Assignment Submission Coversheet

Faculty of Business and Law

Student ID: 220129254

Student Name: Alina Kriutchenko

Campus: ☒ Burwood   ☐ Waterfront   ☐ Waurn Ponds   ☐ Warrnambool   ☐ Cloud

Assignment Title: Assignment One. Designing a Survey

Due Date: Thursday 9th April 2020, 11:59 pm

Course Code/Name: Master of Data Science

Unit Code/Name: MIS770

Unit Chair/Campus Coordinator: Dilal Saundage

Assignment One. Designing a Survey

The first block of the question will help to find out people's opinion on the matter. The middle part shows their willingness to active actions. The last part has various questions for understanding demographic representation and its relation to previous questions.

Part A. Survey Question

Question 1

Do you think that global warming is an important problem?

It will help to understand peoples' awareness of the problem and to find out whether the existing information in the popular media is a good representation of the topic.

Type of variable for an answer is categorical. The level of measurement is ordinal. Answers:
- Strongly Agree
- Agree
- Partly agree
- Neutral
- Disagree
- Strongly Disagree

The graphical representation is a bar chart. There are six vertical columns: the x-axis has names of columns and the y-axis has percentages of people.

Question 2

Do you think that climate change is responsible for these events around the world: hurricanes, heat waves or flooding [1]?

We need to understand how much people are aware about the effect of the global warming. Type of variable for an answer is categorical. The level of measurement is ordinal.
Answers:
- Yes
- Partially
- No

The graphical representation is a pie chart. There are three parts of it.

Question 3

What causes global warming, in your opinion?

The answers will give information about the level of awareness among the population.
Type of variable for an answer is categorical. The level of measurement is nominal.
Answers:

- Human activity
- Natural earth's processes
- Both [2]

The graphical representation is a bar chart. The x-axis will have columns with answers. The y-axis is for percentages.

Question 4

In your opinion, is it possible to slow it down?

This question can help to measure peoples' level of expectation and will show the necessary steps which can show everyone what solution works with this matter. To find out if people are ready to involve in decision-making.
Type of variable for an answer is categorical. The level of measurement is ordinal. Answers:
- Yes
- Partially
- No

The graphical representation is a pie chart. There are three parts of it.

Question 5

With which of the following government programs you are familiar with?

This question will help to see how popular these programs by the media and to decide which program requires a better campaign. Also, to see how we should develop new education programs at schools.
Type of variable for an answer is categorical. The level of measurement is nominal. Answers:
- Farmer Managed Natural Regeneration
- Clean energy and access to carbon markets
- Climate adaptation concepts [3]

The graphical representation is a horizontal bar chart. The x-axis will have three bars with the name of the concepts. The y-axis will show the percentage of people familiar with it.

Question 6

Are you familiar with the greenhouse gases process [2]?

It helps to understand if citizens are aware of the basic concepts of the greenhouse gases effect.
Type of variable for an answer is categorical. The level of measurement is ordinal. Answers:
- Yes
- Partially
- No

The graphical representation is a pie chart. There are three parts of it.

Question 7

Do you know how much the average temperature on the planet has changed over the past 100 years [4]?

Will help to understand how knowledgeable public about certain aspects of climate change.
Type of variable for an answer is numerical continuous. The level of measurement is an interval.

The graphical representation is a histogram. The vertical axis represents frequency and the horizontal is temperature.

Question 8

What growth (cm) experienced sea level in the last 100 years? [4]

Will help to understand how knowledgeable public about certain aspects of climate change.
Type of variable for an answer is numerical continuous. The level of measurement is the ratio.

The graphical representation is a histogram. The vertical axis represents frequency and the horizontal is the growth.

Question 9

By your assumptions, in how many years the Arctic sea ice cover will disappear [5]?

Will help to understand how knowledgeable public about certain aspects of climate change. Type of variable for an answer is numerical discrete.

The graphical representation is a frequency distribution.

Question 10

Have you ever been affected (financially, physically or any other way) by extreme weather [2]?

To see how many people were affected by global warming.
Type of variable for an answer is categorical. The level of measurement is nominal.
Answers:
- Yes
- No

The graphical representation is a pie chart. There are two parts of it.

Question 11

Are you ready to take action for reducing the speed of climate change? [6]

It is important to know the current level of willingness to do some prevention measures. It will help to develop further strategies of communication with citizens about this matter. And to find out if people are ready for the actions now.

Type of variable for an answer is categorical. The level of measurement is ordinal.
Answers:
- Yes
- Not sure
- No

The graphical representation is a horizontal bar chart. The x-axis is a percentage of responses and the y-axis will have "yes", "no" or "not sure" columns.

Question 12

Which of the following steps do you undertake?

It will help to understand the current level of involvement and responsibility

Type of variable for an answer is categorical. The level of measurement is nominal.
Answers:
- Use energy wisely
- Eat more meat-free meals
- Ride a bike or taking a walk
- Buying less clothes
- Do you have an automatic light system at home (IoT technology)?
- Have solar panels or a wind turbine
- Support climate change movements
- Being active and take part in voting for climate change related issues [7].

The graphical representation is a bar chart. The x-axis represents the categories. And the y-axis will show the percentage of people who follow them.

Question 13

How many clothes do you buy every month (except for shoes, bags)?

This experience will help government and cloth brands to choose the further direction for their development, advertisement. It can show the opportunities for the sustainable clothes design among different age groups and genres.
Type of variable for an answer is numeric discrete.
Answers:
- 1-5
- 5-10
- 20-30
- 30-45
- >45

The graphical representation is a frequency distribution.

Question 14

What type of transport do you use to get to work?

It will help to measure peoples' dependence on the gasoline mode of transport. It is important for evaluating the possibilities of future development of eco-friendly vehicles.

Type of variable for an answer is categorical. The level of measurement is nominal. Answers:
- Car
- Public transport
- Bicycle
- Walking

The graphical representation is a pie chart. There are four parts of it.

Question 15

Would you use a bicycle or walk to get to work? (Choose YES if you already do)
To check if citizens are ready to use non-electrical mode of transport and compare it by age or gender group. To see the number of people who already or can possibly in the future choose a climate friendly way to commute to work. To correlate the results with their age, genre.
Type of variable for an answer is categorical. The level of measurement is nominal. Answers:
- Yes
- Not sure
- No
- My job is too far away

The graphical representation is a pie chart. There are four parts of it.

Question 16

How would you rate a work done by a government for the slowing down of climate change?

To get to know the public's opinion on the work done by the government for reducing the speed of climate change. It is important because
Type of variable for an answer is categorical. The level of measurements in ordinal.

Answers:
- Very good
- Good
- Neural
- Bad
- Very bad

The graphical representation is a bar chart. The horizontal axis represents answers. The vertical axis will show the percentage of people.

Question 17

Which state you are from?

It will connect peoples' opinions to a certain generation. It will allow to see the dynamic of peoples' views on the topic. It will show the specific dynamics by state. Type of variable for an answer is categorical. The level of measurement is nominal. Answers:
  • New South Wales
  • Victoria
  • Queensland
  • Western Australia
  • South Australia
  • Tasmania
  • Other [8]
The graphical representation is a table. There will be 4 rows and 2 columns. The first column will contain the headings and variables like "male" etc. The second column will contain a percentage.

Question 18

What is your age?

This question connected to every other. It will connect peoples' opinions to a certain generation. It will allow to see the dynamic of peoples' views on the matter. Also, it will highlight the least informed group.
Type of variable for an answer is numeric continuous. The level of measurement is the ratio.
Answers:
  • 15-30
  • 30-45
  • 45-60
  • >60
The graphical representation is a frequency distribution.

Question 19

What is your gender?

It will help to analyze results.
Type of variable for an answer is categorical. The level of measurement is nominal. Answers:
  • Male
  • Female
  • Other
The graphical representation is a summary table. There will be 4 rows and 2 columns. The first column will contain the headings and variables like "male" and etc. The second column will contain a percentage.

Question 20

What is your socio-economic status?

It's important to know how people rate their financial capabilities. People usually have different ideas about the relevance(importance) of certain problem depending on their income. The ecology of our planet doesn't make your top list when you are struggling with lack of food or rent bills.
Type of variable for an answer is categorical. The level of measurement is ordinal.
Answers:
  • low income
  • middle income
  • high income
The graphical representation is a summary table. There will be 4 rows and 2 columns. The first column will contain the headings and variables like "low income" etc. The second column will contain a percentage.

Part B. Collection of Survey Data

Task 6

The survey will be taken online. It can be created as a segment of a government statistical website. It's the most convenient, fast and modern way of communication. There are main advantages: low costs, automation, less time needed, convenience for respondents, design flexibility, limited sampling and respondent availability. Main disadvantages are: limited sampling and respondent availability, possible cooperation problems, no interviewer, respondents will be more willing to share information, no interviewer, respondents cannot be probed. [9] Most responders will feel very comfortable to give their answers in this convenient format.

Task 7

The systematic sample method will be used for capturing every individual's opinion. Different companies, groups and communities going to take part in it. During the choosing process preference will be given to some groups. In general, they have to represent a variety of associations. The survey will be sent to various companies' resource management team and through different government services used by every citizen like public service institution or even voting facilities. People at work will be more willing to take a survey if they receive it from trusted companies repetitive. A survey itself will have a very minimalistic and visually not distracting design. Therefore, as a request it will be asked a responsible person at the company to choose a few people from different departments and positions.

References

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