**Appendix**

A questionnaire consisting of both open and closed items was utilized to collect data about preservice teachers’ understanding of STEM education. It was designed as a Google Form, and included 11 questions, namely:

1. Have you ever heard about STEM?
2. What does S-T-E-M stand for?
3. How did you hear about STEM? (you can select more than one option)

[ ]  TV, radio, internet or social media

[ ]  Politicians

[ ]  Teachers, instructors or educators

[ ]  The courses from Faculty of Education

[ ]  The courses from other Faculties (please identify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What do you think STEM is?
2. What is the purpose of STEM Education?
3. Is STEM important for you?

[ ] Yes [ ]  No

1. How does STEM relate to your major?
2. What is integration?
3. How are S-T-E-M integrated? Please draw a diagram to illustrate how you visualize this integration.
4. When should STEM be taught?
5. Which teachers should teach STEM?