

## The Effect of the MAP Growth Test on Primary School Students' Reading Comprehension: American Excellence Schools as a Case Study

Majde Mahmoud Albatineh \* , Abdallah Baniabdelrahman 

Department of Curricula and Instruction, Faculty of Education, Yarmouk University, Irbid, Jordan.

Received: 24/1/2023  
Revised: 4/4/2023  
Accepted: 11/5/2023  
Published: 15/12/2023

\* Corresponding author:  
[mjxp@live.com](mailto:mjxp@live.com)

Citation: Albatineh, M. M. . . , & Baniabdelrahman, A. . (2023). The Effect of the MAP Growth Test on Primary School Students' Reading Comprehension: American Excellence Schools as a Case Study. *Dirasat: Educational Sciences*, 50(4), 211–222.  
<https://doi.org/10.35516/edu.v50i4.3885>



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### Abstract

**Objectives:** The purpose of this study is to investigate the effect of using the MAP Growth test in improving the reading comprehension of primary school students. The study uses American Excellence Schools in Jordan as a case study.

**Methods:** The study sample included 30 male and female students who studied at American Excellence Schools which is a private school registered with the Directorate of Education of Amman. The study used a quasi-experimental design. The sample was divided into two experimental groups based on their performance in the MAP Growth pre-test assessment. A special instructional program was designed for each experimental group according to the directions in the user guide of the MAP Growth test so as to focus on the weaknesses and missing skills of each group, which were identified based on the results of the MAP Growth pre-test assessment. Upon the completion of the instructional program, students took the MAP Growth post-test assessment, and data was analyzed to find whether there is any statistically significant differences at ( $\alpha = 0.05$ ) in the students' mean scores in the reading comprehension post-test due to the use of the Map Growth test.

**Results:** The results showed that there were statistically significant differences at the level ( $\alpha = 0,05$ ) in the total score of students' reading comprehension for the two groups in favor of the post-test due to the use of the instructional program.

**Conclusions:** The researchers recommend using the MAP growth test to enhance students' reading comprehension skills.

**Keywords:** MAP Growth test, primary school students, reading comprehension.

### أثر اختبار قياس التقدم الأكاديمي في الاستيعاب القرائي لدى طلبة المرحلة الأساسية: مدارس الجودة الأمريكية في الأردن

مجدي محمود رجاء النبطانية<sup>\*</sup>، عبدالله احمد عبدالله بني عبدالرحمن

قسم المناهج وطرق التدريس، كلية التربية، جامعة اليرموك، إربد، الأردن.

#### ملخص

الأهداف: هدفت الدراسة إلى استقصاء أثر اختبار قياس التقدم الأكاديمي في الاستيعاب القرائي لدى طلبة المرحلة الأساسية في مدارس الجودة الأمريكية في الأردن.

المنهجية: شملت عينة الدراسة 30 طالبًا وطالبة من مدارس الجودة الأمريكية، وهي مدرسة خاصة تابعة لمديرية التربية والتعليم في عمان. تم جمع البيانات باستخدام المنهج التجريبي من نوع "تجربة واحدة"، وجرى تقسيم العينة إلى مجموعتين تجريبيتين بناءً على أدائهم في اختبار قياس التقدم الأكاديمي القبلي. تم تصميم برنامج تعليمي خاص لكل مجموعة تجريبية من خلال اتباع التوجهات المتوفرة في دليل الاستخدام لاختبار قياس التقدم الأكاديمي بحيث يركز البرنامج التعليمي على نقاط الضعف والمهارات المفقودة لدى كل مجموعة وتم تحديدها بناءً على نتائج اختبار قياس التقدم الأكاديمي القبلي. بعد انتهاء البرنامج التعليمي، تم إجراء اختبار قياس التقدم الأكاديمي البعدي للطلاب وتحليل البيانات من خلال اختبار ويلكوكسون للعينات المرتبطة لمعرفة إذا ما كان هنالك فروقات ذات دلالة إحصائية عند مستوى الدلالة ( $\alpha=0,05$ ) في المجموع الكلي لعلامات الطلبة في اختبار قياس التقدم الأكاديمي البعدي.

النتائج: أظهرت النتائج وجود فروقات ذات دلالة إحصائية عند مستوى الدلالة ( $\alpha=0,05$ ) في أداء طلبة المجموعتين التجريبتين على اختبار قياس التقدم الأكاديمي في الاستيعاب القرائي لصالح الاختبار البعدي تعزى إلى استخدام البرنامج التعليمي الذي يركز على نقاط الضعف والمهارات المفقودة لدى كل مجموعة.

التوصيات: في ضوء النتائج، يوصي الباحث باستخدام اختبار قياس التقدم الأكاديمي لتعزيز مهارات الاستيعاب القرائي لدى الطلاب في المرحلة الابتدائية.

الكلمات الدالة: اختبار قياس التقدم الأكاديمي، الاستيعاب القرائي، طلبة المرحلة الأساسية.

## INTRODUCTION

Reading is an important language skill that shows language proficiency of students and the success in learning a certain language is usually judged by the ability to write, read and understand that language. Among other skills, reading can be very challenging for students as a fundamental requirement to success. For many students, reading difficulties grow to be a consistent problem through their learning years. Moreover, these difficulties affect their desire to read and they never overcome them without the proper guidance Smith (1994) Alyousef (2005) defined reading as a process between a reader and a text. This process is interactive in which the reader reaches fluency through interacting with the text dynamically to grasp the meaning using various kinds of knowledge. Moreover, reading comprehension is not limited to decoding a text and building an idea about it.

Grabe (1991, p. 377) believes that a lot of skills and strategies are involved in reading comprehension process: "An active process of comprehending where students need to be taught strategies to read more efficiently ( e.g. guess from context, define expectations, make inferences about the text, skim ahead to fill in the context, etc )." In this sense, Rivas (1999) explains that reading contains various skills and can't be assessed in isolation from them.

As for the reading development and effective reading instruction, Fletcher (2007) stresses that developing reading comprehension is highly affected by phonological awareness, decoding, and language comprehension. It is clear that in order to advance further in reading comprehension, reading instruction should be individualized and dynamic rather than static and should adapt to a student's knowledge and needs (Vaughn & Fuchs, 2003).

In this sense, mercer (1998) explains that teachers have a crucial role managing language activities where students are involved in order to make them relate to when, what and how they are needed to execute the ongoing language activities. There are four skills of English language: reading, writing, listening and speaking which should be obtained by students to excel the language. Unfortunately, the current English teaching practices doesn't have a full focus on reading especially in the assessment process. For an example, Pennington (1999) explains that instructions and focus in testing learners speaking abilities are lacking strong base and reliability in the testing designs.

## ASSESSMENT

Assessment is an important tool for both teachers and students to track a language skills development. That is, any learning system needs feedback (Davis, 1998). It can be looked at as the use of a well-organized system of tests to make judgments about achievements. (Gronlund & Linn, 1990). Another definition mentioned by Palomba and Banta (1999) defines assessment as the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving learning.

Brown (1990) stated that assessment is a connected series of measures carried out for the sake of determining a complex attribute of an individual or a group. In which information about the student level of achieving learning goals are gathered and interpreted.

Black and William (1998a) define assessment as the practice of detecting and defining the knowledge, understanding, abilities and skills of students. It is seen as an activity to stimulate learning by collecting data and offering constructive feedback. In more simple words, it is to gather information about how well students are doing in their learning to take correct decisions in planning the teaching techniques and instructions.

From this perspective, assessment gives teachers the opportunity to track the teaching /learning process effectively as they can pinpoint their students' weaknesses and demands hence apply the suitable changes to their instructions according to the assessments' results.

There are two types of assessment according to Stiggins (2001) and Tessmer (1993): formative assessment which is assessment for learning, and summative assessment which is assessment of learning. Spafford, Pesce, and Grosser (1998) identify summative assessment as assessment concentrated on the performance at the end of a term of teaching to measure the outcomes of student's total learning of a subject matter. It is limited to summarizing students' achievement at a particular time. Summative assessment includes tests, quizzes, assignments and project work submitted at the end of a term, semester or year the purpose of which is to measure proficiency (Boston, 2002).

Black and Wiliam (1998b) explain that formative assessment is a continues process planned to assess the level of a student in the learning process and help a teacher identify the suitable instructional activity to improve student's learning. In this view, assessment is an ongoing process of collecting information about students' performance by using different techniques with results gained on the long term basis. The purpose here is not limited to measuring proficiency rather extend to improve students' achievements. Collins and O'Brien(2003) and Shaaban (2005) stated that detecting the strengths and weaknesses of learners through formative assessment serves the purpose of improving proficiency.

#### **Teachers' perspective of assessment**

Previous studies show a strong relationship between approaches to teaching and lecturers' conception of teaching. Trigwell and Prosser (1998) found that lecturers' perceptions of their teaching context influence their teaching. They have identified two conceptions of teaching and learning: 1- Teachers' perspective of learning as joining of information look at teaching as information transmission to students leading them to focus more on themselves as teachers. 2- Teachers' perspective of learning as assisting in the development and alteration of students' concepts of learning are thus more student-focused. In this regard, Samuelowicz and Bain (2002, p. 181) stated that "different teachers' orientations result in different assessment practices". In other words, Assessment for teachers who consider teaching and learning as the reproduction or transmission of knowledge is the measure of a student's capacity to reproduce the knowledge they have learned. Teachers who emphasize critical thinking and facilitate learning, on the other hand, consider assessment as a means of transforming knowledge and a crucial component of the learning process (Samuelowicz & Bain, 2002). Segers, Gijbels, & Thurlings (2008) stated that the ways in which assessment is carried out have implications for students' learning.

#### **Students' perceptions of assessment:**

Students' perceptions of any assessment system play a mediating role in how it affects their learning processes and outcomes (Struyven, Dochy, and Janssens 2005; Lizzio and Wilson 2013). Rowntree relates that assessment has an impact on students even before they are assessed (Rowntree, 1987). For instance, different factors may influence students' perception of assessment like previous experience with assessment, their characteristics and communication with teacher and among each other's. This means that lecturers' intervention for assessment can be perceived by students differently and influence students' learning process in various ways.

#### **Benchmark Testing:**

Relating to the purpose of formative and summative assessments, Perie, Marion, Gong and Wurtzel (2007) offered a definition of benchmark assessments: Interim or benchmark assessments are described as those that "(1) assess students' knowledge and skills relative to curriculum goals within a limited time frame, and (2) are designed to inform teachers' instructional decisions as well as decisions beyond classroom levels" Perie et al (2007, p. 4). In addition to providing data that can be aggregated across classrooms and/or schools, benchmark tests also provide data that can be used at the individual student or classroom level.

Perie et al. (2007) inform that benchmark assessments are utilized in one of the three forms: instructional purposes, evaluative purposes or predictive purposes. Perie et al. (2007) indicate that when benchmark assessments are employed for instructional purposes, the results are used to modify instruction and curriculum at the classroom level to better conform the needs of the students. Effective formative assessments, according to Black and Wiliam (2010), involve students as a part of the feedback loop that eventually results in enhanced teaching and student learning. In other words, benchmark assessments establish a continuous circle that allow both teachers and students modify their actions in order to get better results.

#### **Measures of Academic Progress Assessment:**

Brown and Coughlin (2007) mentioned a summarized definition for MAP as a benchmark/interim, computer-based adaptive assessment that is intended to take place three or four times during an academic year and intended to assess students in Reading, Language Usage, and Math. MAP test is a Common Core-aligned assessment that does not require additional practice time because it is in line with curricular standards (Lazarin, 2014). It is used, like other benchmark examinations, to track students' progress on a set of standards that they need to master in order to meet end-of-year

learning objectives (Cordray, Pion, Brandt, Molefe, and Toby, 2012).

### **Statement of the Problem**

Through the researcher's experience as an English teacher for 7 years, it has been noticed that the majority of students in primary stage lack most of the important language skills like reading. Most of the students show different weakness points in the classroom activities and in the regular term tests. These weaknesses seem to be accumulating and affecting students' academic development and achievements yearly. The researcher noticed that researches on the development of reading comprehension using assessment tools and procedures are little. The researcher believes that the need of utilizing alternative assessment tools in improving students' reading comprehension skill has become a necessity and shall enrich the field of English language teaching methods with the proper means to achieve the desired learning goals.

According to the education policy at the school level in Jordan, basic reading abilities should be mastered by school students. However, the outcomes and data from global organizations like PISA (2012), IELTS (2013–2014) and local media reports have emphasized that school scores point to poor student learning achievement (Malkawi, 2014). The low levels of students' performance in reading comprehension and other English skills allude to inefficient current practices of English language teaching in Jordanian schools failing to produce proficiency in English language among schools' students (Smadi, 2013). This might be because of the widespread reliance on regular approaches to language instruction and reading comprehension practices (Amoush, 2012). Many Jordanian EFL students read slowly, which may be a result of the students' inadequate reading skills (Al-Makhzoumi, 1986).

In addition, Jordanian researchers (e.g., Al-Ansi, 1992; Frahihat, 2003; Al-Sarairah and Abul-Haija, 2007; Al-Jamal, Hawamleh and Al-Jamal, 2013) highlight the problems in reading and reading comprehension that Jordanian students face. The results of these researches showed that the followed practices of teaching are questionable and lack the required efficiency leading to a low level of students' reading comprehension and there is urgency for adopting new unconventional methods in teaching different English skills. Teachers in Jordanian schools lack articulation of national standards, norms, and instructional materials that may be used to teach certain skills and practices which may influence the academic success of the students (British Council, 2015).

### **Purpose of the Study**

This study aims to investigate the effect of the Map growth test on primary stage students' reading comprehension; the case of The American Excellence Schools.

### **Questions of the Study**

This study seeks to answer the following question: Are there any statistically significant differences at ( $\alpha = 0.05$ ) in the students' mean scores on the reading comprehension post-test due to the use of Map Growth Test on Primary Stage Students' Reading Comprehension.

### **Significance of the Study**

This is one of the few studies that look into the impact of using the Map growth test on primary stage students' reading comprehension performance. The current study is significant because it may allow primary stage students to improve their performance in reading comprehension lessons by using Map growth test. Furthermore, this study is significant because it may help teachers in Jordan introduce a new teaching strategy for teaching reading comprehension. Moreover, the study is significant because it may assist policymakers and curriculum designers plan and designing appropriate activities and tasks that improve students' reading comprehension. Further, the current study's findings may encourage other researchers to conduct studies, particularly in Jordan, to investigate the potential impact of Map growth test on other English language skills.

### **Operational Definition of Terms**

In the current study, the following terms have meanings as follows:

**Measure of Academic Progress Test: (MAP) Growth Test:** It is a computer-adaptive test in which every student gets a unique set of test questions based on responses to previous questions. Questions get harder or easier according to student's level. The test aims to determine what the student knows and how they are growing academically.

**MAP Assessments:** The MAP assessments are a group of computer-adaptive tests in reading, language usage,

mathematics, and science conducted 4 times a year. It rank each student on a learning continuum from grade 3 to grade 10 in each subject. Each MAP assessment uses a continuous interval scale known as the Rasch (RIT) unit scale score to assess students' development and level of proficiency throughout a range of strand-defined competencies.

**Reading Comprehension:** It is a process that students utilize to understand text material by integrating the new information into the networks of students' experiences and prior knowledge. In this study, reading comprehension is defined as the mean score obtained by the primary stage students on reading comprehension according to the MAP growth pre- test and post-test used in the study.

**Literal comprehension Level:** It is a group of main outcomes consisting of recognizing the reading text details, eliciting facts from the text, recognizing the meaning of the key words and expressions, and recognizing characters and places. In this study, literal comprehension is defined as the mean score obtained by the primary stage students on reading comprehension according to the MAP growth pre- test and post-test used in the study.

**Inferential Comprehension Level:** It is a group of outcomes including eliciting the main idea, guessing the writer's motives and intentions, inferring cause-effect relationships, and explaining the main expressions presented in the text. In this study, inferential comprehension is defined as the mean score obtained by the primary stage students on reading comprehension according to the MAP growth pre- test and post-test used in the study.

**Critical Comprehension Level:** It is a group of outcomes including distinguishing between facts and fiction, deducting the implicit meanings in the text, making judgments, and predicting results. In this study, critical comprehension is defined as the mean score obtained by the primary stage students on reading comprehension according to the MAP growth pre- test and post-test used in the study.

#### **Limitations of the Study**

The findings of the current study are limited to the fourth, fifth and sixth grades students in The Excellence Schools in Amman –Daboq in which the Map program is utilized during the first semester of the academic year 2022/2023.

#### **Review of Related Literature**

After reviewing educational research, the researcher collected studies relevant to this study:

Many studies (e.g. , Bohlman (2012), Bruner (2020), He, W., & Meyer, J. (2021), Borman, Carlson, and Robinson (2010), Mousavi and Salehi (2019) showed that using Map testing and other bench mark testing may generate a measurable improvement in English reading comprehension and other skills. Thus, Map testing and other benchmark testing may improve students' reading comprehension. He, W., & Meyer, J. (2021).

Steven (2005) investigated the impact of an assessment method on foreign language proficiency growth using a longitudinal design that extended for eight years. Eight cohorts of Japanese undergraduates between 18 -20 years- old participated in the study. The study used document analysis, parallel growth models devised to provide comparative latent variable path analyses of changes in achievement and language proficiency and a multiple group added growth model to answer the questions of the study. The study results suggested that formative assessment practices have a great impact on learners' engaging and participation in language learning activities. The study also highlighted that the effect of formative assessment differs from a language skill to another. It suggests that a thoughtful use of formative assessment leads to a tangible improvement in language proficiency and learning outcomes.

Baniabdelrahman (2010) investigated the effect of using self-assessment on English reading performance of EFL students. The sample of the study consisted of an experimental group and a control group; each group consisted of two eleventh grade sections (67 male and 69 female students). The data were collected through one-minute papers and rating-scale sheets. The results of the study showed that low achievers could benefit more self-assessment techniques implementation. The study suggests that using self-assessment in teaching EFL students can be effective and beneficial for both instructors and students in improving learning objectives.

El-Koumy (2009) investigated the effect of classroom performance assessment on the EFL students' basic and inferential reading skills. A pretest-posttest was employed as tools in the study. The experimental group of the study consisted of 64 first-year secondary school students in Menouf Secondary School for Boys in (Egypt) during the academic

year 2006/2007. The study showed that there was a statistically significant difference in the favor of experimental group in the inferential reading skills. in favor of the experimental group.

Borman, Carlson, and Robinson (2010) investigated the effects of benchmark assessment on student achievement in reading and Math. The study collected data through the Center for Data-Driven Reform in Education (CDDRE). The analytic sample included 509 schools across 56 districts in 7 states (Alabama, Arizona, Indiana, Mississippi, Ohio, Pennsylvania, and Tennessee). The study findings show significant positive effects of the intervention on students' state test scores in mathematics but not in reading.

Bohlman (2012) investigated the appropriateness of MAP (Measures of Academic Progress) testing from the NWEA (Northwest Evaluation Association) for English language learners. Ten elementary school students in a small suburban school were studied during the 2011-2012 school year. According to the findings of the study, the majority of students studied were able to reach recommended growth targets in reading and math.

Mousavi and Salehi (2019) investigated the effect of benchmark assessment on improving EFL learners' self-efficacy, autonomy, and vocabulary learning and retention. 60 homogenized EFL students were randomly assigned into an experimental and a control group, each containing 30 students. Before and after self-efficacy questionnaire, autonomy questionnaire, a vocabulary pretest and a benchmark test assigned for the experimental group were the study tools. The results showed a statistically significant improvement for the treated group regarding their self-efficacy, autonomy, and vocabulary learning and vocabulary retention scores. This suggests that applying benchmark assessment in an EFL setting enhances learners' self-efficacy and autonomy and leads to improved learners' vocabulary learning and retention.

Bruner (2020) investigated the effectiveness of RTI (Response to Intervention) a part of MAP Growth Program implementation in improving MAP test scores (including reading comprehension and Math) in ELA within Northeast Missouri. The data compiled and analyzed for this study revealed that in 2018 and 2016 there was a statistically significant difference in the frequency of students between third and sixth grade performing below basic versus basic on the state assessment between RTI and Non-RTI schools while there was no significant difference for the years 2015, 2016, 2017, and 2019.

He, W., & Meyer, J. (2021) examined the achievement and growth user norms for English MAP® Reading Fluency™ Foundational Skills that includes measures in three domains: Phonological Awareness, Phonics & Word Recognition, and Language Comprehension. This norming study used test events administered to Grades K–3 students in the 2018–2019 school years. The findings of the study showed registered student's progress and improvement in the three reading fluency foundational skills.

### **Concluding Remarks**

From the previous review of related literature, it can be concluded that Map Growth test and other types of formative assessment are widely implemented and used on different schools and universities around the world. While few amount of studies were initiated to investigate the effect of Map Growth test on students' improvements and learning none has been done in Jordan. A good amount of studies were conducted to examine the effect of different formative assessment on EFL learners but few studies have been initiated on Arab learners of English. MAP Growth Test is considered a new educational system that schools are gradually implementing in the Middle East. It is hoped that MAP Growth Test as an assessment tool might significantly improve students' reading comprehension. As a result, this study seeks to add to the research field in Jordan and fill a gap in Jordanian unconventional assessment methods use in improving English language skills. There are no similar studies on Jordanian EFL schools or university students that the researcher can find.

### **Methodology**

**Design of the Study:** A quantitative approach was applied in the current study. The data were collected using a one-shot quasi-experimental design through a pre-/post-test for the participants. In addition, Map Growth Test –based instructional was used to treat the experimental group which includes primary stage students from the American Excellence School in Amman - Dabouq.

**Participants of the study:** The current study consisted of 30 students who studied at The American Excellence Schools, a private school at the Directorate of Education in Amman. The current study was carried out during the first

semester of the academic year 2022/2023. The participants of the study consisted of students from three different grades; 4, 5 and 6 all students whose Map test results defined them as students at risk in the reading comprehension genre. Students at risk in each class are divided into two groups according to their performance in the first round of the Map Test as presented in the class report. The two groups are Tier 3 (students lag behind their peers by one or more years requiring intensive intervention) and Tier 2 (students lag well behind their peers requiring some form of intervention).

**Research instrument:** Map Growth Test - Based Instructional Program was constructed to help participants improve their reading comprehension. The researcher built the instructional based on the MAP manual guiding tips. The usage of Map Growth Test - Based Instructional Program may assist students to improve their reading comprehension skills effectively. This instructional program extended for eight weeks. It started on the 4th of September 2022 and ended on the 23rd of October 2022. The reading comprehension activities of each week (8 weeks) were redesigned in the light of MAP Growth Test pre-test taken on 22nd of August. The reading comprehension activities of each unit were alienated into two weeks 40 minute sessions, two times a week for eight weeks. The post-test was taken on 31st of October.

**The Instructional Material:** The instructional material used in this study is chosen from the Aligned instructional partner sources: Khan Academy and IXL. The material was determined based on the students' areas of concern and their missing skills according to the standard view of the learning continuum report. After preparing a group intervention plan, the researcher chose a proper instructional material to address the focused skills.

**Procedures for Designing the Instructional Program:**

The following procedures were carried out in the implementation of the current program:

1. Conducting MAP Growth Test pre-test, scanning the class performance and identifying if it is homogenous or heterogeneous and making the instructional grouping using the class report.
2. Identifying students who are academically at risk.
3. Identifying the focused skills within a domain to plan a strategy group.
4. filling students' intervention plan to match the interventions closely to the Target skills as much as possible
5. choosing the instructional material for students
6. Defining the procedures that will be used in each lesson.
7. Teaching the participants according to the instructional program.
8. Conducting MAP Growth Test post-test after the program to assess students' reading comprehension progression.

**Validity and Reliability of the Instructional Program:**

The researcher presented the MAP Growth test-based instructional program to a jury of fourteen English curriculum and instruction specialists to ensure the validity instructional program. The jury included seven professors, four instructors, one English language supervisor, and two teachers at the ministry of education. The jury was asked to review the program and offer any ideas or suggestions to the researcher on the program that was handed out. For example, a modification of the instructional lesson plans to become student-centered instructional program rather than a teacher-centered one, numbering the lessons and weeks, and documenting the resources of all material used in the program. The modifications were made by the researchers as they had recommended.

MAP Growth test is trusted and reliable in more than 146 countries. Providing high quality data to track learning improvement, it has a distinguish set of elements: a test item bank with continually developed items and accurate students' performance scales in the different subjects, minimum standard error and more effective measurement and instructional time, time-independent student performance scale providing a clear view of student's level and needs, national norms to track students' performance across the nation, and alignment with Common Core standards.

**Results and Discussion:**

In order to answer the research question: are there any statistically significant differences at ( $\alpha = 0.05$ ) in the students' mean scores on the reading comprehension post-test due to the use of Map Growth Test on Primary Stage Students' Reading Comprehension, Wilcoxon Signed Ranks Test was used for tiers 2 and 3 in each grade as shown in the next tables.

### 1. Grade 4

**Table 1: Wilcoxon Signed Ranks Test for the effect of the Map growth test on primary stage students' reading comprehension for tiers 2 and 3 in grade 4.**

Tier			N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
3	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.032	.042
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				
2	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.023	.043
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				

a RIT post < RIT pre

b RIT post > RIT pre

c RIT post = RIT pre

The table - shows there are statistically significant differences at ( $\alpha = 0.05$ ) between Post RIT and Pre RIT in favour of Post RIT in tiers 2 and 3 in grade 4.

### 2. Grade 5

**Table 2: Wilcoxon Signed Ranks Test for the effect of the Map growth test on primary stage students' reading comprehension for tiers 2 and 3 in grade 5**

Tier			N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
3	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.032	.042
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				
2	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.032	.042
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				

Table - shows there are statistically significant differences at ( $\alpha = 0.05$ ) between Post RIT and Pre RIT in favor of Post RIT in tiers 2 and 3 in grade 5.

### 3. Grade 6

**Table 3: Wilcoxon Signed Ranks Test for the effect of the Map growth test on primary stage students' reading comprehension for tiers 2 and 3 in grade 6**

Tier			N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
3	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.023(a)	.043
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				
2	RIT post - RIT pre	Negative Ranks	0(a)	.00	.00	-2.032(a)	.042
		Positive Ranks	5(b)	3.00	15.00		
		Ties	0(c)				
		Total	5				

Table - shows there are statistically significant differences at ( $\alpha = 0.05$ ) between Post RIT and Pre RIT in favour of Post RIT in tiers 2 and 3 in grade 6.

Table 1,2,3 show that the total score of the reading comprehension post-test is higher than pre-test, and this value is significant at ( $\alpha = 0.05$ ), which means that there is a significant difference in students' reading comprehension post-test. This result means that there is a positive effect of using Map Growth Test on Primary Stage Students' Reading Comprehension. The results revealed that there are statistically significant differences at ( $\alpha = 0.05$ ) in the students' mean scores on the reading comprehension post-test due to the use of Map Growth Test on Primary Stage Students' Reading Comprehension.

Using Map Growth Test resulted in significantly higher post-test scores primary stage students' reading comprehension. Therefore, it is possible to draw the conclusion that the students who took the MAP test and was treated with the intervention plans based on the test might improve the overall reading comprehension skills according to the post-test results. Reading comprehension skills for the primary stage students has improved with the use of at all three levels was improved with the use of Map Growth Test and the following MAP test based instructional.

We can match the findings of the study with those of other studies (e.g., Bohlman (2012), Bruner (2020), He, W., & Meyer, J. (2021), Mousavi and Salehi (2019) that have demonstrated the positive effects of using Map Growth Test on students and other bench mark testing in generating a measurable improvement in English reading comprehension and other skills. Supporting previous research, the results showed that Map Growth Test improved students' ability to comprehend texts and understand what they read. Thus, we can conclude that Map Growth Test is an appropriate formative assessment that helps enhancing students' ability to better understand texts.

Map Growth Test's positive effects on the students' performance in post-test scores in reading comprehension can be related to a number of possible factors. One of these factors is the intervention plans which were integrated in a way to improve students' reading comprehension performance. Based on students' needs, intervention plans were carefully decided and designed for students who are academically at risk and according to their areas of concern (Literal, Inferential, and Critical). Intervention plans were designed with focus on instructional areas (a-vocabulary acquisition and use, b-informational text and c-literature), sub instructional/domain (e.g...Context clues and reference, craft and structure and word relationships and nuance.), and standards (e.g...ELAGSE2L4a), and missing skills (e.g... Identifies words that best for give context and uses context to determine the meaning of words).

Another major factor is the nature of the MAP test-based instructional program. The instructional, being designed to treat each tier solely and meet students' weaknesses in every level of reading comprehension, created goal-targeted interventional plans to ensure achieving desired progress. The instructional focused on developing reading comprehension skills (deducing the meaning of unfamiliar words ;using context to guess the meaning of new words; interpreting important information; scanning texts for specific information; skimming texts for the main ideas; analyzing the text and making inferences; deducting the implicit meanings in the text; and making judgments).

Another reason that might have contributed to students' improvement is the well-planned content of the reading activities and work sheets that instructional partners of Map Growth Test present to help teachers get more from tried and true tools they can use. All of instructional partners are vetted on content quality, support for differentiating instruction, accessibility, and ease of use by Northwest Evaluation Association's.

Another factor that could have helped students improve their reading comprehension is the diversity of activates used in the instructional sessions. Students worked collaboratively through pair or group works in a collaborative atmosphere since every class were divided into tiers with the same instructional areas and all the activities could be done either individually or in groups. The instructional materials also included a variety of reading topics that teacher can choose from to encourage students to engage in interesting attractive topics and respond actively.

One more factor that could have helped students improve their reading comprehension is the redundancy of the additional instructional sessions as an extra portion besides the scheduled lessons during the term in which they focused on their weaknesses and areas of concern. This extra effort encouraged students to participate and collaborate resulting in active learning.

From the stated above, it can be concluded that Map test-based instructional program improved the students' ability in reading comprehension in different ways: First, it has treated each student's weakness skill individually through determining the area of concern, sub instructional/domain, standard, and missing skills. The use of tailored sessions for students in lower and higher RIT bands (different tiers) helped improving students' reading comprehension and kept their growth on track. Second, it was relatively simple to integrate the sessions for each tier being a separate portion of time outside the regular curriculum lessons which was not affected regarding subject and time. These additional sessions gave the teacher and students an extra space to work on skills students' lack. Third, cooperating with many instructional partners, like Khan Academy, Achieve3000 and Learning A-Z, Map test-based instructional programs offered teachers a wide variety of tools and activities to train students and strengthen their reading comprehension skills. Additionally, Map partners offers variant, fun and attractive topics for students to encourage them participate actively in the learning process. For example, Khan Academy instructional material combines practice activities, educational and entertaining video teaching, and vocabulary articles. It also provides students with exercises based on interesting excerpts with a common theme or subject and the opportunity to practice using a variety of reading techniques or skills while reading the same text.

The researcher came to the conclusion that Map test-based instructional program created a beneficial experience for students to improve their performance in reading-related questions, including those requiring them to analyze the text and make inferences; interpret important information; deduct the implicit meanings in the text; and make judgments. As a result, students were able to get a tangible improvement in their post-test scores in reading comprehension. Consequently, the researcher believes that implementing Map test-based instructional program will improve students' various reading comprehension skills.

### Recommendations

Based on the findings of the study, the researcher represents the following recommendations:

- Schools administrations are advised to use Map Growth Test Program and build instructional programs following MAP guide lines mentioned in their manual to improve students' performance in reading comprehension.
- Schools administrations should conduct workshops and training sessions to train English teachers to use Map Growth Test Program and design MAP test-based instructional programs skillfully to achieve learning outcomes.
- EFL teachers are recommended to use the current MAP test-based instructional program and other similar unconventional methods to develop students' performance in reading comprehension lessons and help students overcome challenges and obstacles.
- Researchers are encouraged to carry out various studies to examine the effects of using Map Growth Test - based instructional program on other grades and other English language specialties such as language use.

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