



Peer Review Report Form

Manuscript Title:	Assessing the Readiness of Grade 10 Students: A Basis for the Development of Diagnostic Assessment Tool in Mathematics for Senior High School
Type of Article:	Original Article

FIRST ROUND

Editor

<u>General Comments and Recommendations</u>
The reviewers acknowledge the significance of your manuscript and recommend several revisions to further improve its clarity, coherence, organization, and overall scholarly quality. In addition, you are advised to thoroughly review and validate all references included in the manuscript. Please ensure that all cited sources are accurate, accessible, and retrievable through Google Scholar to uphold the credibility and reliability of the study. Furthermore, only sources that are cited within the manuscript should appear in the References section, and all entries listed in the References section must also be cited in the text. For example, if 20 unique sources are cited in the manuscript, then only those 20 sources should be included in the References section. Please also note that repeated citations of the same source within the text are counted as a single reference entry; therefore, the total number of references may be lower than the total number of in-text citations.

Reviewer 1

<u>General Comments and Recommendations</u>
The manuscript has a relevant and practical focus, especially because readiness in mathematics is an important issue before students enter Senior High School. The paper is also useful because it does not only report scores, but tries to identify least-learned competencies that can guide the development of a diagnostic assessment tool. However, the main part that needs stronger improvement is the methodological basis of the diagnostic assessment tool, particularly the development and validation of the achievement test used in the study. Since the whole paper depends on this test, the authors need to explain more clearly how the items were constructed, reviewed, validated, and checked for reliability. At present, the paper says that the test was researcher-developed and aligned with the DepEd Mathematics Curriculum, but this is still not enough to fully support the claim that the identified least-learned competencies are accurate and dependable. The manuscript reports 25 least-learned competencies and uses these as basis for the proposed diagnostic tool, but there is no detailed evidence yet on content validity, item difficulty, discrimination index, reliability coefficient, table of specifications, and expert validation process. Without these, the results may be useful but still weak as evidence for developing a formal diagnostic assessment tool.



Specific Comments and Recommendations

My main suggestion is for the authors to strengthen this part by adding a more complete description of the test development process. They may include how many items represented each competency, how the competencies were selected, who validated the test, what criteria were used by the validators, and what statistical item analysis was done before interpreting the results. This is important because some competencies in the table seem represented by only one or few items, so a low percentage correct may reflect item difficulty or item construction problem, not necessarily lack of mastery of the whole competency. The authors should also clarify why only seven prerequisite least-learned competencies were selected from the 25, because the alignment from Grade 10 to SHS subjects needs to be more transparent and defensible. Improving this section will make the findings more convincing and will better support the proposed diagnostic assessment tool. Overall, the topic is promising and has good practical value, but the paper will be stronger if the authors first establish that the assessment instrument is valid, reliable, and properly aligned before making strong conclusions about student readiness.

Please indicate your recommendation by checking the appropriate box below.

<u>Decision</u>	
☐	Accept the manuscript for publication.
☐	Reconsider the manuscript after the authors have satisfactorily addressed and complied with the reviewers' comments and recommendations.
☐	Reject the manuscript, as it is not suitable for publication.

Reviewer 2

General Comments and Recommendations

The paper tackles a very timely and relevant issue in our basic education sector, particularly regarding the students' readiness and transition to Senior High School. The initiative to identify the least-learned competencies in Mathematics to bridge learning gaps is highly appreciated and aligns well with the goals of outcomes-based education.

Specific Comments and Recommendations

You stated that you used "total enumeration sampling" for the entire Grade 10 population for the 2022-2023 school year. But looking at your data in Tables 1 and 2, your total number of respondents (N) is only 38 students. For quantitative research aiming to establish the basis for a standardized diagnostic tool, 38 is extremely small. This makes it very difficult to generalize the findings beyond your specific institution. You need to heavily justify this sample size or explicitly acknowledge it as a major limitation of the study in your Discussion section.

You classified the study under a "developmental research design," specifically mentioning the analysis and design phases. But reading through your Results and Discussion, the paper actually reads more like a standard descriptive-correlational needs assessment. You successfully identified the 25 least-learned competencies and correlated the academic grades with the test scores. However, the actual "diagnostic tool" was not developed, drafted, or presented in the manuscript. I suggest you either rephrase your research design to match what



was actually conducted, or include the actual drafted diagnostic tool in the paper to truly satisfy the "design phase" claim.

Right now, the findings look like a localized, school-level assessment. To elevate the paper and make it more competitive for a journal, I suggest providing a deeper discussion on why these specific 7 prerequisite competencies are the least-learned. Instead of just reporting the percentages and ranks, dig deeper into the mathematical concepts and the pedagogical gaps behind them. Discussing the theoretical reasons why students struggle with these specific polynomial or probability concepts will make your paper much more impactful.

Please indicate your recommendation by checking the appropriate box below.

<u>Decision</u>	
	Accept the manuscript for publication.
/	Reconsider the manuscript after the authors have satisfactorily addressed and complied with the reviewers' comments and recommendations.
	Reject the manuscript, as it is not suitable for publication.

SECOND ROUND

<u>Decision</u>	<u>Editor</u>	<u>Reviewer 1</u>	<u>Reviewer 2</u>
Accept the manuscript for publication.	/	/	/
Reconsider the manuscript after the authors have satisfactorily addressed and complied with the reviewers' comments and recommendations.			
Reject the manuscript, as it is not suitable for publication.			