

looks great

Pre-test Report

-BJ

We did the pre-test on 12 people giving the questionnaire in print and asking them to fill out the survey and give us their opinions if any. As a result we derived the top 5 skills in each category to more research on them for the final questionnaire.

In order to simplify the questionnaire the format of essential words were changed to bold or italic. Some question parts were deleted. Few minor grammar and spelling mistakes were corrected.

Overall it seemed that the questionnaire was fluent and they had no difficulties understanding the contents of it. The final questionnaire is attached below.

Survey: Individual's characteristics and academic elements that promote innovations skills

Section I. Demographic questions (Choose one of the options or write your answer)

1. Are you female or male? ☐ Female ☐ Male
2. What is your nationality? _____
3. How old are you? ☐ 20-25 ☐ 26-30 ☐ 31-35 ☐ 36-40 ☐ 41 or more
4. What was your major/academic program in university/before you entered CMU? _____
5. Did you have any work experience before joining CMU? ☐ Yes ☐ No
6. If yes, how many years did you work? ☐ 1-5 ☐ 5-10 ☐ 11-15 ☐ 16 or more
7. Have you ever done an internship? ☐ Yes ☐ No
8. If yes, for how long (months)? ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7 or more
9. Are you a graduate student? ☐ Yes ☐ No
10. What will your final degree be at CMU? ☐ Master ☐ PhD
11. If it is PhD, have you taken the qualification exams? ☐ Yes ☐ No
12. Are you graduating within this year? ☐ Yes ☐ No

Section II. Individual's characteristics and academic elements questions

13. Do you think that having a "*Creative approach*" is an important **characteristic** to be innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

14. Do you think that being "*Self-driven and persistent*" is an important **characteristic** to be innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

15. Do you think that being "*Resourceful and shrewd*" is an important **characteristic** to be innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

16. Do you think that being "*Initiator of change*" is an important **characteristic** to be innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

17. Do you think that being "*Highly future oriented*" is an important **characteristic** to be innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

18. Do you think that "*Challenge Seeking*" is an important **attribute** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

19. Do you think that "*Persistence*" is an important **attribute** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

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20. Do you think that "*Curiosity*" is an important **attribute** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

21. Do you think that "*Commitment*" is an important **attribute** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

22. Do you think that being "*Aggressively ambitious*" is an important **attribute** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

23. Do you think that "*Integrity*" is an important **value** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

24. Do you think that being "*Respectful to others*" is an important **value** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

25. Do you think that "*Peace*" is an important **value** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

26. Do you think that "*Freedom*" is an important **value** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

27. Do you think that "*Personal and social responsibility*" is an important **value** for being innovative?

Strongly disagree				Strongly agree
1	2	3	4	5

28. Which kinds of **knowledge** listed below you think are important to be innovative?

(Please **rank** them all and add others if necessary)

	Business knowledge (business plan, marketing, market needs, etc)
	Technical knowledge (Technology, methods, engineering, production, etc)
	Design Knowledge (conceptualization, creativity, form, ergonomic issues, etc)
	Law or legal Knowledge (intellectual property, contract, agreement, etc)
	Others:

29. Do you agree that the **contribution of CMU culture** is important to innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

30. Do you agree that the **impact of your academic department's culture** is important for innovation promotion?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

Why?

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- a. Which part(s) do you think is good? _____
- b. Which part(s) do you think is not good enough? _____
- c. How to improve it? _____

31. Do you agree that the influence of **CMU facilities**, like libraries, laboratories, classrooms, gyms and business incubators, are important for improving students' innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

Why?

- a. Which part(s) do you think is good? _____
- b. Which part(s) do you think is not good enough? _____
- c. How to improve it? _____

32. Do you agree that **CMU faculty skills** are important in improving students' innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

33. Do you agree that the effect of **academic activities** (like seminars, meetings, etc.) in CMU is important in improving students' innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

Why?

- a. Which part(s) do you think is good? _____
- b. Which part(s) do you think is not good enough? _____
- c. How to improve it? _____

34. Do you agree that the impact of your **classmates and/or colleagues in CMU** is important in improving your innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

35. Do you agree that the **curriculum in your program** has a significant effect in fostering a student's innovation ability?

(Choose one option that you think is most suitable and answer the following questions)

Strongly disagree				Strongly agree
1	2	3	4	5

Why?

- a. Which part(s) do you think is good? _____
- b. Which part(s) do you think is not good enough? _____
- c. How to improve it? _____