



Nurul Fitriyah <nurul.fitriyah@fkip.unmul.ac.id>

[jotse] Editor Decision

4 messages

Journal of Technology and Science Education <info@jotse.org>

Tue, Jul 13, 2021 at 4:40 PM

Reply-To: Dra Jasmina Berbegal-Mirabent <jberbegal@uic.es>

To: Nurul Sulaeman <nurul.fitriyah@fkip.unmul.ac.id>

Cc: Shelly Efwinda <shelly.efwindaa@gmail.com>, Pramudya Dwi Aristya Putra <prmudya.fkip@unej.ac.id>

Dear Nurul Sulaeman:

We have reached a decision regarding your submission to Journal of Technology and Science Education, "Teacher Readiness in STEM Education: Voices of Indonesian Physics Teachers".

Our decision is: Major revision

When you revise your manuscript please highlight the changes you make in the manuscript by using the track changes mode in MS Word or by using bold or coloured text. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer and revise your manuscript within 30 days to avoid any further delay in publishing your article. If we do not received your response in this deadline, your paper will be archived.

To submit the revision, log into [https:// www.jotse.org](https://www.jotse.org). Go to the section "USER HOME" and then to the sub-section AUTHOR". There, you will find all your manuscripts. Select the manuscript that you want to upload.

Please, do not hesitate to ask if you have any questions or suggestions.

Dra Jasmina Berbegal-Mirabent
Universitat Internacional de Catalunya
jberbegal@uic.es

Reviewer B:

The authors want to understand the readiness of Indonesian physics teachers to STEM education. In order to study this topic, they use the alignment, capability and engagement framework. Although the whole work refers to the Indonesian case, the authors explain in detail how the Indonesian education works in detail, making somehow easy to compare it with other countries.

The text is very clear and well structured, with a very detailed introduction and a exhaustive bibliography. In addition, results are nicely contrasted with other literature. The followed procedure is also clear, giving details about the questionnaire they used for the study (as a comment, the questions about alignment and engagement are very general and I would encourage the authors to find additional questions to improve the measurement of those points).

However, from my point of view, the following points need a revision:

- In line 49, what is the meaning of "high diversity" in this sentence? Please clarify.
- In lines 174-175 authors ask the participants about gender, education level and teaching experience, but table 2 only reflects the gender. I think that both education level and teaching experience are key for this study. What about them?
- Figure 3 doesn't give a lot of additional information and may also be quite confusing. Perhaps a cleaner graph with less keywords would be better. This is just a suggestion, so authors may do whatever they think it's better.
- Histograms in figure 4 are not very clear. They have a scale in the left side without axis, but they also show the number of counts in top of each

bar. This representation doesn't give additional information. Please consider to fix this.

- In figure 4, how do the authors explain why most people chose JHS grade 8 instead of JHS grade 9? There is a significant difference! Please, give an explanation.
- The graph shown in figure 5 is analyzed by the authors along lines 238-240 but they give a very vague description of it. In contrast, they should have asked for a response from those who opted for the "not being sure" case. If there is no information about, a hypothesis would also be acceptable, remarking that it is just a hypothesis applied to the Indonesian case.
- In conclusions, lines 301 and 302, authors have to clarify along the text why is the possibility of implementation weakened due to the COVID-19 pandemic. They only mention this in the introduction, so this can't be used directly in the conclusions. Please relate this topic along the text.

Summarizing, I found this work very interesting and I would sincerely recommend it for publication after a careful review of the previous points.

Reviewer D:

Thank you for the opportunity to revise this work.

I found the topic timely and appropriate. There is a good fit with the scope of the journal. The intellectual work conducted is also interesting and might be suitable for publication once a number of major issues are addressed. Below I elaborate on the main weaknesses I found that, in my view, should be revised and require some extra work.

1. Introduction

- The theoretical foundations or empirical evidence that leads to the three research questions are not clearly articulated. To make the argument stronger the authors need to better motivate (and connect) the research questions with the current state of the art.
- Do not use a subheading within the introduction. The paragraph explaining the contribution should be fully integrated within the introduction.
- The authors also need to justify the relevance of the geographical setting (Indonesia). Why is this case relevant for the academic community? What other countries can learn from this case?

2. Literature review

- This section is short and concise. My only comment here is to try to better connect the theoretical foundations with the empirical case described later. In the current version, there is a sort of mismatch. The last paragraph introduces the concepts of Alignment, Capabilities, and Engagement, but more emphasis should be put on their impact on teacher readiness and the extent to which these topics have been studied in the literature.

3. Method

- More information about how the survey was designed is necessary. What was the role and profile of the experts that participated in the focus group? How did the 6 questions emerge? Note that Alignment and Engagement are also examined with one question; however, 4 questions are used to measure Capabilities. Apparently, this seems a bit unbalanced.
- Sample: 101 teachers from 12 provinces filled in the questionnaires. How representative is this sample? From which regions were participants? More details are needed describing both the adequacy of the sample and how respondents were contacted and responded.

4. Results

- The results are nicely presented and organised.

- Figures 4 and 5 need additional clarification in the text
- There are some problems with Figure 6 (the values did not appear in the graph).

5. Conclusions

- How covid-19 is shaping and impacting the results is little discussed.
- The implications for policy and practice could be somewhat extended.

Journal of Technology and Science Education
<https://www.jotse.org>

Nurul Fitriyah <nurul.fitriyah@fkip.unmul.ac.id>
To: pramudya dwi ap <pramudya.fkip@unej.ac.id>

Tue, Jul 13, 2021 at 5:38 PM

[Quoted text hidden]

Nurul Fitriyah <nurul.fitriyah@fkip.unmul.ac.id>
To: Dra Jasmina Berbegal-Mirabent <jberbegal@uic.es>

Sun, Aug 8, 2021 at 8:36 AM

Dear Dr. Jasmina,
I hope this email finds you well.
Thank you for the fruitful comments and suggestions from the reviewers.
We uploaded the revised version through our account on the JOTSE website.
Looking forward to discussing further.
Sincerely,

Nurul

[Quoted text hidden]

--

Nurul F. Sulaeman, Ph.D.
Lecturer
Department of Physics Education
Faculty of Teacher Training and Education
Mulawarman University
Samarinda, East Borneo, Indonesia

Jasmina BM <jberbegal@uic.es>
To: Nurul Fitriyah <nurul.fitriyah@fkip.unmul.ac.id>

Wed, Aug 25, 2021 at 8:47 PM

Dear Nurul,

We acknowledge receipt of your submission.
It has now successfully passed the initial screening and is now under review.
As soon as we receive the review reports of the referees, we will come back to you with a decision.

Yours sincerely,

Jasmina Berbegal Mirabent
Professora agregada
Directora del programa ADE+Enginyeria
Universitat Internacional de Catalunya
[C/ Immaculada, 22](#)
[08017 Barcelona](#)
Tel. (+34) 932 541 800 ext. 4150
Tel. (+34) 930 191 414
Email: jberbegal@uic.es
Website: <http://www.uic.es/en/teacher/berbegal-mirabent-jasmina>

Missatge de Nurul Fitriyah <nurul.fitriyah@fkip.unmul.ac.id> del dia dg., 8 d'ag. 2021 a les 2:36:

[Quoted text hidden]



[Home](#) [About](#) [User Home](#) [Archives](#) [Submissions](#) [Publication Fee](#) [Indexing & Statistics](#)

[Home](#) > [User](#) > [Author](#) > [Submissions](#) > #1191 > **Summary**

#1191 Summary

Summary [Review](#) [Editing](#)

Submission


Authors	Nurul Sulaeman, Shelly Efwinda, Pramudya Dwi Aristya Putra
Title	Teacher readiness in STEM education: Voices of Indonesian Physics teachers
Original file	1191-4432-3-SM.DOC 2021-03-27
Supp. files	1191-4682-1-SP.DOCX 2021-03-27
Submitter	Nurul Sulaeman 
Date submitted	March 27, 2021 - 04:35 AM
Section	ARTICLE
Editor	Jasmina Berbegal-Mirabent 
Author comments	Dear Editors, Thank you for the opportunity to share and discuss our manuscript in your journal. Looking forward to discuss more. Sincerely, Authors
Abstract Views	847

Status

Status	Published Vol 12, No 1 (2022)
Initiated	2022-02-10
Last modified	2022-03-31

Submission Metadata

Authors

Name	Nurul Sulaeman 
ORCID iD	https://orcid.org/0000-0001-5098-0615
Affiliation	Mulawarman University
Country	Indonesia

Principal contact for editorial correspondence.

Name	Shelly Efwinda 
ORCID iD	http://orcid.org/0000-0003-0715-2632
Affiliation	Mulawarman University
Country	Indonesia
Name	Pramudya Dwi Aristya Putra 

OmniaScience

USER

You are logged in as...
nurulsulaeman

- [My Profile](#)
- [Log Out](#)

PRINTED EDITION



NEWS

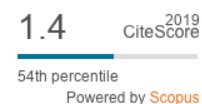


INDEXING

SJR (Scopus)



CiteScore Rank (Scopus)



See more: [Latindex](#), [Google Scholar](#)...

Crossref
Similarity Check
Powered by iThenticate

AUTHOR

Submissions

- [Active \(0\)](#)
- [Archive \(2\)](#)
- [New Submission](#)

JOURNAL CONTENT

Search

ORCID iD <http://orcid.org/0000-0002-1166-8220>
 Affiliation University of Jember
 Country Indonesia

Title and Abstract

Title Teacher readiness in STEM education: Voices of Indonesian Physics teachers

Abstract STEM (science, technology, engineering, mathematics) education is widespread around the globe, with various theoretical frameworks and challenges from practical perspectives. In classroom practice, teacher readiness to conduct STEM learning is essential for its successful implementation. This study explores physics teachers' readiness for STEM education using the Alignment, Capabilities, Engagement, or ACE, framework. Data collection is based on 101 teachers' responses to six open-ended questions. Interestingly, all the teachers showed strong alignment with STEM education and how to implement it. Most of them have known STEM education as integrating technology, engineering, and mathematics to science (physics), but only about half of them have experience conducting STEM lessons. They have basic capabilities of identifying the possibilities of implementation in various physics curricula, such as motion, electricity, and fluids. However, in the online learning made necessary by the COVID-19 pandemic, the possibility of implementation is weakened. The teachers showed their engagement to explore more detail in designing and implementing STEM in their classrooms. Also reflected in the study was a significant challenge in terms of pedagogical and time management. Therefore, professional development in STEM education is essential to support teachers' alignment, capabilities, and engagement to develop their readiness. As specific examples, STEM learning materials in motion, electricity, and fluids could help teachers understand the design and implementation of STEM education.

Indexing

Keywords STEM education, In-service Physics teacher, teacher readiness
 Language en

Supporting Agencies

Agencies —

Search Scope

All

Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)

INFORMATION

- [For Readers](#)
- [For Authors](#)
- [For Librarians](#)

VISITORS



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

Journal of Technology and Science Education, 2011-2023

Online ISSN: 2013-6374; Print ISSN: 2014-5349; DL: B-2000-2012

Publisher: [OmniaScience](#)