



Corrigendum: Developing Pre-service Teachers Conceptualization of STEM and STEM Pedagogical Practices

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Keywords: STEM, mathematics pre-service teachers, chemistry pre-service teachers, professional development, higher education

Corrigendum on

Developing Pre-Service Teachers Conceptualization of STEM and STEM Pedagogical Practices by Berisha, F., and Vula, E. (2021). *Front. Educ.* 6:585075. doi: 10.3389/feduc.2021.585075

In the original article, Akaygun, S., and Aslan-Tutak, F. (2020). "Collaboratively Learning to Teach STEM: A Model for Learning to Integrate STEM Education in Preservice Teacher Education," in *Critical Questions in STEM Education. Contemporary Trends and Issues in Science Education*. Editors V. I. Akerson, and G. A. Buck (Cham: Springer), Vol. 1. https://doi.org/10.1007/978-3-030-57646-2_9 was not cited in the article. The citation has now been inserted in **Methodology**, Paragraph Number 2, **Table 1** and should read:

Initially, pre-service teachers were asked to reflect on STEM knowledge they might have and STEM conceptualization. The pre-reflection was meant to enable researchers (authors) to learn how much STEM knowledge and STEM awareness pre-service teachers had. For 5 weeks in a row, the STEM professional development workshop was attended by pre-service teachers on Saturdays. In the eighth week, pre-service teachers presented and discussed their group STEM projects. During the workshop, participants had a dual role: as learners-involved in the learning process while engaging in the STEM workshop and as teachers-involved in discussions and perspectives on pedagogical processes. **Table 1** outlines the weekly activities for the STEM professional development workshop based on work of Akaygun and Aslan-Tutak, (2020). All activities were completed in groups (mainly two mathematics and two pre-service chemistry teachers). After the professional development workshop, open-ended, post-reflective questions were emailed to all participants to inquire about their experiences. In response, the understanding, knowledge, and pedagogical practices gained during the collaborative practices and the benefits/challenges they faced during the STEM workshop were acquired. A total of 26 responses were collected from all participants in the workshop (incomplete responses were not considered).

Text Correction

In the original article, there was an error. The word used "prepared" should be replaced with "replicated".

A correction has been made to **Methodology**, Paragraph Number 1:

The study took place at the University of Prishtina, Faculty of Education, during the academic year 2017/2018. A total of 40 (22 mathematics and 18 chemistry) pre-service teachers engaged voluntarily in the professional development workshop organized and structured by mathematics and chemistry university lecturers (authors) associated with the needs provoked during the Teaching and Learning of subject-specific courses at Master-level studies. The lecturers replicated the module developed by Dr. Sevil Akaygun and Dr. Fatma Aslan-Tutak from the Bogazici University (Akaygun

OPEN ACCESS

Approved by:

Frontiers Editorial Office, Frontiers Media SA, Switzerland

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Specialty section:

This article was submitted to
STEM Education,
a section of the journal
Frontiers in Education

Received: 16 July 2021

Accepted: 19 July 2021

Published: 30 July 2021

Citation:

Berisha F and Vula E (2021)
Corrigendum: Developing Pre-service
Teachers Conceptualization of STEM
and STEM Pedagogical Practices.
Front. Educ. 6:742893.
doi: 10.3389/feduc.2021.742893

TABLE 1 | The activities for the STEM professional development workshop (Akaygun and Aslan-Tutak, 2020).

Week	Schedule
1	Pre-reflection on STEM knowledge
1	Activity 1: <i>Introduction to STEM education</i> Lecture on STEM education Two scientific articles on STEM education were shared with the pre-service teachers for reading and reflection (Dugger, 2010; Laboy-Rush, 2011)
2	Activity 2: <i>Poster of STEM Student Club Logo</i> Visioning of STEM through drawing (students were given A3 paper size and crayons) Reflection on the activity
3	Activity 3: <i>Edible Car</i> Guided worksheet instructed for planning, designing, and testing the speed of movement of the "Edible Car." Different foods were provided Reflection on the activity
4	Activity 4: <i>Ocean Color</i> Guided worksheet through QR code reader for planning, designing, testing ocean colors Reflection on the activity
5	Activity 5: <i>Building a boat</i> Guided worksheet for planning, designing, testing if the ship will sink or float Recycling materials provided Reflection on the activity
8	Activity 5: <i>Build your Project</i> and lesson worksheets for planning, designing and testing
8	Post-reflection questions on STEM

and Aslan-Tutak, 2020) with their collaboration and organized STEM workshop activities to introduce practices that support STEM education.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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- Akaygun, S., and Aslan-Tutak, F. (2020). "Collaboratively Learning to Teach STEM: A Model for Learning to Integrate STEM Education in Preservice Teacher Education," in *Critical Questions in STEM Education. Contemporary Trends and Issues in Science Education*. Editors V. I. Akerson and G. A. Buck (Cham: Springer), Vol. 15. doi:10.1007/978-3-030-57646-2_9
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