

# Effects of Portfolio Assessment Technique on Students' Attitudes and Reading Comprehension Achievement in Crisis-Affected Public Senior Secondary Schools in Bokkos LGA, Plateau State, Nigeria

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## Abstract

Continuous attacks on citizens keep students out school who are either running for safety or the schools serve as IDP camps. The study investigated the effects of portfolio assessment technique on students' attitudes and reading comprehension achievement in crisis-affected public secondary schools in Bokkos LGA of Plateau State, Nigeria. Quasi-experimental research design, specifically pre-test, posttest control group design was adopted for the study. Two public secondary schools were selected out of the 22 public secondary schools in Bokkos LGA and labelled as schools A and B. School A served as experimental group and had 83 students with 41 males and 42 females. School B was the control group with 76 students consisting 32 males and 44 females. Four research questions and four hypotheses were used for the study. Simple random sampling technique was adopted in selecting and assigning the two schools to experimental and control groups. Intact classes of SSII students found in the two schools served as sample of the study. Three instruments namely: Attitude towards Reading Comprehension Questionnaire (ARCQ), English Language Comprehension Achievement Test (ELCAT) and Portfolio Attitude Questionnaire (PAQ) were used for data collection. Data were analysed using means, SD and t-test for independent samples. The findings of the study revealed that portfolio assessment helped improved students' attitudes and achievement in reading comprehension. Portfolios significantly improved students' attitudes and achievement in reading comprehension. The study recommended that Plateau State Ministry of Education should organize seminars and workshops for teachers on portfolio assessment. It recommended that teachers should use portfolio assessment in teaching reading comprehension.

**Keywords:** Portfolio Assessment Technique, Reading Comprehension, Students' Attitudes, Crisis-Affected Areas.

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## 1. Introduction

English Language is the primary medium of instruction in Nigeria that imbibe in students the ability to interpret written discourse which directly influence their ability to access, internalize, and critically evaluate subject/material contents. It is the official language in Nigeria that is used in administration, business and it is the medium of instruction in schools. English language has four core language skills such as reading, writing, listening and speaking which consist of structural components like grammar and vocabulary. It is intended to build communicative competence, literacy and critical thinking via language mastery and study of literature. Reading focuses on comprehension of texts that encourage analytical skills and vocabulary acquisition which is reading comprehension. Reading comprehension constitutes a foundational component of the secondary school literacy in Nigeria and it is a critical determinant of students' capacity to access, interpret and synthesize knowledge across the school curriculum. It is the ability of individuals to process texts, understand the meaning and be able to integrate them with existing knowledge. Reading comprehension is a multidimensional, interactive, and socially situated process which produces meaning from dynamic interplay among cognitive processing efficiency, background knowledge activation, metacognitive regulation, motivational orientation and

socio-cultural contexts. It is the extent to which people evaluate contents to construct meanings based on background knowledge which occupies a pivotal position within secondary school English Language.

As a school subject, Reading comprehension serves and functions as a curricular objective as well as an index of cognitive development and a predictor of cross-disciplinary academic achievement that is used for structural determinant of students' educational progression. During reading comprehension lessons, students are asked to read comprehension passages and answer questions provided at the end of the passages to indicate the extent to which they comprehend the passages. Within the Nigeria secondary school system, proficiency in reading comprehension covers the mastery of discrete language skills and also serve as a foundational academic literacy upon which performance in the sciences, social sciences, humanities, and vocational subjects all depend. Thus, success in all academic subjects at senior secondary school level of education depend largely on how well students can read and understand in English language (Auta, Ibrahim & Ayeace, 2023). Reading comprehension in senior secondary school is evaluated as substantial components of English Language in the Senior School Certificate Examination (SSCE) (WAEC & NECO) which serve simultaneously as measures of academic competence and as mechanisms in shaping individuals' future educational opportunities because they are utilized for access to tertiary institutions. Studies have shown that students' achievement in English Language both at school based and external examination is poor (Auta, Ibrahim & Ayeace, 2023). Also, (Yakubu, 2022; Eze & Chukwu, 2024) reported that students' performance of in reading comprehension components is poor and that students have deficiencies in inferential reasoning, contextual vocabulary interpretation, thematic synthesis and critical reasoning with texts. Students' poor achievement in English language, particularly in reading comprehension can lead to systemic instructional and evaluative problems and deficiencies.

The students' poor achievement in English language and by extension, reading comprehension has been attributed to factors such as misalignments between instructional practices, the cognitive demands of examination tasks and instructional and assessment strategies used by teachers among others. Students' poor achievement in reading comprehension can lead to systemic instructional and evaluative challenges and deficiencies. There is need to adopt instructional and assessment strategies and techniques that are grounded in contemporary literacy theory which advocates a shift from narrow focus on reading mechanics to a broader and more flexible understanding of literacy as a social critical and multimodal exercise. Contemporary literacy assessment technique advocates the use of formative and continuous models that document learning trajectories and support reflective self-regulation (Panadero, Andrade & Brookhart, 2018; Ahmed & Bello, 2023). The contemporary literacy measures areas such as individuals' ability to identify, understand, interpret, create and communicate information in various multimodal and text-mediated platforms in a dynamic global society (UNESCO, 2026). It evaluates aspect of literacy such as multiliteracy, critical literacy, socio-cultural perspectives that imbibe digital media, power dynamics and context-dependent communication which all focus on collaboration, communication, creativity and critical thinking. The approaches have been found to facilitate reading comprehension whereby students can read with a focus and think critically, implore, initiate and create meaning that can bring innovations into what is read (Learning Without Tears, 2021). Comprehension breakdown due to decoding deficits often from limitations in vocabulary depth, capacity of working memory, inferential reasoning ability and poor strategic monitoring but these can be curbed using contemporary literacy measures.

Also, reading comprehension as an integrative, cognitive and affective process can measure literal recall that might be linked to individual's attitudes. For instance, students who lack proficiency across the different interdependent domains find it difficult to construct coherent mental representations of complex and abstract texts. This does not imply that attitudes might not influence students' performance in reading comprehension since cognitive ability has link with individuals' affective behaviour. Thus, attention has been given to the influence of students' attitudes such as their beliefs and disposition to reading comprehension which reflect on their affective responses to texts, perceived competence, motivational persistence, and expectations of success. For instance, in their studies (Fakeye, 2017 Yakassai, 2024) reported that positive reading attitudes were associated with sustained engagement and strategic processing that help to improve comprehension outcomes while negative perceptions like viewing reading passages as tedious, overly difficult or irrelevant to examination success diminishes students' cognitive investment, weakens their persistence and leads to poor comprehension achievement. These imply that the extent to which students enjoy reading passages, perceive difficulty and their confidence in responding to comprehension questions, motivation for independent reading, vocabulary development, examination relevance, receptivity to corrective feedback, and willingness to engage in collaboration all influence their reading comprehension achievement. Some the attributes identified might be

related to factors such as safety of the school environment which in most schools in the Northern part of Nigeria is not guaranteed due to insecurity as a result banditry and terrorism.

Thus, there is the need to adopt pedagogical interventions that enhance reading comprehension achievement both in cognitive terms and attitudinal dimensions. The way and manner in which learners' accomplishments are assessed and evaluated need to reflect the true ability of such learners so that decisions taken concerning them would be valid and reliable to avoid faulty assessment and making wrong decisions. Assessment of students' performance should reflect on the three domains so as to provide reports on the total development learners as contained in the National Policy on Education (NPE) document of the Federal Republic of Nigeria (FRN) (2013).

Reporting students' progress is expected to take into cognisance the cognitive, affective and psychomotor domains of learning. Measures of students' progress should capture the all-round development of such learners so as to ascertain their areas of talents or giftedness. The reports of students' progress can be used for providing adequate guidance to the students on educational and career development as well as social adjustment. Despite the importance of affective variables, most classroom assessment practices in Nigeria secondary schools rely predominantly on summative examinations that measures only the cognitive ability of students. Most often, summative examinations under-represent the overall developmental growth and strategic reasoning of learners because the approaches focus on assessment of product over process thereby offering limited opportunities for using feedback to reflect and revise students' areas of difficulties and misconceptions. Incremental progresses are not captured in summative assessments to measure students' metacognitive development and shift or progress in learner disposition. Adopting innovative assessment strategies such as portfolio assessment which is an aspect of contemporary theory would promote flexibility in understanding literacy as a social, critical and multimodal exercises that are power dynamic and context-dependent. The foregoing imply that portfolio assessment is theoretically a grounded alternative assessment that align with the principles of contemporary literacy theory.

The study was anchored on the constructivist theory propounded by Jean Piaget, Jerome Bruner and Lev Vygotsky which focuses on learning by experience whereby, learners are exposed to activities that require them to reconstruct meaning iteratively rather than reproduce information mechanically. The theory posits that intellectual development unfolds through complementary processes of assimilation and accommodation. Vygotsky belief that within Zone of Proximal Development (ZPD), learners attain higher levels of performance through scaffolding mediation provided by more knowledgeable others who with the portfolio are the teachers and gradually internalize strategic and conceptual competencies. Portfolio assessment embodies the constructivist principle of progressive knowledge construction through recursive cycles of task completion, feedback, revision, and reflection which involves and engages students in processes analogous to assimilate and accommodate tasks with teachers as facilitator. Students' submissions of pieces of work are not just static artifacts but evolving representations of understanding, demonstration of cognitive restructuring and conceptual refinement of learning outcome over time.

The common portfolio collections in reading comprehension include annotated passages, reflective journals, vocabulary logs, inferential analyses, peer reviews, teacher feedback, and evidence of revision. These artifacts provide longitudinal insight into students' interpretive growth and strategic refinement. Portfolio assessment focuses on assessment of both process and product which facilitate a comprehensive appraisal of literacy development. Portfolio-based assessment techniques are associated with gains in lexical acquisition, inferential reasoning, metacognitive awareness, and learner autonomy (Daramola & Ogunsiji, 2021; Eze & Chukwu, 2024). Continuous assessment records as found in portfolios are efficient in educational contexts because they provide continues feedback and expose students by involving and engaging them in tasks execution even amidst instability and disruption in the instructional process. This implies that the use of innovative assessment techniques can help even in the face of insecurity where school attendance is threatened. For instance, students in crisis-affected areas may find it unsafe to attend school due to fear of being attacked or kidnapped while some schools may be taken over as IDP camps. Students in such school environments often experience irregular class attendance, constrained access to learning resources, and psychosocial stressors that diminish concentration and motivation. These contextual factors cumulatively can impede literacy attainment and weaken academic confidence. In such situations, portfolio assessment can provide opportunities for students to work on their own even when they are away from the classrooms.

Analysis on emergency settings indicate that formative and portfolio-oriented assessment frameworks can mitigate learning loss by documenting incremental progress and sustaining engagements during periods of instability (Bamidele & Ayeni, 2019; UNICEF, 2021). The continuous documentation of learners' experiences

using portfolios can produce a more equitable representation of student competence than isolated high-stakes examinations. Portfolios offer students opportunity to participate in deciding what learning tasks to engage in, how to assess and the criteria for attaining mastery of learning. Performance in school subjects is said to be influenced by students' gender which is the biological state of being male or female. The effect of gender of students' performance has been inconsistent because while some studies have reported gender difference, other found no gender difference in students' attitudes and performance in school subjects. Osikomaiya and Popoola (2020) and Obeka, Nwigwe and Usulor (2023) found that females out performed males in reading comprehension. Portfolio assessment but reported that a slight gender difference existed between male and female students' attitude toward reading comprehension. Pagal, Mirafuentes and Ypanto (2017) reported that literal and evaluative levels of male and female students to reading comprehension skills were due to their attitudes and practices.

Attaining proficiency in reading comprehension requires adopting innovative assessments that adequately measure and document students' achievement in and attitudes towards reading comprehension in order to shape their performance which conventional methods of teaching cannot effectively do. The foregoing reveals a compelling need to explore alternative evaluative strategies like the portfolio assessment which are capable of enhancing both students' achievement and attitudes towards learning (Salami & Afolayan, 2020; Adebola & Lawal 2022). Therefore, the present study sets to investigate the effects of portfolio assessment on attitude and reading comprehension achievement among senior secondary school two (SSII) students in crisis-affected areas of Bokkos Local Government Area, Plateau State.

The following research questions were raised for the study

1. What is the attitude towards comprehension mean scores of the SSII students in crisis-affected areas of Bokkos LGA?
2. What are the reading comprehension achievement mean scores of SSII students in the crisis-affected areas of Bokkos LGA?
3. What is attitude towards portfolio assessment mean scores of SSII students in the experimental group and according to gender.
4. What is the reading comprehension achievement mean scores of the SSII experimental group students according to gender?

The following hypotheses were formulated for the study and tested at 0.05 level of significance.

1. There is no significant difference between the pre-test and posttest attitudes towards reading comprehension mean scores of the SSII students in crisis-affected areas of Bokkos LGA.
2. There is no significant difference between reading comprehension achievement mean scores of students taught using portfolio assessment and those taught using conventional method.
3. There is no significant difference between attitude towards portfolio assessment mean scores of experimental group students in the crisis-affected areas based on gender.
4. There is no significant difference between the reading comprehension achievement mean scores of students in the experimental group based on gender.

## 2. Methodology

The study adopted a quasi-experimental research design specifically, the pretest-posttest control group research design. The population of the study consisted of all 22 public secondary schools that were affected by crises in Bokkos LGA from which two schools were randomly selected and used for the research. These were GSS Kopyal and GSS Ngoksar which were coded as schools A and B and were randomly assigned to the experimental and control groups. The choice of quasi-experimental research design was because principals of the selected schools would not allow interference with the normal class arrangements but intact classes were used whereby there was no random assigning of subjects to the experimental and control groups. School had 83 students made up of 41 boys and 42 girls and was assign as the experimental group while school B had 76 students with 32 males and 44 females that was the control.

Three instruments were used to collect data in the study namely: an Attitude Towards Reading Comprehension Questionnaire (ARCQ), English Language Comprehension Achievement Test (ELCAT) and a Portfolio Assessment Questionnaire (PAQ). The ARCQ consisted of two sections A and B. Section A sought the biodata

of the respondents while section B contained 24 items on students' attitude towards reading comprehension that were scored on a five-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) and were scored as 5, 4, 3, 2 and 1 respectively for positive items and vice versa for negative items. Items of the ARCQ were adapted from existing instruments developed by Wakjissa (2016) which were developed and used to measure senior secondary school students' attitude towards geography. Scores between 24 - 48 were regarded as negative attitude, 49 - 72 were neutral attitude and 73 - 120 were termed as positive attitude towards reading comprehension.

The ELCAT consisted two sections A and B. Section A solicited personal data about the respondents and section B had 40 questions, 10 each from four reading comprehension passages. Each correct answer was scored 2½ marks with each passage having 25 marks making a total of 100 marks for the ELCAT. Scores from 0 - 39 were regarded as Fail, 40 - 49 as Pass, 50 - 100 were considered as credit and distinction. The PAQ had two sections A and B. Section A sought biodata of the respondents while the section B had 20 items scored on a five-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) which were scores as 5, 4, 3, 2 and 1 respectively and vice versa for negative items. Items of the PAQ were adapted from existing instruments developed by Wakjissa (2016) which were developed and used to measure senior secondary school students' attitude towards portfolio assessment. A score of 20 - 40 was regarded as negative attitude, 41 - 60 was termed neutral attitude while 61 - 100 was positive attitude towards portfolio assessment.

All three instruments were developed using test construction procedures. The content validity of ARCQ, ELCAT and PAQ were determined through the scrutiny of four experts; two each from Educational Psychology and Research, Measurement and Evaluation all from the Department of Educational Foundations, Faculty of Education, University of Jos. A table of specifications was used in construction of the ELCAT items to ensure that all passages were given the required number of items based on period used and behavioural objectives stated for each passage. The construct validity of the ARCQ and PAQ were determined using factor analysis method. Items of the ARCQ loaded on the following four factors: confidence in reading had seven items, autonomous and independent reading (reading for leisure) had seven items each while difficulty in reading and vocabulary development had five items each.

The determinant correlation matrix for the ARCQ was 7.81E - 008 (0.000078) which is greater than the recommended value of 0.00001, indicating that multicollinearity of the data was adequate. Also, the Kaiser - Meyer - Oikin (KMO) sampling adequacy measure and Bartlett's test of sphericity were used in assessing the suitability of the data for the analysis. The KMO index was 0.953 which is greater than 0.50 considered suitable for factor analysis. The Bartlett's test of sphericity was highly significant ( $p < .000$ ); therefore, factor analysis was considered appropriate.

The Cronbach Alpha method was used in estimating the reliability of internal consistency of the ARCQ, ELCAT and PAQ. The ARCQ had a reliability coefficient of 0.91 which indicated that items consistently measured the attributes of students' attitude towards reading comprehension, The reliability coefficient of internal of the ELCAT was estimated to be 0.88 showing that the test items were homogeneous and PAQ had a reliability coefficient of 0.89 which showed that the PAQ items were highly consistent in measuring attributes of students' attitude towards portfolio assessment. Mean scores, standard deviation and t-tests were used in analyzing the data collected for the study.

### 3. Results

#### Research Question One

**Table 1: Attitude towards Comprehension Mean Scores of the SSII Students in Crisis-Affected Areas of Bokkos LGA.**

Group	N	Pre-test Mean	SD	Posttest Mean	SD	Mean Difference
Experimental	83	59.33	8.90	93.51	9.53	34.18
Control	76	58.89	7.06	64.11	9.64	5.22

Table 1 presents the pre-test and posttest attitude towards comprehension mean scores of students in the experimental and control groups. It shows that the two groups were at the same attitude level as revealed from their pre-test mean scores of 59.33 and 58.89 for the experimental and control groups respectively showing a

mean difference in the pre-test was 0.44. The posttest mean score of the experimental group increased to 93.53 indicating a mean score gain of 34.18 on the posttest while the control group had a mean score of 64.11 revealing a mean score gain of 5.22. The results in Table 1 showed that the experimental group had higher mean score gain than the control group. The results implied that portfolio assessment was more effective than conventional method in improving the attitude towards reading comprehension of SSII students in the crisis-affected areas of Bokokos LGA.

### Research Question Two

**Table 2: The Reading Comprehension Achievement Mean Scores of the SSII Students in Crisis-Affected Areas of Bokokos LGA**

Group	N	Pre-test Mean	SD	Posttest Mean	SD	Mean Difference
Experimental	83	22.71	6.91	70.57	7.04	47.86
Control	76	22.60	6.80	35.23	5.21	12.63

The results in Table two shows the reading comprehension achievement mean scores of students in the experimental and control groups. It showed that the experimental group had a pre-test mean score of 22.71 while the control group had pre-test mean score of 22.60. The experimental group recorded a posttest mean score of 70.57 after exposure to portfolio assessment revealing a mean score gain of 47.86. The control group had a posttest mean score of 35.23 showing a mean score gain of 12.63. The results indicated that the mean score gain of 47.86 for the experimental group was higher than the mean score gain of 12.63 recorded for the control group. The results implied that portfolio assessment was very effective in improving the reading comprehension achievement mean scores of the students than the conventional method.

### Research Question Three

**Table 3: The SSII Experimental Group Students' Attitude towards Portfolio Assessment**

N	Mean Score	SD	Gender	N	Mean Score	SD	Mean Difference
			Male	41	83.22	5.38	
83	82.36	5.39					1.70
			Female	42	81.52	5.33	

Table 3 reveals the attitude towards portfolio assessment of the experimental group. The Table shows that both male and female students had positive attitude towards portfolio assessment as revealed from the mean score of 82.36. The attitude towards portfolio assessment for both male and female students were also positive with 83.22 for males and 81.52 for the females with a slight mean difference of 1.70. This indicated that both male and female students had positive attitude towards portfolio assessment.

### Research Question Four

**Table 4: Reading Comprehension Achievement Mean Scores of SSII Experimental Group Students According to Gender**

Gender	N	Pre-test Mean	SD	Posttest Mean	SD	Mean Difference
Male	41	22.81	6.99	71.77	6.08	48.96
Female	42	22.62	6.92	69.40	7.77	46.78

Table four reveals the reading comprehension achievement mean scores of the SSII students in the experimental group. From Table 4, both male and female students in the experimental group were at the same level of reading

comprehension ability, as shown from the pre-test mean scores of 22.81 and 22.62 for the male and female students respectively. The male students had higher mean score of 71.77 in the posttest with a mean score gain of 48.96 over the pre-test. The female students on the other hand recorded posttest mean score of 69.40 revealing a mean score gain of 46.78 and a mean gain difference of 2.18. The results implies that portfolio assessment was effective in improving the reading comprehension achievement of both male and female students. It shows that gender did not affect the students' achievement in reading comprehension when exposed to portfolio assessment.

### Hypothesis One

**Table 5: Summary of t-test Analysis for Difference between Pre-test and Posttest Attitudes towards Reading Comprehension Mean Scores of SSII Students in Crisis-Affected Areas of Bokkos LGA**

Group	Test Type	N	Mean	SD	Df	T	P-value	Decision
Experimental	Pretest	83	59.33	8.90				
					157	0.403	0.688	Not Sig.
Control	Pretest	76	58.89	7.06				
Experimental	Posttest	83	93.51	9.53				
					157	19.31	0.000	Sig.
Control	Posttest	76	64.11	9.64				

The results in Table 5 shows the summary of t-test for significant difference between the pre-test and posttest attitudes towards reading comprehension mean scores of the experimental and control groups. The analysis for the pre-test showed that under df, 157;  $t = 0.403$  and p-value, 0.688 at 0.05 alpha level, there was no insignificant difference in the reading comprehension achievement mean scores of the two groups. That is, there was no significant difference between the pre-test attitude mean scores of the experimental and control groups. The posttest analysis showed that under df, 157;  $t = 19.31$  and p-value of 0.000, a significant difference existed between the mean scores of the two groups. The results revealed that a significant difference existed between the posttest attitude mean scores of the experimental and control groups at 0.05 level of significant in favour of the experimental group who were exposed to portfolio assessment. The results implied that portfolio assessment was effective in improving the students' attitude towards reading comprehension compared to conventional method.

### Hypothesis Two

**Table 6: Summary of t-test Analysis for Difference between Pre-test and Posttest Reading Comprehension Achievement of SSII Students in Crisis-Affected Areas of Bokkos LGA**

Group	Test Type	N	Mean	SD	Df	T	P-value	Decision
Experimental	Pretest	83	22.71	6.91				
					157	0.103	0.918	0.918
Control	Pretest	76	22.60	6.80				
Experimental	Posttest	83	70.57	7.04				
					157	35.694	0.000	Sig.
Control	Posttest	76	35.23	5.21				

Table 6 presents the summary of t-test analysis for difference between the pre-test and posttest reading comprehension achievement means scores of the experimental and control groups. The analysis revealed that there was no significant difference for the pre-test of the two groups with  $t = 0.103$ ; p-value of 0.918 under df 157. It showed that there was no significant difference between the pre-test mean scores of the experimental and control groups. For the posttest analysis,  $t = 35.694$ ; p-value of 0.000 under df 157 showed a significant difference between the posttest reading comprehension mean scores of the experimental and control groups in favour of the experimental group. It can be deduced that portfolio assessment was more effective in improving the students' reading comprehension mean scores than the conventional method of assessment.

### Hypothesis Three

**Table 7: Summary of t-test Analysis for Difference Between Attitude towards Portfolio Assessment Mean Scores of the SSII Experimental Group Students based on Gender**

Gender	N	Mean	SD	Df	T	P-value	Decision
Male	41	83.22	5.38				
				81	1.441	0.153	Not Sig.
Female	42	81.52	5.33				

Table 7 presents the summary of t-test analysis for significant difference between attitudes towards portfolio assessment of male and female students in the experimental group. Table 7 shows that for  $t=1.441$ , under df 81, the p-value of 0.153 is greater than 0.05 level of significance. We retain the null hypothesis that there is no significant difference between the attitudes towards portfolio assessment mean scores of SSII male and female students in crisis-affected areas of Bokkos LGA. The analysis shows that the mean score difference of 1.70 was not significant. This implies that both male and female students had positive attitudes towards portfolio assessment.

### Hypothesis Four

**Table 8: Summary of t-test Analysis for Difference between Pre-test and Posttest Reading Comprehension Achievement of SSII Students in the Experimental Group Based on Gender**

Gender	Test Type	N	Mean	SD	Df	T	P-value	Decision
Male	Pretest	41	22.81	6.99				
					81	0.122	0.903	Not Sig.
Female	Pretest	42	22.62	6.92				
Male	Posttest	41	71.77	6.08				
					81	1.542	0.127	Not Sig.
Female	Posttest	42	69.40	7.77				

Table 8 reveals the summary of t-test analysis for any significant difference between the pre-test and posttest reading comprehension mean scores of students in the experimental group based on gender. The pre-test mean score difference of 22.81 for male and 22.62 for female students was 0.19 which was not statistically significant. The results showed that both male and female students' reading comprehension ability in the pre-test was poor and there was no significant difference in the reading comprehension mean scores of the two genders. The

students' performance was higher in the posttest whereby the male students recorded a mean score of 71.77 and female students had mean score of 69.40 giving a mean score difference of 2.37 in favour of male students. However, the difference was not statistically significant as revealed from the t-test analysis hence, there was no significant difference between the reading comprehension mean scores of the male and female students. This implied that portfolio assessment was effective in improving the reading comprehension achievement of both male and female students without favour or bias to any gender.

#### 4. Discussion of Findings

For the finding that students in the two groups had negative attitude towards reading comprehension in the pre-test and that after exposure to portfolio assessment, students in the experimental group recorded higher attitude mean score than the control group showed that portfolio assessment was effective in improving the attitude towards reading comprehension of SSII students in the crisis-affected areas. The finding agrees with UNICEF (2021) who reported that formative and portfolio-oriented assessment frameworks mitigated learning loss by documenting incremental progress and sustaining engagements during periods of instability as with emergency settings. It also supports Bamidele and Ayeni (2019) who observed that children in conflict-affected settings often experience learning losses due to displacement, insecurity, and psychological trauma which may lead to decreased concentration, reduced motivation, and limited engagement with academic tasks. It is also in agreement with Learning Without Tears (2021) and Yakassai (2024) who reported that students exposed to portfolio assessment had higher reading motivation and comprehension achievement than students in the control group.

The finding that the students' pre-test mean score achievement in reading comprehension was poor is in agreement with Yakubu, 2022; Eze & Chukwu, 2024 who reported that students' performance in reading comprehension components was poor and that students had deficiencies in inferential reasoning, contextual vocabulary interpretation, thematic synthesis and critical reasoning with texts. This is in line with the findings of Daramola and Ogunsiji, 2021 and Eze and Chukwu, 2024 who observed that portfolio-based approaches were associated with gains in lexical acquisition, inferential reasoning, metacognitive awareness, and learner autonomy. This is revealed whereby after exposure to portfolio assessment, the experimental group recorded higher mean score which implied that portfolio assessment was very effective in improving the reading comprehension achievement mean scores of the students than the conventional method

The finding that portfolio assessment was more effective in improving the students' reading comprehension achievement than conventional method agrees with Adeyemi and Adebayo (2016) who found a more statistically significant improvement in the performance of students exposed to portfolio assessment and Learning Without Tears (2021) that innovative approaches promote continuous writing practice, reflection and self-monitoring which were critical for development of writing competence. That a significant difference existed between the posttest attitude mean scores of the experimental and control groups in favour of the experimental group indicated that portfolio was effective in improving the students' attitude towards reading comprehension compared to conventional method. The finding is in agreement with Fakeye (2017) who reported that students exposed to formative and portfolio-based assessment recorded significantly more positive attitudes toward English language learning than those assessed predominantly through summative examinations. Also, that students who experienced portfolio assessment demonstrated higher motivation, increased classroom participation, and reduced fear of English examinations which supports Panadero, Andrade and Brookhart (2018) who found that portfolio-based formative assessment significantly enhanced students' self-regulation, reflection, and responsibility for learning.

Also, the finding that a significant difference existed between the posttest comprehension achievement mean scores of the two groups in favour of the experimental group showed that portfolio assessment was more effective in improving the students' reading comprehension mean scores than conventional assessment. The finding is in tune with Akinwamide and Adedara (2018), Bamidele and Ayeni (2019), Salami and Afolayan (2020) and Eze and Chukwu (2024) that portfolio assessment significantly helped improved students' comprehension performance and that students taught using portfolio assessment recorded significantly lower levels of writing anxiety and higher achievement scores compared to those in the control group who revealed.

The finding that there was a mean score difference of 1.70 but was not significant implied that both male and female students in the experimental group had positive attitudes towards portfolio assessment revealing that both genders had positive attitude towards portfolio assessment. Thus, portfolio assessment was effective in improving the reading comprehension achievement of the two genders without favour or bias to one gender. The

finding concurs with Adebola and Lawal (2022) who found that portfolio assessment help improved achievement for both male and female students and that no significant gender difference existed between the achievement of male and female students exposed to portfolio assessment.

## 5. Conclusion

It is evident that achievement in English Language particularly in reading comprehension is essential for senior secondary school students' achievement in all school subjects. Also, English Language is a pre-requisite for students' admission to tertiary institutions in Nigeria. Innovative and integrated assessment techniques such as portfolio promote student-centred learning by involving and engaging students in knowledge creation and critical thinking that enable them to fully participate in determining the learning and assessment criteria as well as work towards achieving the expected learning outcomes. Thus, adoption of portfolio assessment would help improve students' reading comprehension ability at senior secondary school level of education in Nigeria.

## 6. Recommendations

Based on the findings, the following recommendations were made:

1. The Plateau State Ministry of Education should organize workshops and seminars on portfolio assessment for teachers in Bokkos LGA.
2. The Plateau State Ministry of Education should train and retrain teachers through in-service to help them update their teaching strategies.
3. Teachers should adopt portfolio assessment and other innovative assessment techniques in their classroom pedagogy to help improve students' attitude and achievement in reading comprehension.
4. The Plateau State Ministry of Education should provide adequate funding to schools in Bokkos LGA to enable them adopt portfolio assessment technique in their classrooms.
5. Parents and other education stakeholders should be involved in the funding of schools to enable schools in Bokkos LGA provide the necessary material needed for implementing portfolio assessment technique.

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