

Hello interviewee,

This is a questionnaire that explores cross-domain learning sustainability. The main hope is to understand the perception of graduate and undergraduate students on cross-domain learning sustainability through this questionnaire. The subjects of the survey are students who are 20 years of age who hope or have received cross-domain sustainability courses. The content of the questionnaire is as follow 23 questions for cross-field learning perception input and effectiveness survey. It takes about 5-10 minutes. Thank you for taking the time to complete the answer. This questionnaire is answered in an anonymous and unidentifiable way. The electronic data is stored until July 2022 and will be deleted. The research team will do its best to maintain your privacy and responsibilities of confidentiality to minimize possible risks. After filling in, please upload the electronic questionnaire. The future publication of this research will be based on a holistic analysis. You will not be identified. The plan for the use of materials that will be published in journals, teaching, teaching materials, etc. will also have no derived commercial benefits. Please feel free to decide whether to fill in or not. You don't need to feel pressure. This questionnaire is unregistered and uncoded. If you do not fill in the questionnaire and make the answer incomplete, all your comments will be deleted as incomplete data. If you want to inquire about the content of this questionnaire or are interested in knowing the research results, this research will be completed in July 2022. You are welcome to request a summary of the research results according to the following contact methods (Contact person: Tzuping Chiang, Tel: +886-82-313521, email:ziping@nqu.edu.tw)

Sincerely,

Tzuping Chiang

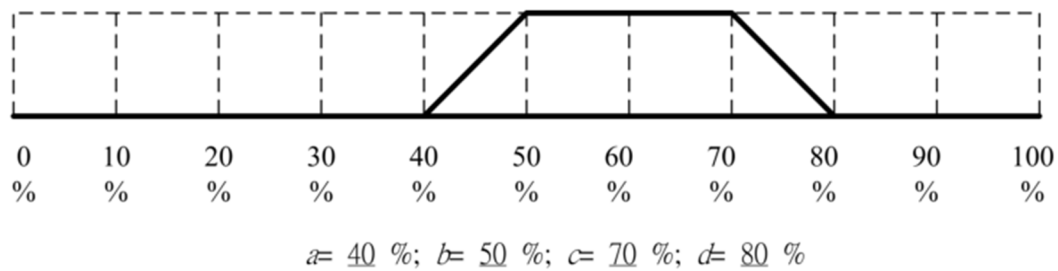
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This questionnaire wants to know to what extent you agree or disagree with the following statements. In 1-10 questions, please using fuzzy numbers. An example was shown as follow. In 11-23 questions, please using the Likert five-point scale.



1. I am not late and do not leave early in the course.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
2. I focus on teacher explanations in the course.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
3. I do not use a cellphone in the course.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
4. I am happy to attend expert meetings or seminars.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
5. I learn easy with peers.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
6. I learn from YouTube or other open courses.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
7. I am happy to have discussions with faculty.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
8. I have effective teaching practices.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
9. I think that the courses have quality interactions.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
10. I think that the courses have supportive environments.  
 $a = \underline{\hspace{1cm}}\%$ ;  $b = \underline{\hspace{1cm}}\%$ ;  $c = \underline{\hspace{1cm}}\%$ ;  $d = \underline{\hspace{1cm}}\%$
11. I value reading about topics in sustainability and civil engineering.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
12. I enjoy thinking about how different fields approach the same problem in different ways.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
13. Not all engineering problems have purely technical solutions.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1

14. When solving civil engineering problems, I often seek information from sustainability fields.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
15. Given knowledge and ideas from different fields, I can figure out what is appropriate for solving a problem.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
16. I see connections between ideas in civil engineering and sustainability.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
17. I can take ideas from outside engineering and synthesize them in ways that help me better understand.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
18. I can use what I have learned in one field in another setting.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
19. I often step back and reflect on what I am thinking to determine whether I might be missing something.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
20. I frequently stop to think about where I might be going wrong or right with a problem solution.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
21. I get higher grades.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
22. After interdisciplinary education, I am more interested in sustainability and civil engineering.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1
23. After interdisciplinary education, I believe that I will be more competitive in the job market.  
☐ 5; ☐ 4; ☐ 3; ☐ 2; ☐ 1