of teachers to produce online activities for tablet access by students and teachers and the development of workbooks and video lessons. Local teachers also were required to be trained in approaches that were collaborative and inquiry-based. Again, this is a departure from traditional instructional approaches used in Thai classrooms.



To begin this process, local teachers were provided with a three-day training session which was designed to challenge their thinking about classroom delivery and student engagement and provide demonstrations and examples of online learning. Local teachers were challenged to put what they had learned into action and to demonstrate their learning by putting themselves in the place of their students.

### **Instructional Approach Used in the Comparison (Control) Group**

As a part of this research study, a comparison group of students (the Control Group) who were exposed to a more traditional approach to English Language Learning was selected. These students were older on average than the Braincloud group by approximately one year and were in Grade 2. Students in the comparison group studied English for one 50 minute period per week. Students in the comparison group used a resource called *Express English 1 (Activity Book)*. This resource is published by Express Publishing, a UK publisher. The materials have been modified to include Thai contexts to make the lessons they contain more meaningful for students. Students in the comparison group received their English language instruction from native Thai speakers. The extent to which these teachers were themselves proficient in English was not clear to this researcher.

### **Sampling**

In order to ensure comparability between the two groups selected for participation in the study, both groups should be randomly selected from rosters of students from participating schools. Given the practical limitations of undertaking a sampling of this nature, it was decided to limit student selection to the class level.

The following samples of students were selected for participation in the research study:

- Braincloud Group (three classes)
  - Baan Thasab – Grade 1/1 (20 students out of a class of 23)
  - Wat Phuttha Phum (Thetsaban 3) - Grade 1/1 (21 students out of a class of 24)
  - Thanawithi School T4 - Grade 1/2 (29 student out of a class of 31)

A total of 70 students in the Braincloud group wrote the LAS Links Placement tests (Speaking and Listening only). Students not writing were absent on the day of test administration.

- Control Group (two classes)
  - Thanawithi School T4 - Grade 2/3 (35 students out of a class of 36)
  - Thanawithi School T4 - Grade 2/4 (35 students out of a class of 36)

As was the case with the Braincloud group a total of 70 students in the Control group wrote the Speaking and Listening tests. Two students were absent on the day of test administration.

It is important to note that students in the Control Group were on average a minimum of one year older and in a number of cases two years older than those in the Braincloud Group. Should the Braincloud Group demonstrate greater English language acquisition than the Control Group,

the fact that the Braincloud Group was considerably younger would provide significant evidence for the value of the Braincloud approach.

### Test Selection

A number of possible standardized measures of English language acquisition or proficiency were considered during the initial phases of this research study. These measures were:

- The Woodcock-Munoz Language Survey (WMLS) (Revised 2011). This test was rejected since all components of the test must be individually administered and would involve considerable examiner training prior to administration.
- IDEA Proficiency Test (IPT) from Ballard & Tighe Publishers. Although this test battery has less onerous training and administration requirements than the WLMS it was also rejected since the overall time of test administration (4 hours/student) was considered to be too long.
- LAS Links Placement Test (2005) from CTB-McGraw-Hill. The LAS Links K–12 Placement Test covers speaking, listening, reading, and writing, and results show three proficiency levels: Not Proficient, Approaching Proficiency, and Proficient. Administration of LAS Links English for students in the Approaching Proficiency range offers a diagnostic view of proficiency in English. The complete test battery takes 30 minutes or less to administer and provides data that can quickly determine progress towards English language proficiency. For these reasons, the LAS Links Placement Test was selected for this research project.

### About the LAS Links Placement Test

The LAS Links Placement Test was designed for the purpose of placing students into instructional programs that are appropriate to their level of English language proficiency. As such it was considered to be a suitable measure for students involved in the Braincloud project. The Placement Test targets students with abilities at the intermediate and proficient cut points of the full LAS Links test battery<sup>1</sup>. Students receiving a perfect score are considered proficient. The Placement test includes four domains: speaking, listening, reading, and writing. These domains are assessed over the course of 25 items. The assessment provides educators with an opportunity to analyze linguistic characteristics (i.e. vocabulary, grammar, and syntactic structure) contained in test questions and scoring rubrics.<sup>2</sup>

It should be noted that the LAS Links Placement Test does not allow for the transformation of raw scores to a common scale that is aligned with proficiency levels in the way that the full LAS Links (Form A or B) test battery does. For curriculum alignment purposes only the Speaking and Listening sub-tests were administered. While this limits the extent to which conclusions can be drawn concerning the overall English language proficiency of students in this research study, it does provide a good indicator of students' speaking and listening skills.

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<sup>1</sup> For a full description of LAS Links Proficiency Levels and Descriptors see (CTB/McGraw-Hill, 2005). See this reference also for the research background that underpins the LAS Links test battery.

<sup>2</sup> A complete description of the research base for the LAS Links test batteries is included in (CTB/McGraw-Hill, 2005).

## Test Administration

### Examiner Training

Examiners for the LAS Links Placement Test administration included Braincloud staff who were involved in providing real-time online English lessons at a distance. These individuals were all experienced English language teachers with a native command of the English language. To ensure the validity of the results it was important that native English speakers were used to assess the English language responses of students.

Prior to the administration of the LAS Links Placement Test, examiners were provided with an online training session to familiarize them with the test battery and to provide them with an opportunity to ask questions related to the test and its administration. This training session was held on January 23, 2015 and was conducted by the author of this report.

The following topics were covered during the course of the training session:

- Overview of the LAS Links Placement Test
  - Why the test was chosen
  - What the test measures
- The role of examiners
- Student sample selection
- Accommodations
- Test Administration
  - Before Testing
  - During Testing
  - After Testing
- Return of the test materials

Each of the examiners was provided with a copy of the Examiner's Guide and the K-1 Placement test prior to the training session. The guide outlines the following Examiner responsibilities. Examiners are to:

- Provide students and local teachers with all necessary materials to write the tests (i.e. student test booklets, pencils with eraser);
- Ensure that the tests are administered according to the instructions outlined in the Examiner's Guide. This involved reading instructions to students from either the student test booklet (in the case of the Speaking test) or from the Examiner's Guide (in the case of the Listening, Reading and Writing tests); and
- Complete the student profile sheets for all tests administered.

## Test Accommodations

Given the amount of instructional time since the beginning of the Braincloud project, it was clear that it would be necessary to allow a number of accommodations related to the administration of the LAS Links Placement test.

Between the beginning of the school term in the fall of 2014 and the time of test administration during the week of February 9-13, 2015, students had received a limited amount of instruction in English language reading and writing. Most of the emphasis in the program during an 18 week period was placed on speaking and listening. As a result only the Speaking and Listening sub-tests of the LAS Links Placement Test battery were administered.

In addition, examiners and local proctors were allowed to provide limited translation of the test instructions for students but were not permitted to translate the actual test items.

Examiners provided some additional information concerning the administration of the Speaking and Listening test to both the Braincloud Project students (Grade 1) and the Control Group (Grade 2). This information is provided in Appendix 3.

## Results

### Data Analysis<sup>3</sup>

The LAS Links Placement Test was administered to three classes of students who were part of the Braincloud program and two classes of students who were selected as a Control group. The schools, Grade designations and number of students in each of the groups taking the test is outlined in the following table:

*Table 1: Overview of Braincloud and Control Groups*

Group	School	n (number of students) by gender		Total
		n (male)	n (female)	
Braincloud	Baan Thasab - Grade 1/1	13	7	20
	Wat Phuttha Phum (Thetsaban 3) - Grade 1/1	12	9	21
	Thanawithi School T4 - Grade 1/2	9	20	29
Control	Thanawithi School T4 -	18	17	35

<sup>3</sup> A set of data tables is provided in Appendix 4.

Group	School	n (number of students) by gender		Total
		n (male)	n (female)	
	Grade 2/3			
	Thanawithi School T4 - Grade 2/4	18	17	35
Totals		70	70	140

The age range and average ages of students in the two groups was quite different. This was not surprising given that students in the Braincloud group were in Grade 1 while those in the Control group were in Grade 2. The approximate age range and average ages of students in the two groups is summarized in the table below.

*Table 2: Ages of Students in the Braincloud and Control Groups*

Group	Age Range	Average Age
Control	7 years, 3 months – 9 years, 7 months	8 years, 7 months
Braincloud	6 years, 9 months – 8 years, 5 months	7 years, 5 months

The age difference between the two groups is important since the older group (i.e. the Control group) may have had the opportunity to acquire greater proficiency in English over time (either through direct instruction or in their daily lives) than the Braincloud group.

As mentioned earlier in this report, of primary interest is determining whether those students who have been exposed to English language learning through the technology-enhanced approach used in the Braincloud project outperformed students who had been exposed to more traditional approaches to English language learning.

The raw test scores for the two groups show that the Braincloud group, on average, outperformed the Control group on both the speaking and listening tasks in the Placement test. When the difference in the average ages of the two groups (i.e. the Braincloud Group was considerably younger than the Control Group by one year on average and in some cases by two years) there is clear evidence for the value of the Braincloud approach.

The following table provides a summary of the descriptive statistics that illustrate these differences.

*Table 3: Raw Score Means and Standard Deviations – Speaking and Listening*

Group	Speaking (max of 10)		Listening (max of 6)	
	Mean	Standard Deviation	Mean	Standard Deviation
Braincloud	2.76	2.13	3.39	0.91
Control	1.39	1.51	3.01	1.08

The following conclusions can be drawn from these summary results:

- On average, the Braincloud group outperformed the Control or comparison group on both the Speaking and Listening assessments;
- The difference between the two groups was greater for the Speaking assessment than the Listening assessment; and
- Based on the standards established by the test publisher neither group could yet be considered proficient (given the time that both have received English language instruction that is not surprising). However, the Braincloud group was moving toward proficiency to a greater extent than the comparison (Control) group.

In order to determine whether the differences between the two groups were statistically significant, a single factor analysis of variance (ANOVA) was undertaken. The results of this analysis for both the Speaking and Listening tests appears in the tables below.

*Table 4: Summary of Single Factor ANOVA Analysis (Speaking Test)*

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Braincloud Group	70	193	2.757143	4.541615
Control Group	70	97	1.385714	2.269358

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	65.82857	1	65.82857	19.33015	2.18E-05	6.822152
Within Groups	469.9571	138	3.405487			
Total	535.7857	139				

In terms of performance on the Speaking test, these results show that the students in the Braincloud group performed significantly better than those in the comparison group and that this difference was statistically significant at the  $p=0.01$  level. In other words there is a 99% chance that this difference is real. The F test performed indicates a value (19.33015) that is higher than the critical value (6.822152) to make this claim. These values are highlighted in yellow in the table above.

*Table 5: Summary of Single Factor ANOVA Analysis (Listening Test)*

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Braincloud Group	70	237	3.385714	0.820082816
Control Group	70	211	3.014286	1.173706004

  

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	4.828571429	1	4.828571	4.843613707	0.02941119	6.82215229
Within Groups	137.5714286	138	0.996894			
Total	142.4	139				

The differences in the listening test results are less clear. While the results still show that the students in the Braincloud group outperformed those in the comparison group by a small amount these differences are not statistically significant at the  $p=0.01$  level as noted by the F test values highlighted (in yellow) in the above table. However, at the  $p=0.05$  level of statistical significance (or the 95% confidence interval), the differences between the two groups are statistically significant.

In order to determine whether there were any statistically significant differences between the speaking and listening scores within each group, the raw scores were converted to z-scores. This conversion places the scores on a common scale and was necessary since the Speaking test was scored out of 10 points and the listening test out of 6 points. No significant difference was found for either group in terms of the speaking and listening scores. However, it was interesting to note that there was a very weak correlation between speaking and listening scores. Again, this is not necessarily surprising given the accommodations and the fact that both groups were more able to respond to the listening questions than the speaking questions.

A discussion about the importance and potential meaning of the differences (or lack of differences) is provided in the next section.

## Summary and Conclusions

As mentioned earlier in this report, the LAS Links Placement Test does not allow for the transformation of raw scores to a common scale that is aligned with proficiency levels in the way that the full LAS Links (Form A or B) test battery does. Also, in the context of this project and for curriculum alignment purposes only the Speaking and listening sub-tests were administered. While this limits the extent to which conclusions can be drawn concerning the overall English language proficiency of students in this research study, it does provide a good indicator of students' speaking and listening skills.

Based on the research conducted, there are several conclusions that can be drawn from the data that were collected and analyzed. These are:

1. The Braincloud group outperformed the control/comparison group on both listening and speaking tasks in spite of the fact that students in the control/comparison group were generally older (by as much as two years in some cases) and could potentially have had a greater exposure to English language learning both in school and in their daily lives.
2. The differences observed between the two groups are both statistically significant (more so for listening than speaking) and important since they point to the impact that using native English speakers and technology can have on the acquisition of English language skills. The Braincloud group performed significantly better on the Speaking test than students in the comparison group. This difference was statistically significant ( $F=19.33$ ;  $p=0.0000218$ ) which is well beyond chance (i.e. beyond the 99% confidence level). In terms of the listening test, similar but less dramatic results were found. The Braincloud group performed better on the listening test than students in the comparison group. This difference was statistically significant ( $F=4.843$ ;  $p=0.029$ ) which is beyond the 95% confidence level.
3. It was clear to this researcher that the Braincloud instructional approach has had a greater impact on English language acquisition than the traditional instructional approach that students in the control/comparison group experienced.
4. At the same time, it is important to recognize that this one measure (i.e. the LAS Links Placement Test) does not indicate that any of the students in either group are proficient in the English language at this time. Most students in the Braincloud group are at the beginning or early intermediate stages of proficiency (for their Grade level) as defined by the LAS Links assessment. Those in the control/comparison group are generally at the beginning stage of proficiency in terms of their listening and speaking skills.
5. In the future, it will be necessary to continue to conduct on-going research into the English language acquisition of students involved in the Braincloud project and to expand the assessment of English language proficiency to include reading and writing. This should be done at a time when these components of the curriculum have been subject to instruction and learning.

With additional instruction and time, this researcher is convinced that students exposed to the Braincloud approach will achieve higher levels of English language proficiency and will do so more quickly than students who are exposed to more traditional approaches to English language learning.



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## Appendix 1: Project Plan & Deliverables

The research project is broken down into three distinct phases. Each phase includes a number of tasks and activities.

### Phase 1 Activities

Phase 1 Activities are:

- ✓ Contact test publishers to obtain samples of test items, administration guides, and professional learning options associated with the tests, and a definitive price quote.
- ✓ Based on the information provided determine which assessment tool should be used in the program.
- ✓ Select students for each group (treatment and control) based on student rosters.

### Phase 2 Activities

- ✓ Develop local test administration procedures and protocols (including test administration timing and accommodations).
- ✓ Develop training requirements for onsite staff and test invigilation.
- ✓ Develop protocols for test scoring.

### Phase 3 Activities

- ✓ Train test examiners in the administration of the LAS Links Placement Test. Training to occur during the late January 2015 via web-conference (ZenLive).
- ✓ Administer the tests (during a one week period in February 2015 (Feb 9-13, 2015))
- ✓ Complete student profile sheets, scan, and email copies to Dr. Carbol for analysis.
- ✓ Review and analyze test results.
- ✓ Write a research report which includes statistical analysis, conclusions and recommendations.

### Project Deliverables, Timelines, and Milestones

The following table provides an overview of the deliverables and milestones and timelines associated with the project. The deliverables were adjusted based on a shift in test administration dates from Sept – Oct 2014 to February 2015.

*Table 6: Deliverables, Timelines, and Milestones*

Deliverables	Timelines	Milestones
Contract Negotiation Period	April 1 - 30, 2014	<ul style="list-style-type: none"> <li>• Preliminary research proposal prepared and amended as per discussions with project lead</li> <li>• Contract signed</li> </ul>

Deliverables	Timelines	Milestones
Phase 1	May 1 – June 13, 2014	<ul style="list-style-type: none"> <li>• Contact test publishers re: samples and price quote</li> <li>• Determine assessment tool to be used</li> <li>• Select students for each group (treatment and control) based on student rosters</li> </ul>
Phase 2	July 1 – August 31, 2014	<ul style="list-style-type: none"> <li>• Develop local test administration procedures and protocols</li> <li>• Develop training and invigilation requirements for onsite staff</li> <li>• Develop or acquire test scoring protocols</li> </ul>
Phase 3	Nov 1, 2014 – March 15, 2015	<ul style="list-style-type: none"> <li>• Train examiners (late January 2015) via web-conference.</li> <li>• Score student papers</li> <li>• Review test results</li> <li>• Analyze test results</li> <li>• Write research report including statistical analysis, conclusions and recommendations</li> </ul>

## Appendix 2: Comments from Parents, Teachers, and School Directors<sup>4</sup>

### Parents

#### **Three Parents (Baan Hua Klong School/Naradhiwas)**

- She hopes that her children will someday speak English. English is important for her children's future and they really do love learning it.
- She like the programme it is really helping her child to be better in English. She hopes that her child will one day be fluent in English.
- She sincerely hopes that the Braincloud programme continues for years and even generations to come.

### Teachers

#### **Local Teacher Pattama Kaewpim (Baan Bang Pla Mor School / Pattani Province)**

- They have tried distance learning (King Project) before but it was only 'one-way' communication. But Braincloud is good because it is 'two-way' and the students can actually speak to the teacher as well. I do not need to call the online teacher asking for anything after the session.

#### **Local Teacher Nittaya Hayetae (Baan Naket School / Pattani province)**

- There is a child who has a learning disability and is barely speaks. Only just now in Grade 1 has begun to gain the confidence to speak up. Although he is still quite shy, he loves doing the writing exercises in the tablet. He never misses any Braincloud sessions.

#### **Local Teacher Royda Abdul-Latae (Baan Ta Saap School / Yala province)**

- The positive effect of Braincloud can be seen clearly in students with poor attendance. BC has created excited and interest and improved the attendance of all students. All students always come in before class start and they are willing to learn English with our BC teachers.

#### **Local Teacher Busarate Kachaphol (Wad Rachasamosorn School / Narratiwat province)**

- The students are so excited by BC that they will do whatever it takes to make it to school. Even if there are harsh weather conditions such as heavy monsoon rain.

#### **Local Teacher Krisana Juntanawol (Anubaan Ra Ngae School/ Narratiwat Province)**

- One day there were grade 5 students who saw the BC students learning and then became curious. The teacher had them compete against each other using English. She

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<sup>4</sup> These comments are unedited and were collected by the Braincloud team.

pointed to things in the room and asked what they were (desk, window, etc). The grade 1 were able to answer in English whereas the grade 5 students weren't able to answer at all.

**Local Teacher Nadilah Torha (Baan Hua Khlong School / Narratiwat Province)**

- The online teacher is important because they pronounce words with the 'correct' accent. The classroom teacher is even careful to not speak too much for fear of the students imitating her accent, and not that of the online teacher. The workbook and tablet are elements of this teaching method that are necessary. The kids enjoy the tablet because it is like playing a game.
- Some words are difficult for Thai students to pronounce such as Apple and Strawberries. But her students can pronounce the correct accent which she doesn't need to teach them how to do that.

**School Directors**

**School Director Mr Preecha Yacharad (Baan Manangyong School / Pattani Province)**

- Braincloud programme has helped his students gain self confidence in their speaking abilities.
- Normally students are shy and reluctant to speak to foreigners but the Braincloud students feel comfortable and confident enough to speak with the online teacher.

**School Director Ms. Wanpen Sae-Tae (Baan Thasap School/Yala)**

- Students come early to English class because they enjoy the online teacher and activities.
- This is satisfying because her students have had very little exposure to native English speaker such as tourists and are afraid to speak in case they make mistake.

## Appendix 3: Examiner Observations – Braincloud Group & Control Group<sup>5</sup>

### Speaking Exam

After meeting the Grade 1 and Grade 2 students of Thetsaban 4 Thana Withi School, we were impressed with the school environment and the school municipal program. As we toured the school, we can see that English is subtitled after almost all the signage on school campus. Most of the Grade 2 students had no exposure to English or very little prior to this examination or even prior to attending Primary school. Grade 1 however, has been with Braincloud for a semester.

#### The exam questions:

##### **What is it? (Repeated 2x)**

**Grade 1:** These students have been in the Braincloud program for over 4 months now and they are thriving with vocabularies. Some of them were not sure as to which vocab to use to answer. They were definitely more expressive in English ideas and poised to answer in English. Most of them could remember and did say the following: spoon, water, yellow, mother, sit, stand, blue, home, school, etc. These are just some of the answers that were given. If they student didn't know, they most sit quiet even if we tweaked the question to trigger a response.

**Grade 2:** most of them answered in Thai right away, seems eager to show and tell, but when asked to say the answer in English, they would smile or stay quiet. When we rephrased the question to 'what else do you see?' or 'what color is this?' to see if it would trigger any response, which it didn't. Out of 36 students in a class about 5-7 would have some sort of response for this. A few students who were able to answer told us that they were getting tutored privately after school.

##### **What is it used for? What do we do with it? (Repeated 2x)**

**Grade 1:** we had already learned food, fruits, and kitchen, some of the basic vocabularies since the beginning of the semester. Most of them had a shortened answer for these questions. Although not perfectly responded, they were brave enough to speak out.

**Grade 2:** Most of the questions are easily answered if they were translated in Thai. They were able to understand the concept of what we were trying to ask them to say. With such limited vocabulary, most of these students didn't know the word food, mother, car, blue, yellow, kitchen, home, etc. About ten or so students did tell us that when they have their assembly in

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<sup>5</sup> This appendix includes the observations of Braincloud teachers who were asked to serve as examiners for the administration of the LAS Links Placement test. The observations are unedited.

the morning, the teachers would say in English “ students STAND UP” or student SIT DOWN. For the photo with the lady getting out of the car, most of them used this factor to help respond.

### **What do we say when we want to ask something? Why do we raise our hand in class?**

**Grade 1:** Answers that were given: teacher, book, pencil, speak and etc. the amount of response depleted quite heavily in this question as they cannot yet form longer sentences.

**Grade 2:** With barely any exposure to English, they could hardly say anything to respond to this question. Quite difficult.

### **Listening Exam**

**Grade 1:** These students were running late on their school/lunch schedule so we had to accommodate. We tested the whole class at once with local teachers monitoring. The story section was difficult although we could see that Grade 1 is more familiar with the words being used because they were actually looking down at the test papers while we were reading. They weren't looking for hints like Grade 2. They understood what NAME meant because we have been speaking with each other the whole semester. A few of them actually at the 'dog's name' question.

**Grade 2:** Since the speaking exam took so long, we had to split the groups up into 10/15/15 in order for their school schedule to move smoothly and for us to work efficiently. The listening exams were monitored by two local Thai teachers and the proctor. They seem to be able to understand basic animal and body vocabulary. Most of them seem to understand words such as *dog and ear*. Although you could sense confusion when we said 'write' or 'word', and they certainly didn't know the word 'paint'. When it was time for the story section, they looked completely lost, while we read the story, trying to pick out what is it that we are wanting them to grasp. We could see it in their face that 'color' was going to be significant. They could also relate to green, orange, and yellow, blue, red. Some of them even repeated it out loud. Overall I would say it was still the lack of exposure and practice.

## Appendix 4: Data Tables

*Table 7: Braincloud Group Raw Score Data*

<b>Baan Thasab - Grade 1/1</b>						
<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>	<i>Reading Score</i>	<i>Writing Score</i>
1	1	1	2	5		
2	1	1	1.5	5		
3	1	1	3.5	4		
4	1	1	3.5	3		
5	1	2	7	3		
7	1	1	5	4		
8	1	1	1.5	3		
9	1	1	4	2		
10	1	2	6	4		
11	1	2	0	4		
12	1	1	1.5	4		
13	1	1	3.5	4		
14	1	1	5.5	2		
15	1	2	3.5	2		
16	1	2	7	4		
18	1	1	3	4		
20	1	1	0	3		
21	1	1	6.5	4		
22	1	2	7	4		
23	1	2	6	4		
<b>Wat Phuttha Phum (Thetsaban 3) - Grade 1/1</b>						
<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>	<i>Reading Score</i>	<i>Writing Score</i>
1	1	2	4.5	4		
2	1	1	3	4		
3	1	1	4.5	3		
4	1	1	3.5	3		
5	1	1	6	4		
6	1	1	4	4		
7	1	1	4.5	4		
8	1	2	4	5		
9	1	2	3.5	3		



10	1	2	3	2		
11	1	2	3.5	3		
12	1	1	3.5	2		
13	1	2	4	2		
14	1	2	4	3		
15	1	2	3	3		
16	1	2	6	3		
17	1	1	6	3		
21	1	1	5	2		
22	1	1	6	4		
23	1	1	2.5	2		
24	1	1	4.5	2		

**Thanawithi School T4 - Grade 1/2**

<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>	<i>Reading Score</i>	<i>Writing Score</i>
1	1	1	0	4		
2	1	2	1.5	4		
3	1	2	0.5	4		
4	1	1	0.5	4		
5	1	1	0	4		
7	1	2	3	3		
8	1	1	2	3		
9	1	2	0	5		
10	1	2	1.5	5		
12	1	2	0	3		
13	1	1	0	2		
14	1	2	1	3		
15	1	2	1	3		
16	1	1	1	3		
17	1	2	1	3		
18	1	2	1	3		
19	1	1	2	4		
20	1	2	0	2		
21	1	2	0.5	2		
22	1	2	1.5	5		
23	1	2	0	3		
24	1	2	1.5	4		
25	1	2	1.5	4		
26	1	1	0	4		
27	1	2	0	4		
28	1	2	1	4		

29	1	1	2	2		
30	1	2	3	2		
31	1	2	0	4		
<b>Thanawithi School T4 - Grade 1/4 (Reading and Writing only)</b>						
<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>	<i>Reading Score (6)</i>	<i>Writing Score(11)</i>
1	1	2	N/A	N/A	3	3
2	1	2	N/A	N/A	3	2
3	1	2	N/A	N/A	4	1
4	1	2	N/A	N/A	3	3
5	1	2	N/A	N/A	4	2
6	1	2	N/A	N/A	2	2
7	1	2	N/A	N/A	2	2
9	1	1	N/A	N/A	3	1
10	1	1	N/A	N/A	3	1

Table 7: Control/Comparison Group Raw Score Data

<b>Thanawithi School T4 - Grade 2/3</b>				
<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>
1	2	1	0	3
2	2	1	1	1
3	2	1	1	3
4	2	1	3.5	1
5	2	1	2	4
6	2	1	3.5	2
7	2	1	0	3
8	2	1	0	2
9	2	1	5.5	4
11	2	1	0.5	4
12	2	1	0	5
13	2	1	1	4
14	2	1	4.5	5
15	2	1	3	4
16	2	2	2	5
17	2	2	0	4
18	2	2	0	3

19	2	2	2	3
20	2	2	2	2
21	2	2	1	5
22	2	2	1	3
23	2	2	0	3
24	2	2	0	1
25	2	2	1	5
26	2	2	2.5	1
27	2	1	5.5	3
28	2	2	0	2
28	2	1	4	2
30	2	2	0.5	2
31	2	1	3	3
32	2	2	0	2
33	2	2	3	3
34	2	2	2.5	2
35	2	1	3	2
36	2	2	3	3

**Thanawithi School T4 - Grade 2/4**

<i>Student Number</i>	<i>Grade</i>	<i>Gender (M=1; F=2)</i>	<i>Speaking Score (10)</i>	<i>Listening Score (6)</i>
1	2	2	1.5	5
2	2	1	1	3
3	2	1	3.5	3
4	2	1	0	2
5	2	1	3.5	3
6	2	1	1	5
7	2	1	0.5	4
8	2	1	0	3
9	2	1	0.5	3
10	2	1	1	1
11	2	1	0.5	3
13	2	2	0	4
14	2	2	0	3
15	2	2	0	3
16	2	2	0.5	2
17	2	2	2.5	2
18	2	2	1	3
19	2	2	0	3
20	2	2	0	3
21	2	2	0	3

22	2	2	2	3
23	2	2	2	3
24	2	2	0.5	3
25	2	1	0	3
26	2	1	0.5	3
27	2	1	4.5	4
28	2	1	0	4
29	2	2	0	4
30	2	2	0	2
31	2	1	0	3
32	2	2	1	3
33	2	1	2	1
34	2	1	3	2
35	2	1	3	3
36	2	2	0	5