

Reviewer A:

This article describes the critical need, particularly within the state of Texas, for math and science teachers who are properly trained and have adequate knowledge of the subjects that they have been assigned to teach. In many instances, poor student performance on standardized and other assessments has been directly linked to having teachers with poor or inadequate training in math and science. In addition, this paper also addresses the need to deal with the shortages of qualified math and science teachers in the academic pipeline. To this end, the paper focuses on the needs assessment Student/Teacher surveys that were conducted.

	Review A:	Revised
1)	On page 3 – there is a typo (number 3 out of place) in the second to last sentence of the top paragraph.	✓
2)	On page 4 – second paragraph – the last two sentences begin with “The region ...” Consider rewording.	✓
3)	On page 5 – Section 1.3 – the author(s) cite work done in 1969 on decision-oriented evaluation. Is there any more recent work they could include to justify the importance of this type of needs assessment or is the Alkin work the premier work on this topic?	✓ More recent work added in section 1.3 in pages 4, 5, and 6.
4)	On pages 5 and 6 – need to make it clearer who the student participants were. Were they only those students who indicated an interest in becoming a STEM teacher or were other student participants included?	✓ Changes made and revised with the info. of student participant in page 7
5)	On page 6 – need to better introduce the population of teachers that participated in the study. Were they high school teachers? K-8? Inclusive of all of K-12? Others? It is not until page 9 that this is made clear. I think perhaps a sentence or two on page 6 would be useful for the reader.	✓ Changes made and revised with the info. of teacher participant in page 8
6)	On page 7 (and elsewhere where figures are shown) – I suggest including figure captions for all figures.	✓ Figure captions included
7)	On page 8, I think some text between Table I and Figure 5 would be appropriate. It seems to me both the table and the figure represent the same information, so perhaps both of them are not necessary.	✓ Figure 5 removed
8)	On page 9, some transition text between presenting information regarding the student participants and the teacher survey would be useful. Could the author(s) provide a summary of what the data they collected indicates?	✓ A summary of the student survey added in page 11

9)	On page 10 – again I think some text between tables and figures would be useful for the reader.	✓
10)	On page 11 – a brief summary of the data collected from the teacher survey would be useful and would provide a needed transition into section 4.	✓ A brief summary of the teacher survey added in section 3.2 in pages 11 and 13
11)	On page 12 – section 4.2.1 – there are three sentences in a row in that section that begin with “The universities could ...” I suggest rephrasing to avoid redundancy.	✓
12)	By page 13 it became clear to me that the author(s) tend to include discussion that is pointed towards computer science. Perhaps a statement in the abstract to that affect would be helpful to the reader. Computer science is but just one area within the broad STEM umbrella. If computer science is a focus, that should be made clearer.	✓ Background section with less Computer Science discussion was reorganized to avoid confusion in section 1.2 and 1.3 in pages 2, 3, and 4.
13)	On page 15 – I’m not a fan of ending the paper with a bulleted list. I think a brief reminder of what is being done versus what needs to be done versus how the survey results have prompted action to be taken would provide a more robust end to the paper.	✓ A paragraph as part of the conclusion added in page 17
14)	In terms of the references cited by the author(s), I look at them and wonder if there are any other similar survey-type studies that have been done that might relate to the current work. I think including this work if it exists would be useful in terms of providing evidence of the utility of these studies in terms of the present work. My question might be, what has been learned based on similar work done by others and how did this work shape the current study?	✓ Discussion of similar studies added in section in section 1.3 in pages 4, 5, and 6.
	Review B:	Revised
	It is important to conduct a Needs Assessment to identify which problems or needs exist in a given area, and there is substantive value in reporting decision alternatives that may help to address those needs. This paper would be strengthened if the authors more clearly identified how they established the decision alternatives (that is, did the authors make these decisions; did the survey ask the teacher for their feedback on these decisions; how are the results from the survey directly linked to the decisions). Much of this was unclear in the paper. A survey is only as good as the questions that are selected, and it seems as if many of the questions were simply descriptive and did not align with any particular theory of action or framework. It was not clear why elementary teachers were part of the sample, as were teachers of subjects other than STEM, yet the students in the survey were only preparing to teach middle and high school STEM subjects. This was a disconnect.	✓ Discussion of a Needs Assessment added in section in section 1.3 in pages 4, 5, and 6.

	<p>It was also unclear why the Background section focused only on Computer Science, yet the paper was about STEM subjects in general.</p>	<p>✓ Background section with less Computer Science discussion was reorganized to avoid confusion in section 1.2 and 1.3 in pages 2, 3, and 4.</p>
	<p>Overall, there were several places in the paper where sentence structure, grammar, and punctuation were incorrect.</p>	<p>✓</p>
	<p>The number of tables, figures and graphs should be reduced. Select only those figures/tables that will add value to the text.</p>	<p>✓ Table 1 removed</p>
	<p>Also, I would suggest that your pie graphs contain the descriptor in the graph and not the percentage (e.g., write 1-2 years on the pie chart itself in Figure 10 and not the percentage).</p>	<p>✓ Description with the percentage added into the pie graphs</p>
	<p>Terms like "insufficient" and "inadequate" are too hard to quantify or define, so I would suggest you either define them or let us know how you defined them for the students and teachers in your sample.</p>	<p>✓ A sentence added to identify the terms in the first paragraph in page 13</p>
	<p>Your "Conclusions" are simply a repeat of your findings and are not really conclusions. This should be the place where you apply what you learned and help the field understand why these findings are important and contribute to advancing the field.</p>	<p>✓ A paragraph as part of the conclusion added in page 15</p>
	<p>Finally, your resources/bibliography was very weak with only a limited number of resources, and none of which are from Peer Review Journals. I wish you the best in your NSF Noyce grant.</p>	<p>✓ Discussion of similar studies added in section in section 1.3 in pages 4, 5, and 6. A list of peer review journals added in the References</p>