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Topic: Using Dynamic Assessment to Promote College EFL Learners' Reading Skills in Taiwan

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Abstract

Nowadays educators are recommended to use multiple assessments to evaluate what students have learned. This study reports on the use of an innovative assessment, *dynamic assessment* (DA), with EFL learners. It describes in detail how the researcher implemented DA to assess and instruct Taiwanese college EFL students' reading skills through the use of mediation. The theoretical construct of DA is based on Vygotsky's Zone of Proximal Development (ZPD), which is the distance between one's actual and potential development levels. It challenged traditional static assessment that relies on a student's current/actual performance as the primary indicator of an individual's abilities. The study attempted to answer three research questions: (1) What are the effects of DA on promoting Taiwanese EFL students' reading strategies? (2) Does DA help the participants realize their learning potential and if so, to what extent? and (3) What needs to be considered to design an effective mediation procedure?

Working with five EFL students at a university in Taiwan, the researcher provided each learner with mediation to promote his/her hidden learning potential during DA procedures. The purpose of the study was to help promote and assess the learners' reading strategies in: finding main ideas, using contextual clues, and making inferences. The research design followed the pre-test, mediation treatment, and post-test paradigm. Both implicit and explicit mediation were provided. The learners' pre-test and post-test scores were compared after the mediation treatment. The study showed that appropriately designed mediation played a significant role in promoting learners' reading strategies and realizing their learning potential. Also, certain factors need to be considered to design an effective mediation procedure.

This study can contribute valuable new knowledge to the sparsity of DA literature in SLA. It can also empower educators to become researchers when they implement and further investigate this innovative approach to language assessment.

Keywords: dynamic assessment, EFL, reading strategies

Introduction

Traditionally, assessment has been used as an information-gathering activity to gain insight into learners' current level of knowledge or ability (Baily, 1996; McNamara, 2004). Most traditional assessment tends to measure learners' actual development or what the learners have already learned, and thus it is also called "static assessment" by some researchers (Feuerstein et al., 1979). One of the main criticisms made by critics of static assessment is that we cannot continue to assume that learners' performance is static. Poehner (2008) pointed out that very often educators, including L2 teachers, were frustrated by static assessments because they were seen as activities that are "distinct from, and perhaps even at odds with, the goals of teaching" (p. 4).

Grigorenko & Sternberg (1998) brought up the importance of taking a new direction on assessment by asking,

Wouldn't it be nice if researchers could test people's ability to learn new things rather than just people's ability to demonstrate the knowledge that they already have acquired? (p. 75)

They highlighted a serious problem of static assessment, which is that traditional psychometrics are underpinned by assumptions of performance stability and the normal, bell-curve, distribution of capabilities. The assumptions and test data collected are expected to indicate the learners' true and accurate current performance level. When the learners' responses contradict these assumptions, the results are viewed as "errors of measurement" (p. 75). Grigorenko & Sternberg argued that while yesterday's information may be relevant for many assessment questions, such information is not particularly useful for differentiating capacity from performance. The solution to this, according to some researchers who believe in a new way of assessment, is to adopt dynamic assessment.

Dynamic Assessment (DA)

As assessors, we were taught to be neutral and provide directions as the way the test "is." However, providing effective mediation is the core of dynamic assessment (DA). It means that when we conduct DA, we are not expected to be a neutral third party. Instead, we should "find routes to move the learner to the next level of development" (Haywood & Lidz, p. 41). DA rests on a considerably more open-ended assumption regarding the stability of learners. One significant characteristic of DA is that it is not like static assessment which measures a learner's response without any attempt to intervene in order to change, guide, or improve the learner's performance. The importance of DA, therefore, should not be ignored because it is not simply an assessment, but also a tool that can be used to help make a difference in the learner's skills. As Lidz and Elliott (2000, p. 6) mentioned, instead of constantly seeking to discover how the child came to be what he/she is, we should strive to discover the child's potential and what he/she is capable of becoming.

The central concept of the dynamic assessment (DA) is grounded in the concept of Zone of Proximal Development (ZPD) and Feuerstein et al.'s Mediated Learning Experience (MLE), which form the theoretical constructs of this proposed project.

Zone of proximal development (ZPD)

The concept of Zone of Proximal Development (ZPD) in Vygotsky's Sociocultural Theory (SCT) holds the view that one's abilities are flexible rather than fixed. It is also concerned with the development of a person's potential abilities. Vygotsky (1978) believed

that the normal learning situation for a student is a socially meaningful cooperative activity. He considered tests/assessments at school that only looked at the learner's individual problem solving skills as inadequate, arguing instead that the progress in concept formation achieved by the learner in cooperation with a more mature counterpart (an adult, a teacher, or a more competent peer) was a much more practical way to look at the capabilities of learners. Vygotsky emphasized the role of social interaction and mediation in a learner's internalization. Moreover, the responsibility of the more mature counterpart is to provide constructive mediations, or scaffolding, to the learner. According to Vygotsky, new cognitive functions and learning abilities originate within this interpersonal interaction, and later they are internalized and transformed to become the student's inner cognitive processes. Thus, through cooperation and mutual interaction between the learner and his/her more mature partner, the learner may reveal certain emergent functions that have not yet been internalized. In Vygotsky's SCT, these functions belong to the Zone of Proximal Development (ZPD), which is in counter-distinction to fully developed functions that belong to the Zone of Actual Development (ZAD). An individual's responsiveness to mediation or support that is sensitive to their current level of ability (ZAD) reveals cognitive functions that have not yet fully developed (ZPD). While the results of static assessments show us the already existent abilities of the student, the analysis of ZPD allows us to evaluate the ability of the student to learn from the interaction with the teacher or a more competent peer. This learning ability may serve as a better predictor of the students' educational needs than the static scores indicated in a static assessment.

Mediated learning experience (MLE)

Feuerstein et al's Mediated Learning Experience (MLE) construct was developed independent from Vygotsky's ZPD, but it realizes Vygotsky's vision of integrating mediations and assessment, and that involves co-constructing a ZPD with learners in order to promote development. According to Feuerstein et al. (1988), human cognitive abilities are not fixed, instead, they develop while interacting with adults who mediate the world to them in their daily lives. In MLE construct, *mediation* is the key component. Feuerstein et al. state that children in a non-mediated environment learn through a trial-and-error fashion, which resembles the stimulus-response conditioning model of the behaviorist paradigm. They believe that this direct learning experience does not promote children's ability to construct meaning and make connections with a world that is beyond their understanding when they are on their own. On the other hand, in a mediated learning environment, an adult or more competent peer can extend a child's attention beyond the direct learning environment, and help him/her develop many of the cognitive functions necessary to perform tasks that he/she can't perform at the current level. The mediator provides the child a model to move beyond his/her current capacities. The MLE construct challenges the unstated belief in educational static assessment in the way that it claims that the ability of human beings does not stay the same. When an adult or a more competent peer offers mediations to a learner, the mediator is able to attend to the learner's responsiveness to the mediations and then modify the mediations according to the learner's needs. The learner's ability will change with the assistance of effective mediations. The MLE construct fits perfectly within Vygotsky's vision of unifying assessment and instruction as a single development-oriented activity (Kozulin & Garb, 2002).

Dynamic Assessment of Reading Abilities

Dynamic Assessment of reading abilities uses a response-to-instruction paradigm to complement traditional static assessment of word recognition and reading comprehension. The process helps the examiner to predict appropriate intervention by exploring students' responses to a series of mediations in an interactive teaching-learning relationship. According to Carney & Cioffi (1990), the characteristics of using DA to diagnose one's reading abilities are that it is

process-oriented versus product-oriented; its procedure involves response to instruction, not mere recording of existing abilities; and it allows the examiners to analyze the student's patterns of response to a series of mediated instructions designed to promote one's reading proficiency, instead of only indicating the learners' performance by the use of indices such as percentiles and points. In DA, the examiner analyzes reading tasks to determine what the student needs to do to be successful and how the task may be adapted to help the student achieve success. The significant advantage of dynamic assessment of reading abilities over static assessment is that the learners' response-to-instruction information tells us how they may be able to perform if the conditions that make them inefficient are addressed. Successful reading results from automatic and consciously directed cognitive activities. DA thus investigates the degree to which a student's use of consciously directed cognitive activities can improve reading performance.

Most of the previous studies conducted to explore dynamic assessment of reading abilities were in the field of special education (Cioffi & Carney, 1983; Hamilton, 1983; Spache, McIlroy & Berg, 1981; Spreen, 1982; Wilson, 1981). These researchers implemented dynamic assessment to improve or to test the validity of the diagnosis of learners' reading disorders. They consistently noticed that traditional static assessment often failed to provide the information teachers needed to help their students constructively. Assessing reading abilities in a dynamic manner is not common in L2 assessment. One of the few known DA studies in L2 reading was by Kozulin and Garb (2002), who investigated whether DA could help provide information about the learning potential of at-risk Israeli high school EFL students in their grammatical knowledge and reading comprehension skills. The current study is different from Kozulin and Garb's research (2002) in that the researcher investigated five Taiwanese college students who were at intermediate-high level. Their English proficiency level was much higher than the subjects in Kozulin and Garb's study. Also, the areas being examined in the current study included more cognitively-demanding reading skills such as finding main idea in higher-level texts, using contextual clues to predict the meaning of vocabulary words, and making inferences.

Purpose and Research Questions

The purpose of this study is to investigate the effects of dynamic assessment on Taiwanese college students' current and potential reading skills, and discover what types of modifications should be made to design an effective mediation procedure. The research questions of the study are as follows:

- (1) What are the effects of DA on promoting Taiwanese college EFL students' reading strategies?
- (2) Does DA help the participants realize their learning potential and if so, to what extent?
- (3) What needs to be considered to design an effective mediation procedure?

Method

Participants

There were five nineteen-year-old participants, three males and two females, in this study. They are Albert, Jessie, Joey, Shannon, and Victor. Names used in the study are pseudonyms. They were students in one of the courses taught by the researcher called "Freshman English for Non-English Majors" at a university in Taiwan. Their English proficiency levels varied.

Procedures

The nature of this research is exploratory and descriptive. In this study, the researcher worked closely with five participants individually for four weeks in the mediation stage while exploring the effects of dynamic assessment on the participants' reading skills. The role of the

researcher, who was also the mediator, was to provide as much in-depth mediation as possible to achieve the purpose of concurrently assessing the participants' current level, discovering their learning potential, as well as instructing them appropriate reading strategies. (In this study, the terms "researcher" and "mediator" are used interchangeably.) In the mediation stage, the researcher observed the participants and interacted with them while using the flowchart for mediation procedure (Appendix A). The flowchart was designed by the researcher to serve as guides in the mediation process. The researcher's interaction with each participant was first audio-recorded and then transcribed for later analyses. The analyses were then described in detail to answer the stated research questions in the study.

This study adopted the pre-test, mediation, and post-test paradigm. At the pre-test stage, the researcher gave a pretest to all the participants to assess their current reading level. The pretest was made up of 12 short passages adopted from previous TOEFL exam samples. The passages were selected to assess the participants' reading strategies in three areas: finding main ideas (FMI); using contextual clues to predict the meanings of vocabulary words (CC), and making inferences (MI). In the pretest, there were four FMI questions, four CC questions, and four MI questions. The researcher recorded the questions that each participant answered incorrectly in the pretest. A week later, the mediation stage began. The researcher met with each participant individually one day each week, for four weeks straight. Each time they met, the researcher served as a mediator who provided mediation to the participants on the questions he/she answered incorrectly in the pretest. There was no time limit for each meeting because the primary purpose of the mediation stage was to provide the participants with as much in-depth reading strategies intervention as he/she needed. One week after the four-week mediation stage, the researcher gave the participants a post-test that were also made up of 12 short passages of similar reading level adopted from previous TOEFL exam samples. The post-test consisted of the same number and types of questions as in the pre-test: four FMI, four CC, and four MI.

Implementation of DA Mediation

The amount of mediation provided to each participant depends on the number of incorrect answers in each participant's pre-test. The participants received mediation on the questions they answered incorrectly. Therefore, the more incorrect answers a participant provided in the pre-test, the more mediation he/she received. In addition, based on Aljaafreh and Lantolf (1994), intervention should be provided in gradual progression. The purpose is to estimate the minimum level of guidance required by the novice to successfully perform a given task. Therefore, guidance normally starts at a highly strategic (implicit) level, and progressively becomes more specific, more concrete, until the appropriate level is reached. In order to make the dynamic assessment more systematic, in this study the researcher designed a series of mediation which began with the most implicit hints to the most explicit ones. The exact procedures for the mediation for each specific reading strategies investigated in this study are shown in Appendix A.

Data Analysis

Research Question 1: What are the effects of dynamic assessment on promoting Taiwanese EFL students' reading strategies?

To answer this research question, the researcher used three types of resources to serve the purpose of triangulation in the study. They are: audio-recorded data collected when the researcher interacted with each participant in each mediated session; the participants' post-mediation response sheets; and each participant's pre- and post-tests scores in the given reading passages.

Interaction analysis.

1. Stronger motivation in using English.

Before the mediation procedure took place, the participants were told that they could choose to use Chinese to express themselves. The reason is that L1 is proven to be a very useful tool in an ESL class to motivate learners to be involved in using more in-depth cognitive strategies and to fulfill their linguistic and instructional needs during the process of interacting with peers or teachers (Teo, 2006). Throughout the mediation process, one surprising discovery is that the participants were found reluctant to use Chinese even with the researcher's suggestion unless they ran out of their last resource to express themselves in English. This situation was out of the researcher's expectation because these students usually were reluctant to use English in their Freshman English class when they were put in groups for discussion activities. Their strong motivation in using English to converse with the researcher in the current study might be a sign that they were so focused on finding the answers to the questions that they did not realize they were using English as a tool to think and solve problems. Another explanation for this could also be that when the participants focused intensely on solving the tasks given, their subconscious anxiety in using the foreign language either disappeared or was at a very low level. In this situation, they were motivated to use English to achieve their purpose. Below is an example.

Interaction 1

R: Researcher V: Victor

- (1) R: What does the word "graven" mean in this passage?*
- (2) V: I think it means, uh, they don't have, uh.....*
- (3) R: You can use Chinese to explain to me if you like.*
- (4) V: I will try in English.*
- (5) R: Okay, try it then.*
- (6) V: Hmmm.....Shape. They don't make a shape to describe [sic] the god. They don't have a*
- (7) R: They don't have a real shape?*
- (8) V: They don't make a real face to describe [sic] the god.*
- (9) R: I see. You mean "graven" means that they don't make an image for their god?*
- (10) V: Yes.*

In this example, we can see that Victor's vocabulary is quite limited; however, in Line 4, he expressed his intention to describe what was in his mind in English, even though he knew that the researcher could understand him perfectly if he switched to Chinese. In Line 7, the researcher tried to help him clarify what he said by adding the word "real." In Line 8, he continued using English to complete the entire sentence by changing "shape" to "face," hoping to make his meaning clearer. Although the sentence he used to express himself was not perfect, the researcher was able to understand what he meant. Therefore, in Line 9, the researcher tried to interpret his meaning in a more proper English sentence to confirm with him what he really meant. While interacting with Victor in the dynamic assessment, the researcher did not notice any anxiety that was frequently found in many typical Taiwanese EFL learners when they were asked to participate in a conversation or discussion in an English language course. Instead, Victor insisted on using English to accomplish his task with no fear of making errors.

2. Roles of implicit and explicit feedback.

Two types of feedbacks, namely implicit and explicit feedbacks, were provided to the participants in the mediation process. It was noticed that providing the participants with the implicit feedback at the initial stage of the dynamic assessment helped to challenge the participants to rely on themselves more at the beginning. Explicit feedback was offered when implicit feedback was not sufficient to generate correct responses from the participants. It was also found that explicit feedback was almost always necessary in the first and second mediation sessions, but not in the later sessions when the participants became less dependent on it because they became more proficient and more confident in relying on the provided implicit feedback. Interaction 2 below illustrates how both types of feedbacks were presented to a participant to guide her to establish proper reading strategies and their effects on her.

Interaction 2

R: Researcher J: Jessie

(1)R: So, the author is comparing two things. What are they?

(2)J: The spectacular rise in prices on the stock market.

(3)R: And?

(4)J: The economic situation.

(5)R: Yes! What is the authoring saying about these two things?

(6)J: It's [sic] not the same.

(7)R: Good. They are not the same. How do you know?

(8)J: Hmmmm (no response while thinking hard)

(9)R: Are there any keywords that tell you they are not the same?

(10)J: The last sentence in the passage.

(11)R: Hmm, actually take a look at the underlined sentence, and see if you can find any keywords that tell you the spectacular rise in prices on the stock market and the economic situation are not the same.

(12)J: "bore little relation."

(13)R: Good! The phrase means "had little relationship." So, they don't show a lot of relation. Now, what can you say about the stock market and the economic situation during that time?

(14)J: The spectacular rise in prices on the stock market is not..... showing the (struggling to find a proper word choice).

(15)R: the "real"?(encouraging the participant to go on)

(16)J: the real economic situation.

The mediator provided some implicit feedback in Line 1. As shown from Line 2 to Line 6 above, Jessie was able to use the implicit feedback given by the researcher quite effectively. In Line 9, when the researcher tried to see whether Jessie could find keywords in the passage to help her answer the inferential question, she noticed that Jessie looked for them in the wrong place. Thus, in Line 11 she pointed out the exact part "bore little relation" (explicit feedback) where the keywords were. With the help of the explicit feedback, Jessie was able to infer immediately that the stock market and the real economic situation did not bear any relationship, Interaction 2 proved that when implicit feedback was presented at the initial stage, followed by explicit feedback when the former was not sufficient, the learners were able to find the correct answers to the questions more easily.

3. The role of students.

By interacting with the participants in the dynamic assessment, the mediator did not only help them improve their reading strategies, but also allowed herself to be helped by the participants. The participants' responses gave the mediator an opportunity to learn about the

learners' difficulty, confusion, and their process of thinking, as well as some technical problems such as question designs. Interaction 3 below supports this point. Victor was asked to answer an inferential question after he read a passage.

Interaction 3

R: Researcher V: Victor

- (1) V: Aspirin has many beneficial effects. It cures Alzheimer's disease and Parkinson's disease.*
- (2) R: First of all, do you understand what the question is about?*
- (3) V: Yes, it asks about the beneficial effects of aspirin.*
- (4) R: Well, not quite so. Do you know what the word "claims" mean in the question?*
- (5) V: No.*
- (6) R: "Claims" means "statements." Here it refers to the statements many people make about the beneficial effects of aspirin.*
- (7) V: Oh.*
- (8) R: So, actually the question is not really asking you what you think the beneficial effects of aspirin are. It is asking you what you think about or can infer from the statements many people make about the beneficial effects of aspirin.*

In Line 1, when Victor gave the answer to the inferential question, the researcher realized that perhaps he failed to fully understand the inferential question asked. Therefore, in Line 4, she asked him if he knew the meaning of "claims" to check if it was the word that prevented him from comprehending the question. It turned out that Victor would need more clarification on the question. In Lines 6 and 8, the researcher went on providing more scaffolding to help Victor proceed to answering the question. This double-checking allowed the researcher to learn that "claimed" could be a difficult word for some Taiwanese EFL college students, and thus she probably should use it with caution in a reading comprehension test in the future.

Participants' responses.

After the mediation, each participant was given a response sheet (Appendix C) to fill out to express their views on the assessment. A summary is presented in the following based on the participants' responses.

1. Improving reading strategies.

All the participants responded that they learned helpful reading strategies in the process of interacting with the mediator. One strategy all of them felt that they learned from the mediation was identifying the main ideas of a passage.

2. Comparing dynamic assessment with traditional EFL reading assessment.

All of the participants indicated that they enjoyed the direct face-to-face interaction with the mediator, even though the interaction is considered as a type of language assessment. They mentioned that it helped them understand what their reading problems in English were. Dynamic assessment made them feel more relaxed, and gave them more fun and more control in English. They also felt like using English more to communicate and to think in the process of working on dynamic assessment. Unlike most students who usually feel anxious about taking a traditional static test, all five participants looked forward to having the dynamic assessment in the future to help improve their reading skills. They also reported that they were glad to be given chances to correct their mistakes in the test. Four of the participants responded that dynamic

assessment gave them more confidence as language users and test takers. Two of the participants suggested that the researcher should consider conducting dynamic assessment more than in class.

Although they believed that dynamic assessment had helped them understand their reading problems in English, improve in answering reading comprehension, and guide them to use contextual clues to predict the meaning of vocabulary words in reading passages, two respondents considered these tasks to be different from problem-solving activities.

3. *Noticing different styles of writing.*

One participant responded that when the mediator pointed out different reading strategies to guide him to read more effectively, he began to realize that English academic texts are written in a very different way from the Chinese writing style he was used to. He commented that English text is written “steps by steps.” He concluded that “we should first learn how English-speaking people think if we want to improve our reading skills in English.” In other words, he suggested that EFL students should understand the organization of academic texts in English well.

Participants’ pre and post test.

The third set of data used to investigate the effect of dynamic assessment on Taiwanese college students’ reading strategies is comparing their pre and post test scores. Table 1 shows the results of each participant’s pre and post test scores. The total score of each test is 12 points based on 12 reading passages. There was one question per passage, and each question is one point. The detailed analysis of the participants’ pre and post test scores is presented in the following section to answer Research Question 2 in the current study.

Table 1
Each Participant’s Pre and Post Test Scores

Participants	Pre-test Scores	Post-test Scores
Albert	6	6.5
Jessie	3.5	8
Joey	3.5	7.5
Shannon	1	7.5
Victor	2.5	8

Note. The range of the score is 0 to 12.

Research Question 2: Does dynamic assessment help the participants realize their learning potential? If so, to what extent?

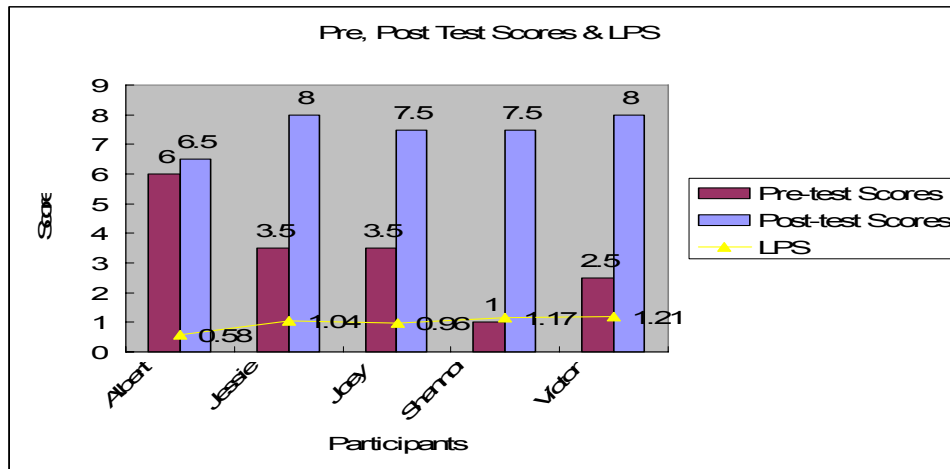
As shown in Table 1, all the participants showed an overall improvement in their post-test scores. Albert, who was the highest pre-test scorer, showed the least progress in his post-test performance among the participants, while the other four showed significant improvement. The scoring method used to operationalize the participants’ learning potential is adopted from the formula created by Kozulin and Garb (2002). The formula they used to calculate the LPS is as follows:

$$LPS = (S_{post} - S_{pre})/Max S + S_{post}/Max S = (2 S_{post} - S_{pre})/Max S$$

(S pre = pre-test scores; S post = post-test scores; and Max S = maximum obtainable score)

The learning potential score (LPS) for each participant in this study was calculated based on this formula. Each participant's LPS was used to show his/her LPS distribution. The LPS distribution helped to show the impact of the designed mediation on each participant's individual learning potential. Two parts of LPS are used to analyze the results. The first part, as shown in Figure 1, indicates the participants' overall individual pre-test and post-test scores, as well as their individual LPS. In the second part, as shown in Figure 2 and Figure 3, the researcher used the participants' pre-test and post-test scores in each reading strategy to calculate each participant's LPS in each type of reading strategy.

Figure 1



Note. The range of the pre and post-test score (Max S) is 0 to 12. The range of LPS is 0 to 2.

Based on the formula, the range of an LPS is from 0 to 2. A participant who received the same score in both pre and post-tests would have a calculated LPS of 0.7. In other words, a LPS of 0.70 or below shows either no significant improvement or digression in a participant's post-test results. The higher an LPS is above 0.7, the higher learning potential a participant demonstrates, and the lower an LPS is below 0.7, the lower learning potential a participant has.

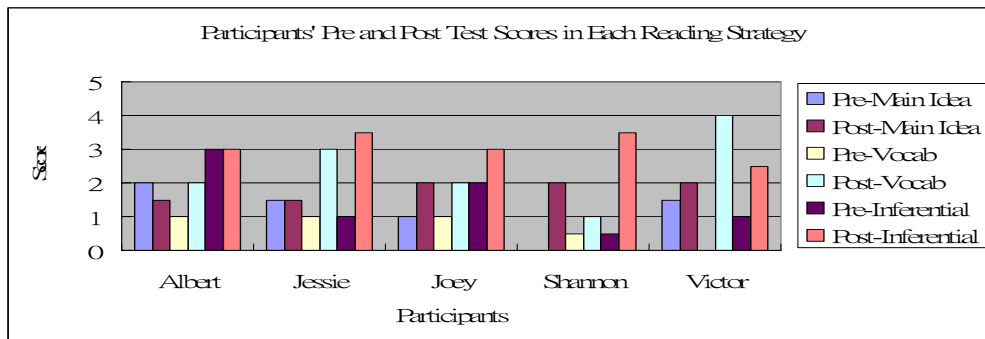
Since the participants were given 12 questions in both the pre and post tests, the maximum points of each test is 12 points. In Figure 1, we can tell that all participants showed improvement in their post-tests. In terms of the LPS distribution as shown in Figure 1, all of the participants, except Albert, showed significant improvement. Jessie, Joey, Shannon, and Victor progressed considerably in their post-tests. Moreover, their LPS indicated their impressive learning potential. For example, Jessie's LPS is 1.04, much higher than the cut-off point of 0.7.

Albert's case is the only exception. Figure 1 shows that Albert scored the highest in the pre-test among all the participants. However, Albert only improved 0.5 points in his post-test, and so his LPS is below 0.6, which is considered as no significant improvement. As mentioned in the method section, the amount of mediation provided to the participants depends on the number of incorrect answers found in the participants' pre-test. The participants only received mediation on the questions they answered incorrectly. Therefore, the more incorrect answers a participant provided in the pre-test, the more mediation he/she received. One possible explanation for Albert's less significant LPS could be that he received significantly less mediation than the other participants in the current study. Albert scored the highest in his pre-test among all the participants. As a result, he received significantly less mediation than the other participants, which caused a low LPS shown in his post-test.

Another significance of this study is that the LPS data obtained in this study helped reveal what did not show in traditional language assessment. For example, Jessie and Joey both obtained the same score in their pre-test. However, their LPS difference infers that they have different learning potential since Jessie scored 1.04 and Joey 0.96. Similarly, Shannon, who scored the lowest in the pre-test, actually demonstrated a very high LPS after the mediation. Her LPS was much higher than the LPS of Albert, the highest scorer in the pre-test, who obtained only an LPS of 0.58. Her LPS was also higher than the second highest pre-test scorer, Jessie and Joey, who had LPS 1.04 and 0.96 accordingly. The highest LPS scorer is Victor with a LPS of 1.21, which was way beyond the cut-off point, 0.70. Surprisingly, Victor had the second lowest score in his pre-test. After the mediation, he became one of the two highest scorers in the post-test. (The other highest scorer is Jessie, who scored the same points in the post-test as Victor did.)

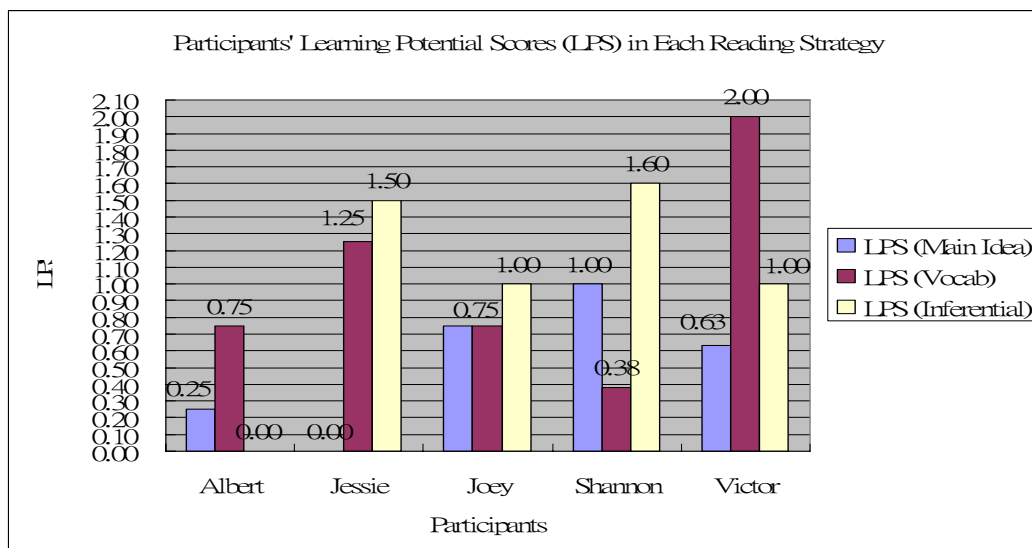
Figure 2 shows the participants' pre and post-test scores in each three reading strategies. Figure 3 shows the participants' LPS in each three reading strategies.

Figure 2



Note. The range of the pre and post-test score (Max S) is 0 to 12.

Figure 3



Note. The range of LPS for each reading strategy is 0 to 2.

Taking a close look at the participants' LPS in each reading strategy helps reveal what cannot be seen in the overall LPS. Also, it might help to discover which particular type of mediation worked more effectively than others. First of all, the participants demonstrated the most satisfactory performance in making inferences. The LPS of four of the participants, except

Albert, in making inferences is way above the cut-off point of 0.7. Albert scored 0 in this strategy because his performance in making inferences after the mediation did not change in his pre and post-tests. Secondly, four of the five participants showed significant improvement in the strategy of using contextual clues to predict the meaning of vocabulary words. Victor's LPS in this strategy was a perfect score because he scored 0 in the pre-test, but a full score of 12 points in his post-test. The strategy that is the least consistent is finding main idea. Jessie's LPS in this strategy is 0, Albert 0.25, and Victor 0.63. The ones who showed significant improvement in the strategy of finding main idea were Joey and Shannon, whose LPSs are 0.75 and 1 accordingly.

The findings above show a surprising result, which is that the participants progressed more impressively in making inferences, a skill that is more cognitively-demanding, than another less demanding skill such as finding main idea. One possible explanation for this is that during the mediation process, the mediator walked the participants step-by-step through the stages including finding main idea and understanding keywords to guide them to make educated guesses when answering inferential questions. The time spent on the mediation procedure of making inferences was longer than on the procedures of the other two strategies.

Research Question 3: What needs to be considered to design an effective mediation procedure?

The transcription of the interaction episodes between the mediator and the participants was used to answer the research question. A summary is presented below.

1. Treating making inferences as more than one single skill.

Making inferences involves cognitively-demanding thinking skill, and thus it is a skill that is rather difficult to master, especially for EFL learners. Throughout the interaction with the participants, it is also noticed that there was a strong correlation between understanding the main idea and answering the inferential questions correctly. Thus, to effectively use mediation to help the participants develop their skills in answering inferential questions, a mediator should first check whether they know the overall main idea of the reading passage. If they can't identify the main idea, then they should be given guidance to find it before working on the steps in making inferences. Appendix B shows steps in finding main ideas.

2. Arranging the order of implicit and explicit feedback properly.

Another factor to consider when a mediator designs the DA mediation procedure is to determine the proper arrangement of implicit and explicit feedback. Aljaafreh and Lantolf (1994) suggested that we should allow an EFL learner to first rely on implicit feedback, and then gradually move to explicit feedback when necessary. Implicit feedback includes giving the overall direction to the participants where they can find the answers. Explicit feedback includes pointing out to the learners the exact place in the passage where the answers are located. Thus, in the mediation procedure flowchart (Appendix A) used by the mediator, the feedback began with giving the participants more general guidelines, which later became more specific.

3. Helping participants to differentiate main idea from supporting ideas.

The researcher discovered that one of the biggest hurdles the EFL learners needed to overcome is learning to differentiate the details from the main ideas in a passage. Although the mediator had attempted in each interaction to point out the differences between details and main idea, some participants still had difficulty making the distinction. Thus, it is crucial that the mediator constantly points out the differences between these two items during the process.

4. Allowing learners to rely on themselves.

Mediators should learn to feel comfortable to gradually let go the control they have had on learners in their learning process. For example, although as mentioned earlier it is important for the mediator to help the participants understand the keywords in order to get the main idea, it is also important for the learners to decide on their own which keywords they needed to know and if they needed to use all the hints given by the mediator to find the answers successfully. A mediator's ultimate goal should be helping the participants to get away from having to rely on hints given, and gradually become independent targeted language users.

5. Making adjustment based on individual differences.

It is unrealistic to come up with a one-size-fits-all mediation procedure because each learner is a unique individual. Some may take much longer time than others to learn the strategies. Thus, a mediator has to make adjustment based on individuals' needs in the one-on-one dynamic assessment.

6. Requiring time and patience.

Helping the learners to develop effective reading strategies in the dynamic assessment is a time-consuming process. It requires frequent practice from the participants and much patience from the mediator. For example, the mediator should constantly remind the learners the common places where the main ideas can be found in a typical academic texts written in English, as shown in Appendix B. Also, they need to be reminded that the answers to most inferential questions are usually not directly stated in the passage. Besides reminders, consistent practices on using the appropriate reading strategies as shown in Appendix A are extremely helpful.

Conclusion

The purpose of this study is to investigate the effects of dynamic assessment on Taiwanese college students' current and potential reading skills, and discover what needs to be considered to design an effective mediation procedure. The participants' pre and post-test results proved that when reading strategies are mediated to the participants appropriately, they helped improve the learners' reading skills effectively. More importantly, when the assessment was integrated with instruction, it helped the learners realize their learning potentials. Therefore, the participants were able to take the strategies learned from appropriate mediation a step further and apply them to new materials presented in the post-test.

In addition, based on the study, a pre-test score was obviously not sufficient to indicate what a teacher would need to know to prepare for effective lesson plans. Dynamic assessment allows teachers to see beyond what is shown in a static score. For example, when two learners received the same score in a pre-test, it did not necessarily mean that they were actually at the same proficiency level. Even if they were at the same proficiency level, a teacher could not tell whether they had different degree of learning potentials until the mediation stage took place in the dynamic assessment. In addition, understanding each individual's learning potential will help a teacher design more effective lesson plans that will serve the individuals more properly. Based on the learners' responses, comments, and questions during the mediation process, a teacher can make adjustment to accommodate each individual's instructional needs. As previous research has shown, dynamic assessment helps teachers reach the goal of unifying assessment with instruction.

This study also explores factors that need to be considered to design an effective mediation procedure. They include: (1) treating making inferences as more than one skill, (2)

arranging the order of implicit and explicit feedback properly, (3) helping participants to differentiate main idea from supporting ideas, (4) allowing learners to rely on themselves, (5) making adjustment based on individual differences, and (6) requiring time and patience.

In addition, as mentioned in the data analysis section earlier, two respondents reported that dynamic assessment does not help them improve their problem-solving skills. Interestingly, they responded that dynamic assessment had helped them understand their reading problems in English, improve their skills in reading comprehension, and guide them to use contextual clues to predict the meaning of vocabulary words in reading passages. It indicates that they did not think that these skills were related to problem-solving strategies. In fact, it tends to be a common problem many EFL teachers are facing: How can we challenge the students in the classroom while at the same time help them apply the skills they learned in the classroom in real-life situations? I suggest that one way is to include mock real-life scenarios in EFL dynamic assessment activities which will allow students to use English to solve the problems assigned.

The limitation in the study includes the small number of participants, which restricts the research's ability to make generalization based on its findings. Also, the study only investigated three reading strategies, namely finding main idea, using contextual clues to predict the meaning of vocabulary words, and making inferences. Dynamic assessment (DA) should also be implemented to explore other reading strategies that were not covered in the current study. In addition, since the quality of mediation is the primary component in DA, it is recommended that we maintain a consistent standard of the mediation for the mediator to use as guidelines while providing mediation for the learners. Thus, further research should focus on designing consistent and high-quality mediation to be implemented in the dynamic assessment procedure.

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Appendix A

Mediation Procedure

The researcher followed the mediation procedures below when providing the participants with the mediations in the study:

A. Finding Main Idea (FMI)

Stage 1: The main idea is the **summary** statement that tells you the overall message of a given passage. It can be stated in a word or a phrase that can serve nicely as a title. Ask yourself: What (Who) is this paragraph about?

Paragraphs are made up of sentences that serve as main ideas, major details, and minor details. The main idea is the summary statement that discloses the overall message of a given passage.

Say: Now, read the passage again carefully, and tell me what you think the main idea is.

* If the learner can't provide any answer, or the answer is wrong, move on to Stage 2.

Stage 2: Explain some **keywords** in the passage to help the learner to comprehend the passage. Also allow the learner to ask questions regarding the meaning of words or sentences. Pinpoint the possible place of the main idea.

Say: Usually main idea can be found in:

- a. 1st sentence – topic sentence*
- b. the last sentence*
- c. certain phrases such as “in short,” “in summary,” “in fact,” “thus” etc. (because they occasionally are used to introduce the main idea.)*
- d. Sometimes the main idea is not stated in any specific phrase or sentence. In this case, you will have to read the context carefully, and then make the most educated guess on what the most important point is about the passage.*

Then, ask, “What is the main idea in the passage?”

* If the learner can't provide any answer, or the answer is wrong, move on to Stage 3.

Stage 3: Narrow down and point out the specific parts in the passage that might lead to the main idea.

* If the learner can't provide any answer, or the answer is wrong, move on to Stage 4.

Stage 4: Explain the context. Tell the answer.

B. Using Contextual Clues to Predict Meaning of Vocabulary (CC)

Stage 1: Explain that in many academic texts, one can guess the meaning of certain important words from the context nearby the vocabulary word.

Ask: In this passage, where do you look to find the parts that will help you understand the meaning of the underlined word?

- a. *If the learner knows the right place to get the answer, complement him. Then, ask him what he thinks the underlined word means. If the learner gives the wrong answer, move on to Stage 2.*
- b. *If the learner cannot provide any answer regarding where to look to help guess the meaning of the underlined word, or gives the wrong answer, move on to Stage 2.*

Stage 2: Pinpoint the possible place where it helps explain the meaning of the underlined word in the passage.

Stage 3: Point out certain phrases that lead to understanding the meaning of the underlined word in the passage

Stage 4: Point out the specific place where the meaning of the underlined word can be found. Explain the context. Tell the answer.

C. Making Inferences (MI)

Stage 1: Ask questions to check whether the learner understands the main idea and keywords in the passage.

- a. If yes, go to the inferential question. If the answer to the inferential question is wrong, go to Stage 2.
- b. If no, go to Finding Main Ideas (FMI) Stage 1 through Stage 4 until the learner understands the main idea of the passage .

Stage 2: At this stage, the learner should know the main idea in the passage already. Mediator should now focus on giving general information to help the learner use the stated meaning to infer the unstated meaning in the passage. Then, ask the inferential question. If the answer to the inferential question is wrong, go to Stage 3.

Stage 3: Point out the specific parts that can help the learner connect the stated and unstated parts in the passage. Then, ask the assigned inferential question. If the answer is wrong, go to Stage 4.

Stage 4: Point out the exact connection between the stated and unstated parts. Give the answer.

Appendix B

Where to Find Main Idea

Usually main idea can be found in:

a. 1st sentence – topic sentence

b. the last sentence

c. certain phrases such as “in short,” “in summary,” “in fact,” “thus” etc. (because they occasionally are used to introduce the main idea.)

d. Sometimes the main idea is not stated in any specific phrase or sentence. In this case, you will have to read the context carefully, and then make the most educated guess on what the most important point is about the passage.

Appendix C

Post Mediation Feedback Sheet

1. What did you learn from the activities we have done in the past several weeks?
2. Before and after the activities, do you find any changes that take place in your reading skills in English?
 _____ Yes _____ No
3. If your answer to Question 2 is “yes,” what are the changes?
4. Do you feel that your reading strategies have improved? If so, in what ways?
5. What do you like about this activity the most?
6. What do you like about this activity the least?
7. Do you have any suggestions to make the activities more helpful?
 - a. Pretend that the activity we did in the past several weeks were an English reading test. We call it “Test A.” Test A allows you to interact with your teacher when you answer a reading question incorrectly. The teacher will give you feedback and guidance to help you get the correct answers.
 - b. You are also asked to take another test called “Test R.” Test R is a regular English reading test, just like the test you took in your mid term and final exam. You took the test and turn it in to your teacher after you were done. You received a final score indicating how you did on the test some days later. You did not get any feedback or guidance from your teacher.

I would like you to compare Test A and Test R, and answer the following questions:
 How do you feel about these two tests: (check ALL that apply from below)

	Test A	Test R	No difference
I feel more relaxed			
I have more fun			
I feel more confident			
I feel I have more control in English			
I feel like using English more			
I feel that I can use English to solve problems			
I feel that I can use English to think			
I feel that it helps me understand my reading problem in English			
I am happy that I am given chances to correct my mistakes in the test			
I feel that it helps me improve my reading skills			
I look forward to having this test again to improve my reading skills			

If you have anything you want to add, please write it on the space below.