The Effect of Using Multimedia Blurb on L2 Reading Comprehension of Narrative Text

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Abstract Strategies that improve reading comprehension is essential for learning. This study investigated the effect of Multimedia Blurb (MMB) on second language (L2) reading comprehension. Readers create a MMB using internet-based tools, and a specific language to express their understanding of the text read. Participants were drawn from intact secondary education pre-service teachers of varied majorships and assigned to three conditions. Two experimental groups produced a MMB, one used their first language (L1) which is Filipino, and the other applied their second language (L2), which is English. A control group did not create a MMB. All groups were tested for comprehension after reading and producing a MMB. A one-way between groups analysis of covariance determined the impact of MMB on comprehension. The experimental groups performed significantly better than the control group, with the L2 group generating the highest mean score. The digital tools utilized and the language used to process the narrative text likely enhanced readers' comprehension. Further study of the MMB elements is recommended.

Keywords: multimedia blurb, narrative reading, new literacies, reading comprehension, second language

Introduction

The survival of societies in a knowledge-based global economy depend on literate citizens. Literacy today implies being able to read multiple forms of knowledge representations, generate and disseminate knowledge to others through technology (International Literacy Association, n.d.). Knowledge-sharing drives knowledge societies, and the ability to access, and use knowledge effectively can be acquired through education (UNESCO, 2005). Literacy is essential for human development. And national progress requires the use of Information and Communication Technologies that (ICT) that drive the world today (International Reading Association, 2001).

It is therefore necessary to look into the quality of students' reading in schools. How they comprehend, the quality of comprehension they gain from reading, which influence their academic success (Hittleman, 1988; Luz, 2007). As students progress through the grades, they are faced with increasing reading demands to learn different subject areas. Developing the reading habit makes them cope with the literacy requirements of school and the environment.

In the Information Age, learners are confronted with so much information made available by the internet. Information comes in different formats which they must learn to read. This situation challenges teachers to equip learners with the ability, and motivation to read widely for their own benefit. But are students interested to read? If they do, can they read well?

The more students read, the more their comprehension improves (Malloy & Gambrell, 2008). It has been observed, however, that most students do not like to read which is evident in their poor reading comprehension performance in different school subjects. The United Nations Cultural, Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics 2016 report shows that 758 million people are still

unable to do basic reading and writing which are foundation skills for learning. Interestingly, in the Philippines, the literacy rate is quite high at 93.6 % out of almost a million people (IndexMundi, 2017). However, Filipino students' National Achievement Test scores in 2009, revealed that public school learners' reading skills failed to reach mastery level (Philippine Star, 2010). This finding was supported by a study conducted among high school students' performance in reading comprehension and Science which reflected the same poor level of competence (Imam, Matsura, Jamil & Ismail, 2014). This contrasts with the high literacy rate of Filipinos.

Reading and Motivation

Motivation is a critical component of reading (Cambria & Guthrie, 2010). Without the will to read, improvement in comprehension would be difficult to achieve. Motivation fuels the reading habit. The breadth and depth of reading is determined by the quality of readers' motivation (Schiefele, Schaffner, Moller & Wigfield, 2012). By reading frequently, they become familiar with vocabulary, language and paragraph structures of texts that aid comprehension of different reading materials.

One of the manifestations of intrinsic reading motivation is the attitude toward reading. It reflects the reader's reading predisposition, which guides the approach applied in a reading activity. Readers with high intrinsic motivation read a lot and do so deeply (Schiefele et al., 2012). Interest in reading thus, enhances comprehension.

Specific beliefs and strategies may improve reading comprehension (Ilustre, 2011). In effect, Guthrie, Klauda and Ho (2013) reported that integrating motivation, engagement and achievement in instructional intervention significantly affect reading comprehension. Learning conditions that support the development of competence, autonomy and

relatedness, promote intrinsic motivation as well (Ryan & Deci, 2000). Applying reading skills in an independent reading context, specific collaborative reading practices can serve as opportunities to develop intrinsic reading motivation. The importance of personal control for engagement in reading is reflected in giving learners choice in the learning tasks (Malloy & Cambrell, 2008).

In assessing how much students have learned from reading, providing opportunities to select how they express their knowledge is important for reading motivation and comprehension. Malloy and Cambrell recommended that literacy activities must be authentic, involve self-selection and characterized by openness pertaining to choice, relevance, challenge and social collaboration. The principles of success, thematic units, choice, relevance, collaboration, and relationship-building are factors that enhance intrinsic motivation (Cambria & Guthrie, 2010). How teachers teach and assess reading hence, play a critical role in students' reading development. Well thought out reading experiences can encourage learners to read well and deeply.

Reading and Technology

The advent of the internet and other ICTs, including the instruction they entail, has transformed the concept of reading into a complex sense-making process involving current and emerging technologies. Thus, Leu, Kinzer, Coiro and Cammack (2004) define reading based on the New Literacies theory, as a "broad range of knowledge and practice with developing technologies" (p. 1585). Beyond simple decoding of traditional linear texts, to meaning-making based on prior knowledge, interactions and transactions, and evaluation of texts in print, the current notion of reading has evolved to incorporate new learning technologies.

Today, literacy is viewed as being multiple in nature and consists of varied channels in text understanding (Boche & Henning, 2015; Coiro, 2003). Technology is utilized to support comprehension through a combination of sounds, images and text that students can manage to develop their literacy skills (Boche & Henning, 2015).

Reading and Language

The language used to make sense of a text also affects reading comprehension. Reading is a complex process that includes cognitive and linguistic mechanisms (Hittleman, 1988; Savage, 1994). Many school subjects use English (L2) as a medium of instruction. As such, proficiency in L2 is required to learn content and be able to understand written texts. The L1 reading skills and L2 linguistic knowledge, however, are said to influence L2 reading comprehension.

The Linguistic Interdependence Hypothesis (LIH) contends that L2 reading ability is grounded on the native language ability. This is reinforced by the Linguistic Threshold Hypothesis (LTH), which emphasizes that a specific level of language proficiency is required before L1 reading skills and strategies can transfer to L2 (Jiang, 2011). L2 reading comprehension is thus, considered a dynamic interaction of two language systems. Based on a review of studies supporting the two theories, Jiang found that both L1 reading ability and L2 language proficiency influence L2 reading ability significantly. L2 language proficiency, nevertheless, is the stronger predictor of L2 reading than L1 reading ability.

Hill (2011) described comprehension as an intricate process involving the application of thinking skills, language reception, information processing, analysis of various text parts to achieve an integrated and accurate understanding. Both L1 reading skills and L2 linguistic knowledge contribute to L2 reading comprehension.

A reading strategy that incorporates motivational, technological and linguistic elements may enable learners to read better. To address students' reading comprehension problem and their poor performance in national tests, a reading strategy that integrates those elements, is thus proposed.

The Multimedia Blurb (MMB)

The present study incorporates the theoretical perspectives specifically on intrinsic motivation, the New Literacies, the LIH and LTH, in developing a reading strategy intended to enhance students' reading comprehension. The strategy involves the creation of a Multimedia Blurb (MMB) after reading, which is based on motivational elements, namely, choice of what to put in the MMB to illustrate meaning; competence through opportunities to apply skills in reading and use of internet-based technology skills; and language that best expresses understanding of the reading material.

Describing a story with the goal of advertising it, was influenced by the American humorist and illustrator Gelett Burgess' idea of a *blurb*. In the present strategy, readers develop a MMB in order to get others to want to read the story described. With the aid of internet-based multimedia tools or resources, readers recreate their understanding of the narrative text. The reader's comprehension is expected to be enhanced by thinking about the text, and using digital tools to convey the meaning of the story.

A MMB intends to concretize what the learner understands about the narrative text. Readers focus on making sense of the story's elements, such as the character/s, setting, problem, plot or theme with the help of internet-based multimedia tools for instance, text, audio, visual, video and interactivity, integrated in one powerpoint slide. Like the blurb, it aims to promote the story, so others may be enticed to read it. The MMB highlights important aspects of the story considering

its intended viewers. In designing and developing the MMB, learners apply the aforementioned new literacies skills to support their text comprehension, consequently, motivating them to read it well. Furthermore, by providing them choice in applying specific reading and new literacies skills to develop their MMB, their competence and reading proficiency are expected to be enhanced.

In this study, it is assumed that learners proficient in their L2, will perform better in the L2 narrative reading comprehension than those who are more proficient in their L1 but less in L2. Literature indicates that being proficient in two language systems is more advantageous, because two communication systems are at work in the meaning-making process. Thus, improving the L2 reading comprehension process better, thereby addressing students' poor performance in national achievement tests. If learners demonstrate poor comprehension of content in basic subjects, as shown in their inadequate mastery of reading skills, teachers must respond to the major problem affecting students' learning. Based on recent research on reading comprehension, the ability to apply new literacies of the internet also enhances comprehension through varied meaning-making channels. It is therefore assumed that learners who process a reading text using multiple media formats i.e., text, graphic, audio, video and other visual elements would have better comprehension than those who do not apply internet-based multimedia tools. Finally, studies on intrinsic motivation emphasize the importance of choice, competence, independence and ownership in the process of reading. These ensure reading engagement which improves reading comprehension. Thus, motivational, technological and linguistic factors must be considered in designing learning activities that support students' reading comprehension development. The MMB incorporates these important elements in the strategy to address students' poor reading comprehension

Purpose of the Research

This investigation aims to examine if there would be a significant difference in the L2 narrative reading comprehension of participants tasked to develop a MMB, and those who are not, controlling for attitude which was found to influence reading comprehension.

Methodology

A quasi-experimental research design, using non-equivalent groups, was applied in this study. Intact sections of secondary education pre-service teachers participated. This is appropriate for studies in which research participants are not randomly assigned to the treatment and control conditions; rather, they are chosen purposively as pre-existing groups, with characteristics that are important for the study (Ary, Jacobs, Sorensen & Walker, 2014).

Participants

A total of 209 third year secondary education students took part in the study, but only 113 of them were finally chosen after a thorough data screening. Participants who did not read the text, but took the post-test; those who failed to follow instructions, and those who were absent, either during the pre-test or post-tests, were excluded. Of the initial number, 23 Filipino, 37 English, 29 and 33 Physical Education (PE) - from two sections, respectively, 24 Physics, 11 Social Science, and 35 History majors took the pre-test.

The final participants were exposed to three conditions of the study. Specific classes were assigned to the experimental conditions based on their assumed language proficiency as indicated by their language specialization and their personal choice of language for self-expression. Learners who were

considered proficient in Filipino were Filipino majors, and those who specialized in other disciplines who chose to use Filipino in their MMB. On the other hand, learners who were considered proficient in English, were assigned to the MMB L2 group. They consisted of English majors, and those who specialized in other disciplines, who opted to use English in their MMB. They were distributed to the study conditions as follows: the control group was made up of 11 Social Science majors; the MMB L1group, of 13 Filipino and 3 History majors, a total of 16 participants. The MMB L2 group was comprised of 31 English, 8 PE, 21 Physics, and 26 History majors, a total of 86 participants. Among the students, 105 used Filipino as their native language, and the rest used other local languages at home. In the L2 group, one spoke Bikol, two Pangasinense, two Ilokano, and two Cebuano. All participants in the L1 group used Filipino at home. And among those in the control group, all spoke Filipino, except for one whose dialect is a variety of Bisaya found in Romblon. The selection of the intact classes required that students must have taken courses on Developmental Reading, which equipped them with appropriate reading skills; and Educational Technology, which afforded them a training on technology-integration skills.

Data Collection

Data were gathered based on two instruments. To determine learners' attitude toward reading, a 40-item Adult Survey of Reading Attitude (n.d.), developed by Smith (1991) with a reliability index of .93, and a test-retest reliability of .87, was used. Its construct validity when correlated with another attitude measure, the Rhody scale of reading attitudes, was .80 ($p< .01$). For the purpose of this study, only six items focusing on one of the five dimensions of reading attitude, specifically, reading activity enjoyment, were used. The other subscales on anxiety, and difficulty, social reinforcement,

modalities, and tutoring were not included, because they were not among the concerns of the study. For the six items used in the study, the Cronbach's alpha was .82, indicating a high level of internal consistency.

The text used in the study underwent readability testing. Through the consensus calculator that applies seven commonly used readability formulas, the average grade level, reading age, and the difficulty of a text were measured. The article "Cupid and Psyche" (Apuleuis, n.d.), was equivalent to a standard average readability for 14-15 year-olds, and most suitable for ninth to tenth graders (Text Readability Consensus Calculator, n.d.). This implies that since the participants are in their third year college level (approximately 18-19 years old), based from a ten-year basic education cycle, the text should be relatively easy for them, even for struggling readers of that level. The text is three stages below their appropriate reading level.

A 15-item researcher-constructed comprehension test, based on the narrative text, was used to determine how well the learners understood the story. It focused on four essential reading comprehension skills, namely, (a) noting details (5 items); (b) making inferences (4 items); (c) sequencing (2 items); and (d) drawing conclusions (4 items). The comprehension test underscored the story's major elements. The narrative text "Cupid and Psyche" (Appendix A) was selected, based on the following criteria: (1) it stimulates interest; (2) has easy to average readability level; (3) has a relevant theme; and (4) is appropriate in length - not too short or too long. The content of the test was face validated by two Reading specialists and a Literature expert. They rated the quiz based on its ability to measure five comprehension skills, namely, noting details, making inferences, sequencing, generalizing and drawing conclusions. The three evaluators consistently gave the test a "Very High" content validity rating, or a score of 5, from a scale of 1-5 with corresponding descriptors, making it a valid measure of the said reading skills.

Procedure

The present research was conducted during the last week of the participants' formal classes in the first semester of academic year 2015-2016. Considering the students' busy schedule, their preoccupation with final examinations, and submission of their final academic requirements, it was deemed necessary to give them adequate time, so that reading the text, and developing their respective multimedia blurbs could be completed, whenever convenient for them. This situation also determined students' interest in reading and engagement in the MMB activity. Since participation was voluntary, those who were not keen in reading, would not likely pursue the assigned tasks; and may opt to drop-out from the study. Hence, only those who were really interested in reading were expected to comply with the specific reading task, work on their MMBs and take the post-test, within a week.

All groups were provided an orientation separately. Except for the control group, the two experimental groups prepared a MMB. A specific criteria guided learners in the MMB design and development, specifically, relevant content, proper organization, creativity, appropriate mechanics and impact. They could choose to use either their L1 or L2 to express their ideas, and apply digital elements for support. In planning the MMB, the students were required to follow specific visual design principles which they studied in the Educational Technology class to produce a more effective MMB.

The participants were first given the attitude test. Except for the control group, the L1 and L2 groups were oriented briefly on the nature of the MMB, which they were tasked to accomplish after reading a downloaded text from their class website. The MMB gave them an opportunity to process the reading material, by creating a representation of what they understood about the story, using internet-based multimedia

tools and a language to express their ideas. The participants were allowed three to seven days to read the text, and to complete their MMB during their free time, outside of class. Their outputs were compiled by group and sent to the teacher-researcher. The participants were then given a comprehension test, and the same attitude test which they took earlier as a pre-test, this time as a post-test. Thereafter, they presented their outputs to their respective sections.

Data Analysis

For the preliminary data analysis, descriptive statistics determined normal data distribution through the computation of the means, standard deviations, skewness and kurtosis, of the three groups of participants. Tests to determine the independence of covariate and treatment effects, and the homogeneity of regression slopes, were first conducted to satisfy the assumptions of the main statistical analysis. A Pearson *r* was also computed to find out if attitude and comprehension scores were correlated, as indicated by previous researches. The Levene's Test of the Equality of Error Variances determined the homogeneity of variances. While the Analysis of Covariance (ANCOVA), was used to find out if a difference exists in the participants' comprehension scores, after controlling for attitude.

Results and Discussion

The study sought to find out if a statistically significant difference exists in the L2 narrative reading comprehension of learners who are exposed to the MMB, and those who are not. In the preliminary analysis, the descriptive statistics show that the data is a little skewed, and platykurtic, but still approximates normal distribution. The means, standard deviations, skewness, and kurtosis of the Control, MMB L1, and L2 groups are presented in Table 1.

Table 1. Mean Values, Standard Deviations, Skewness and Kurtosis.

	M	*SD*	*Skewness*	*Kurtosis*
Multimedia Blurb L1 Group				
Reading Comprehension	9.00	2.42	-.386	-1.09
Attitude Toward Reading	4.09	.526	-.132	-.558
Multimedia Blurb L2 Group				
Reading Comprehension	10.09	1.87	-.400	-.809
Attitude Toward Reading	4.02	.716	-.985	.831
Control Group				
Reading Comprehension	8.90	2.34	-.551	-1.05
Attitude Toward Reading	3.83	.521	.215	-1.43

A computation of the correlation between attitude and comprehension revealed a moderately small positive correlation, based on Pearson's $r(113) = .263$, $p > .01$. This means that although not that strong, a relationship exists between attitude toward reading and comprehension. A positive attitude is associated with a high level of comprehension. This finding validates, what Cambria and Guthrie (2010), Hill (2011), Schiefele et al. (2012), Guthrie, Klauda and Ho (2013), say about the positive relationship between intrinsic motivation, and comprehension. A comparison of the three groups' attitude toward reading, using the Levene's Test of Equality of Error Variances, $p = .132$, showed that the participants were not significantly different from each other, in terms of reading attitude. Preliminary checks ensured the satisfaction of the normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate assumptions.

In the main analysis, the one way between-groups analysis of covariance, compared the effectiveness of the MMB on the participants' comprehension. The independent variable was the MMB, and the dependent variable consisted of scores in the comprehension test. The participants' attitude test

results served as the covariate in the analysis. The ANCOVA $F(2,109) = 3.31$, $p = .04$, partial eta squared $= .05$, showed that after controlling for attitude, there was a significant difference in the comprehension test scores of the MMB L1, MMB L2 and Control groups as shown in Table 2.

Table 2.   Analysis of Covariance.

	MMB L1 Group (n=16)		MMB L2 Group (n=86)		Control Group (n=11)		*F*	*SE*	*Partial Eta Squared*	*p*
	M	*SD*	*M*	*SD*	*M*	*SD*				
Attitude Toward Reading	4.09	.52	4.02	.71	3.83	.52	8.23	.27	.07	.00*
Reading Comprehension	8.93	2.42	10.08	1.87	9.05	2.34	3.31	3.77	05	.04*

p < .05

Using the Least Significant Difference (LSD) post hoc test, results demonstrated that the MMB L2 and L1 groups, posted a significant difference of $p = .032$, with the MMB L2 group manifesting the highest mean score of $M = 10.08$, after controlling for attitude. When compared with both the MMB L1 and L2 groups, the control group did not show any significant difference. It appears that the MMB, with its corresponding language used in processing the text, served important roles in accounting for the significant difference in the comprehension scores.

By using the strategy, learners' L2 narrative comprehension could be improved, validating the hypothesis of the study, that those who are exposed to the MMB, would perform better in the L2 narrative reading comprehension, than those who are not. The significant difference may be explained by the conditions under which the MMB was developed. Learners were afforded choice, and an opportunity to feel competent, as they engaged in the meaning-making process in their own terms, ability and understanding.

Allowing learners to use technology tools to express themselves and to communicate their thoughts and ideas to others meet specific self-determination needs that enhance success and competence in using reading and technology-integration skills. This corroborates the findings of past researchers on the elements that boost reading motivation (Cambria & Guthrie, 2010; Guthrie, Klauda & Ho, 2013; Malloy & Gambrell, 2008; Schiefele et al., 2012). In addition, the language chosen to communicate their text understanding best, most likely contributed significantly to the major difference in the comprehension scores of learners exposed to the MMB. The marked performance of the MMB L2 group confirms what Jiang (2011) contended about the roles of L1 and L2 on L2 reading comprehension. Proficiency in both the L1 and L2 promotes better L2 text comprehension than being fluent only in L1 and being less proficient in L2. The application of the new literacies skills which Coiro (2003), Morrell (2012), Leu, Kinzer, Coiro, Casler & Henry, 2013, and Leu, Zawilinski, Forzani & Timbrell, 2014 described as essential for reading comprehension in the internet era may have also contributed to the comprehension outcomes. Higher levels of thinking, new strategies for making sense of texts, the use of various digital tools, multimedia channels for text comprehension, are new literacies which learners may have applied in the process of accomplishing the MMB task. This emerging form of literacy requires advanced forms of thinking and decision-making. As elaborated by Leu, Kinzer, Coiro and Cammack (2004), this new literacy is based on wide knowledge and use of new technologies learned formally in school, or informally through active use, and in collaboration with others. Awareness of the affordances of emerging technologies provides learners with resources to comprehend the text, and the many possible channels of expression that can be manipulated such as text, images, color, sound, video and interactivity.

Since the significant difference in comprehension among the three groups is evident in the MMB L1 and L2 groups, as presented earlier, with the L2 group demonstrating a higher mean score than the L1 group, fluency in L2 evidently has a greater effect in the L2 narrative reading comprehension. This outcome points to the advantage of the MMB L2 group's proficiency in L2 which cannot be achieved without a certain degree of L1 mastery. This adheres to the findings of Jiang (2011) and Hill (2011) which claimed that between the L1 reading ability and the L2 proficiency, the latter plays a more crucial role in the L2 reading comprehension.

Other factors however, may also have also contributed to the quality of learners' comprehension. For instance, when and how often they read the text, the extent of students' reading abilities, and the metacognitive strategies they may have used within the one week reading period. But these were not considered in the study.

Conclusion and Recommendation

This study sought to examine the effect of MMB on L2 reading comprehension. The MMB is a strategy intended to enhance reading comprehension of narrative texts, through the use of web-based digital tools, and a specific language to concretize text understanding. In this research, participants came from intact sections of secondary education pre-service teachers of varied majorships. They were assigned to three conditions. One control, and two experimental. The students in the experimental conditions were exposed to the MMB, using either their L1 or their L2. This study is beneficial for teachers who want to promote better reading comprehension of students. Reading is a critical skill for learning, and is essential for students' enhanced academic achievement. Filipino students' consistent low performance in national achievement tests over the years

make it necessary to develop a reading strategy that could address the problem. Students' academic success depends much on the quality of their literacy.

The investigation revealed that MMB enhances reading comprehension of narrative texts, through the language used to make sense of the reading material and the web-based digital tools applied to communicate meaning. The Linguistic Interdependent Hypothesis (LIH) and the Linguistic Threshold Hypothesis (LTH) by James Cummins, explain that applying both L1 and L2 in the meaning-making process rather than just the L1, illustrates how bilingualism enhances text understanding. Moreover, the application of new literacies (Leu, Kinzer, Coiro & Cammack, 2004) also likely contributed to the improved comprehension. The awareness of the affordances of advanced technologies may have provided learners the necessary resources to enhance their understanding, and also offered them rich possibilities for expressing it. The New Literacies theory contend that comprehension in the context of the technology-driven era is a result of creating meaning involving knowledge and application of ICT. The MMB creation is a venue for applying knowledge and technology skills to express comprehension. Higher-order thinking such as metacognition may have been at work in making choices and decisions to achieve the reading goals. Multiple support systems and rich digital resources in the world wide web possibly assisted in students' meaning-making process. The MMB is thus, a useful tool to enable learners to make sense of texts in ways that are meaningful to learners. The processes involved adhere to motivational, linguistic, and technological principles. It is suggested that a closer investigation be conducted on such aspects of the MMB that likely caused readers' comprehension improvement not covered in the present study.

Further analyses of the MMB features is therefore recommended. This includes investigating the psychological

processes, specifically, the motivational, cognitive and metacognitive operations involved in the MMB development. And since results of the study indicate the importance of the language and digital tools used in processing the text, a closer examination of the language component of the MMB may be looked into more deeply to see how the two languages particularly contributed to the students' enhanced comprehension. It may also be useful to investigate students' level of proficiency in the L1 and L2 languages, and to group them based on their actual language proficiency scores, rather than just assuming their language proficiency based on their language specialization and their choice. Majorship in a language does not necessarily translate to proficiency in that language. However, their performance in a valid language proficiency test would be a more credible gauge of their actual language skills and proficiency levels. Language and literacy teachers may benefit from these researches, including those who teach other subject areas who want learners to understand how reading in this academic field that are written in L2, may be understood better. Further study on the application of MMB in different curricular areas is useful, to find out if the MMB can provide an avenue for showing the extent of students' learning on topics being studied.

Some limitations may also be considered for future studies. Certain learning factors that were not controlled in the conduct of the study might have contributed to the marked improvement in students' comprehension performance. For example, the time frame for the design and development of the MMB, may have been too long. And because the MMB was a homework activity, students' increased comprehension may be attributed to a wide range of other causes such as the presence of more knowledgeable others, who could provide scaffolding in their text understanding. Or students may have been equipped with strategies in reading that might have helped them understand the L2 text better. Another probable factor is the

narrative text used. Considering that the level of difficulty was not adequately demanding for the readers, their performance may have been positively affected. A more suitable text for the students' reading level is proposed. A third possible area for study is the students' ICT proficiency that might have enabled them to maximize the affordances of technology-like access to more useful information, tutorials, ideas on how to represent their knowledge through multimodal formats, or get support for higher levels of information processing. A stricter control of the experimental conditions would be more beneficial.

The technology-integration skills and new technologies students applied in the MMB development are research areas on new literacies skills, that are emerging, and are worth exploring. Teachers of the 21st century must be aware of current pedagogies that are responsive to learners' characteristics, and are associated with more advanced technologies for learning. In general, the MMB presents itself as a promising reading strategy teachers may use to engage learners in understanding L2 texts better.

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Appendix A

Cupid and Psyche
by Lucius Apuleius

1. A certain king and queen had three daughters. The charms of the two elder were more than common, but the beauty of the youngest was so wonderful that the poverty of language is unable to express its due praise. The fame of her beauty was so great that strangers from neighboring countries came in crowds to enjoy the sight, and looked on her with amazement, paying her that homage which is due only to Venus herself. In fact Venus found her altars deserted, while men turned their devotion to this young virgin. As she passed along, the people sang her praises, and strewed her way with chaplets and flowers.

2. This homage to the exaltation of a mortal gave great offense to the real Venus. Shaking her ambrosial locks with indignation, she exclaimed, "Am I then to be eclipsed in my honors by a mortal girl? In vain then did that royal shepherd, whose judgment was approved by Jove himself, give me the palm of beauty over my illustrious rivals, Pallas and Juno. But she shall not so quietly usurp my honors. I will give her cause to repent of so unlawful a beauty."

3. Thereupon she calls her winged son Cupid, mischievous enough in his own nature, and rouses and provokes him yet more by her complaints. She points out Psyche to him and says, "My dear son, punish that contumacious beauty; give your mother a revenge as sweet as her injuries are great; infuse into the bosom of that haughty girl a passion for some low, mean, unworthy being, so that she may reap a mortification as great as her present exultation and triumph."

4. Cupid prepared to obey the commands of his mother. There are two fountains in Venus's garden, one of sweet waters, the other of bitter. Cupid filled two amber vases, one from each fountain, and suspending them from the top of his quiver, hastened to the chamber of Psyche, whom he found asleep. He shed a few drops from the bitter fountain over her lips, though the sight of her almost moved him to pity; then touched her side with the point of his arrow. At the touch she awoke, and opened eyes upon Cupid (himself invisible), which so startled him that in his confusion he wounded himself with his own arrow. Heedless of his wound, his whole thought now was to repair the mischief he had done, and he poured the balmy drops of joy over all her silken ringlets.

5. Psyche, henceforth frowned upon by Venus, derived no benefit from all her charms. True, all eyes were cast eagerly upon her, and every mouth spoke her praises; but neither king, royal youth, nor plebeian presented himself to demand her in marriage. Her two elder sisters of moderate charms had now long been married to two royal princes; but Psyche, in her lonely apartment, deplored her solitude, sick of that beauty which, while it procured abundance of flattery, had failed to awaken love.

6. Her parents, afraid that they had unwittingly incurred the anger of the gods, consulted the oracle of Apollo, and received this answer, "The virgin is destined for the bride of no mortal lover. Her future husband awaits her on the top of the mountain. He is a monster whom neither gods nor men can resist."

7. This dreadful decree of the oracle filled all the people with dismay, and her parents abandoned themselves to grief. But Psyche said, "Why, my dear parents, do you now lament me? You should rather have grieved when the people showered upon me undeserved honors, and with one voice

called me a Venus. I now perceive that I am a victim to that name. I submit. Lead me to that rock to which my unhappy fate has destined me."

8. Accordingly, all things being prepared, the royal maid took her place in the procession, which more resembled a funeral than a nuptial pomp, and with her parents, amid the lamentations of the people, ascended the mountain, on the summit of which they left her alone, and with sorrowful hearts returned home.

9. While Psyche stood on the ridge of the mountain, panting with fear and with eyes full of tears, the gentle Zephyr raised her from the earth and bore her with an easy motion into a flowery dale. By degrees her mind became composed, and she laid herself down on the grassy bank to sleep.

10. When she awoke refreshed with sleep, she looked round and beheld near a pleasant grove of tall and stately trees. She entered it, and in the midst discovered a fountain, sending forth clear and crystal waters, and fast by, a magnificent palace whose august front impressed the spectator that it was not the work of mortal hands, but the happy retreat of some god. Drawn by admiration and wonder, she approached the building and ventured to enter.

11. Every object she met filled her with pleasure and amazement. Golden pillars supported the vaulted roof, and the walls were enriched with carvings and paintings representing beasts of the chase and rural scenes, adapted to delight the eye of the beholder. Proceeding onward, she perceived that besides the apartments of state there were others filled with all manner of treasures, and beautiful and precious productions of nature and art.

12. While her eyes were thus occupied, a voice addressed her, though she saw no one, uttering these words, "Sovereign lady, all that you see is yours. We whose voices you hear

are your servants and shall obey all your commands with our utmost care and diligence. Retire, therefore, to your chamber and repose on your bed of down, and when you see fit, repair to the bath. Supper awaits you in the adjoining alcove when it pleases you to take your seat there."

13. Psyche gave ear to the admonitions of her vocal attendants, and after repose and the refreshment of the bath, seated herself in the alcove, where a table immediately presented itself, without any visible aid from waiters or servants, and covered with the greatest delicacies of food and the most nectareous wines. Her ears too were feasted with music from invisible performers; of whom one sang, another played on the lute, and all closed in the wonderful harmony of a full chorus.

14. She had not yet seen her destined husband. He came only in the hours of darkness and fled before the dawn of morning, but his accents were full of love, and inspired a like passion in her. She often begged him to stay and let her behold him, but he would not consent. On the contrary he charged her to make no attempt to see him, for it was his pleasure, for the best of reasons, to keep concealed.

15. "Why should you wish to behold me?" he said. "Have you any doubt of my love? Have you any wish ungratified? If you saw me, perhaps you would fear me, perhaps adore me, but all I ask of you is to love me. I would rather you would love me as an equal than adore me as a god."

16. This reasoning somewhat quieted Psyche for a time, and while the novelty lasted she felt quite happy. But at length the thought of her parents, left in ignorance of her fate, and of her sisters, precluded from sharing with her the delights of her situation, preyed on her mind and made her begin to feel her palace as but a splendid prison. When her husband came one night, she told him her distress, and at last drew

from him an unwilling consent that her sisters should be brought to see her.

17. So, calling Zephyr, she acquainted him with her husband's commands, and he, promptly obedient, soon brought them across the mountain down to their sister's valley. They embraced her and she returned their caresses.

18. "Come," said Psyche, "enter with me my house and refresh yourselves with whatever your sister has to offer."

19. Then taking their hands she led them into her golden palace, and committed them to the care of her numerous train of attendant voices, to refresh them in her baths and at her table, and to show them all her treasures. The view of these celestial delights caused envy to enter their bosoms, at seeing their young sister possessed of such state and splendor, so much exceeding their own.

20. They asked her numberless questions, among others what sort of a person her husband was. Psyche replied that he was a beautiful youth, who generally spent the daytime in hunting upon the mountains.

21. The sisters, not satisfied with this reply, soon made her confess that she had never seen him. Then they proceeded to fill her bosom with dark suspicions. "Call to mind," they said, "the Pythian oracle that declared you destined to marry a direful and tremendous monster. The inhabitants of this valley say that your husband is a terrible and monstrous serpent, who nourishes you for a while with dainties that he may by and by devour you. Take our advice. Provide yourself with a lamp and a sharp knife; put them in concealment that your husband may not discover them, and when he is sound asleep, slip out of bed, bring forth your lamp, and see for yourself whether what they say is true or not. If it is, hesitate not to cut off the monster's head, and thereby recover your liberty."

22. Psyche resisted these persuasions as well as she could, but they did not fail to have their effect on her mind, and when her sisters were gone, their words and her own curiosity were too strong for her to resist. So she prepared her lamp and a sharp knife, and hid them out of sight of her husband. When he had fallen into his first sleep, she silently rose and uncovering her lamp beheld not a hideous monster, but the most beautiful and charming of the gods, with his golden ringlets wandering over his snowy neck and crimson cheek, with two dewy wings on his shoulders, whiter than snow, and with shining feathers like the tender blossoms of spring.

23. As she leaned the lamp over to have a better view of his face, a drop of burning oil fell on the shoulder of the god. Startled, he opened his eyes and fixed them upon her. Then, without saying a word, he spread his white wings and flew out of the window. Psyche, in vain endeavoring to follow him, fell from the window to the ground.

24. Cupid, beholding her as she lay in the dust, stopped his flight for an instant and said, "Oh foolish Psyche, is it thus you repay my love? After I disobeyed my mother's commands and made you my wife, will you think me a monster and cut off my head? But go; return to your sisters, whose advice you seem to think preferable to mine. I inflict no other punishment on you than to leave you for ever. Love cannot dwell with suspicion." So saying, he fled away, leaving poor Psyche prostrate on the ground, filling the place with mournful lamentations.

25. When she had recovered some degree of composure she looked around her, but the palace and gardens had vanished, and she found herself in the open field not far from the city where her sisters dwelt. She repaired thither and told them the whole story of her misfortunes, at which, pretending to grieve, those spiteful creatures inwardly rejoiced.

26. "For now," said they, "he will perhaps choose one of us." With this idea, without saying a word of her intentions, each of them rose early the next morning and ascended the mountain, and having reached the top, called upon Zephyr to receive her and bear her to his lord; then leaping up, and not being sustained by Zephyr, fell down the precipice and was dashed to pieces.

27. Psyche meanwhile wandered day and night, without food or repose, in search of her husband. Casting her eyes on a lofty mountain having on its brow a magnificent temple, she sighed and said to herself, "Perhaps my love, my lord, inhabits there," and directed her steps thither.

28. She had no sooner entered than she saw heaps of corn, some in loose ears and some in sheaves, with mingled ears of barley. Scattered about, lay sickles and rakes, and all the instruments of harvest, without order, as if thrown carelessly out of the weary reapers' hands in the sultry hours of the day.

29. This unseemly confusion the pious Psyche put an end to, by separating and sorting everything to its proper place and kind, believing that she ought to neglect none of the gods, but endeavor by her piety to engage them all in her behalf. The holy Ceres, whose temple it was, finding her so religiously employed, thus spoke to her, "Oh Psyche, truly worthy of our pity, though I cannot shield you from the frowns of Venus, yet I can teach you how best to allay her displeasure. Go, then, and voluntarily surrender yourself to your lady and sovereign, and try by modesty and submission to win her forgiveness, and perhaps her favor will restore you the husband you have lost."

30. Psyche obeyed the commands of Ceres and took her way to the temple of Venus, endeavoring to fortify her mind and ruminating on what she should say and how best propitiate

the angry goddess, feeling that the issue was doubtful and perhaps fatal.

31. Venus received her with angry countenance. "Most undutiful and faithless of servants," said she, "do you at last remember that you really have a mistress? Or have you rather come to see your sick husband, yet laid up of the wound given him by his loving wife? You are so ill favored and disagreeable that the only way you can merit your lover must be by dint of industry and diligence. I will make trial of your housewifery." Then she ordered Psyche to be led to the storehouse of her temple, where was laid up a great quantity of wheat, barley, millet, vetches, beans, and lentils prepared for food for her pigeons, and said, "Take and separate all these grains, putting all of the same kind in a parcel by themselves, and see that you get it done before evening." Then Venus departed and left her to her task.

32. But Psyche, in a perfect consternation at the enormous work, sat stupid and silent, without moving a finger to the inextricable heap.

33. While she sat despairing, Cupid stirred up the little ant, a native of the fields, to take compassion on her. The leader of the anthill, followed by whole hosts of his six-legged subjects, approached the heap, and with the utmost diligence taking grain by grain, they separated the pile, sorting each kind to its parcel; and when it was all done, they vanished out of sight in a moment.

34. Venus at the approach of twilight returned from the banquet of the gods, breathing odors and crowned with roses. Seeing the task done, she exclaimed, "This is no work of yours, wicked one, but his, whom to your own and his misfortune you have enticed." So saying, she threw her a piece of black bread for her supper and went away.

35. Next morning Venus ordered Psyche to be called and said to her, "Behold yonder grove which stretches along the margin of the water. There you will find sheep feeding without a shepherd, with golden-shining fleeces on their backs. Go, fetch me a sample of that precious wool gathered from every one of their fleeces."

36. Psyche obediently went to the riverside, prepared to do her best to execute the command. But the river god inspired the reeds with harmonious murmurs, which seemed to say, "Oh maiden, severely tried, tempt not the dangerous flood, nor venture among the formidable rams on the other side, for as long as they are under the influence of the rising sun, they burn with a cruel rage to destroy mortals with their sharp horns or rude teeth. But when the noontide sun has driven the cattle to the shade, and the serene spirit of the flood has lulled them to rest, you may then cross in safety, and you will find the woolly gold sticking to the bushes and the trunks of the trees."

37. Thus the compassionate river god gave Psyche instructions how to accomplish her task, and by observing his directions she soon returned to Venus with her arms full of the golden fleece; but she received not the approbation of her implacable mistress, who said, "I know very well it is by none of your own doings that you have succeeded in this task, and I am not satisfied yet that you have any capacity to make yourself useful. But I have another task for you. Here, take this box and go your way to the infernal shades, and give this box to Proserpine and say, 'My mistress Venus desires you to send her a little of your beauty, for in tending her sick son she has lost some of her own.' Be not too long on your errand, for I must paint myself with it to appear at the circle of the gods and goddesses this evening."

38. Psyche was now satisfied that her destruction was at hand, being obliged to go with her own feet directly down to

Erebus. Wherefore, to make no delay of what was not to be avoided, she goes to the top of a high tower to precipitate herself headlong, thus to descend the shortest way to the shades below. But a voice from the tower said to her, "Why, poor unlucky girl, do you design to put an end to your days in so dreadful a manner? And what cowardice makes you sink under this last danger who have been so miraculously supported in all your former?" Then the voice told her how by a certain cave she might reach the realms of Pluto, and how to avoid all the dangers of the road, to pass by Cerberus, the three-headed dog, and prevail on Charon, the ferryman, to take her across the black river and bring her back again. But the voice added, "When Proserpine has given you the box filled with her beauty, of all things this is chiefly to be observed by you, that you never once open or look into the box nor allow your curiosity to pry into the treasure of the beauty of the goddesses."

39. Psyche, encouraged by this advice, obeyed it in all things, and taking heed to her ways traveled safely to the kingdom of Pluto. She was admitted to the palace of Proserpine, and without accepting the delicate seat or delicious banquet that was offered her, but contented with coarse bread for her food, she delivered her message from Venus. Presently the box was returned to her, shut and filled with the precious commodity. Then she returned the way she came, and glad was she to come out once more into the light of day.

40. But having got so far successfully through her dangerous task a longing desire seized her to examine the contents of the box. "What," said she, "shall I, the carrier of this divine beauty, not take the least bit to put on my cheeks to appear to more advantage in the eyes of my beloved husband!" So she carefully opened the box, but found nothing there of any beauty at all, but an infernal and truly Stygian sleep, which being thus set free from its prison, took possession

of her, and she fell down in the midst of the road, a sleepy corpse without sense or motion.

41. But Cupid, being now recovered from his wound, and not able longer to bear the absence of his beloved Psyche, slipping through the smallest crack of the window of his chamber which happened to be left open, flew to the spot where Psyche lay, and gathering up the sleep from her body closed it again in the box, and waked Psyche with a light touch of one of his arrows. "Again," said he, "have you almost perished by the same curiosity. But now perform exactly the task imposed on you by my mother, and I will take care of the rest."

42. Then Cupid, as swift as lightning penetrating the heights of heaven, presented himself before Jupiter with his supplication. Jupiter lent a favoring ear, and pleaded the cause of the lovers so earnestly with Venus that he won her consent. On this he sent Mercury to bring Psyche up to the heavenly assembly, and when she arrived, handing her a cup of ambrosia, he said, "Drink this, Psyche, and be immortal; nor shall Cupid ever break away from the knot in which he is tied, but these nuptials shall be perpetual."

43. Thus Psyche became at last united to Cupid, and in due time they had a daughter born to them whose name was Pleasure.

Source: Thomas Bulfinch, *The Age of Fable; or, Stories of Gods and Heroes 3rd edition* (1855), Ch 11, pp.115-28. Edited by D.L. Ashiliman, © 2001. Bulfinch's source is *The Golden Ass* (books 4-6) by the Roman writer Lucius Apuleius. Retrieved from https://www.pitt.edu/~dash/cupid.html