



MIS770 Foundation Skills in Data Analysis – Trimester 1 2024

Assessment Task 1 – Designing a Survey Instrument – Individual

Due Date: Wednesday, 10th April 2024, by 8:00 pm (Melbourne time)
Percentage of Final Grade: 20%
Word Count: 2400 Maximum number of words

Description

Purpose

This assignment task is aligned to the learning outcomes GLO1 & ULO1 and applies the ideas and concepts introduced in Module 1 to design a survey that can be used to collect sample survey data. (Note: For this assignment, you will only be creating the survey instrument. Your survey is **not** being used to collect any actual data from the public, nor do you need to estimate the number of responses you require.)

Remember, the first step in Data Analysis is to collect a sample that faithfully represents the population we are investigating. By completing this task, you will develop your skills in designing appropriate questions in your survey such that the data you gather is robust and relevant.

Context/Scenario

At GKJ Pty Ltd, a fictitious consulting company, there is a proactive initiative to assess the potential impact of generative Artificial Intelligence (AI) on the current job landscape. The company, operating in both local and international markets, recognises the need to stay ahead of the curve and is keen on understanding how AI advancements may shape its workforce.

In your role as a data analyst at GKY Pty Ltd, you have been tasked with designing a comprehensive **survey** that will enable pertinent data to be collected **from your company's employees** for subsequent analysis.

By conducting this survey, the company aims to gather valuable insights that will inform strategic decisions, facilitate a smooth transition, and foster a positive and collaborative environment as they navigate the evolving landscape of generative AI within GKJ Pty Ltd.

Therefore, this survey should capture insights across various themes, including:

- employee awareness and understanding of generative AI,
- attitudes and perceptions of employees towards its integration in the workplace,
- existing skill sets of employees, and their preparedness for potential changes in job requirements,
- areas where employees may require additional training or upskilling,
- effectiveness of communication within the workplace regarding the introduction of generative AI,
- employee concerns or reservations they may have about the impact of generative AI on their roles.

You should be mindful that the answer to each question you ask in the survey will be recorded for analysis in a dataset. This forms **Part A** of the assignment. For **Part B** of the assignment, you will need to first establish how you would implement the survey (in other words, how would you distribute the survey). As a clue, it would be unwise to simply “hand out” a paper survey to anyone you meet. Secondly, you will need to decide on a “Sampling Method” that will ensure that you gather sample data that is representative of the population you are investigating. These steps are explained in more detail under **Specific Requirements**.

The survey should contain exactly 20 questions which ought to take a person no more than about 5 minutes to complete. For this survey, there should be no open-ended questions and, where appropriate, answers can be selected from options. (For more information, see **Survey Question Hints and Guideline Two – Response Option Principle**).

Tip: You need to be mindful of the company **purpose** of the survey when you are crafting your survey instrument. In other words, make sure your survey questions are relevant when compared to the reason the survey is being undertaken.

Specific Requirements

In this assignment, your tasks will be split into two (2) distinct Parts. The **Part A** relates to the Survey Questions and **Part B** to the Collection of the Survey Data (i.e., the methodology and determination of the target audience).

Part A – Survey Questions

- Task 1: write/create twenty (20) questions that are **specifically** aligned to the survey purpose.
- Task 2: justify/state the purpose/reason for asking each question (Note: you should relate your answers back to the overall purpose of the survey).
- Task 3: indicate the type of variable that is most appropriate to your question. If the variable is numerical, then please also indicate if it is **Discrete** or **Continuous**. (For more information, see **Guideline Three – Variable Type**).
- Task 4: indicate the level (scale) of measurement that is applicable to each question (For more information, see **Guideline Four – Level (Scale) of Measurement**).
- Task 5: indicate, in detail, the type of visualisation (e.g. Chart/Table/Graph) you would use to visually represent the data for each question.

Part B – Collection of Survey Data (Textbook: Berenson et. al. Ch 1)

- Task 6: determine and describe the target audience to ensure that your data is representative of the population.
- Task 7: indicate the methodology you would adopt to conduct the survey (i.e. how would you propose the data should be collected) and then describe your sampling frame.

Survey Question Hints

An example of an appropriate Survey Question:

What is your estimated annual income?

Note: If you wish, you could also ask this question more broadly by asking the respondent

to give a range such as: "Below \$40,000", "\$40,000 to less than \$50,000", "\$50,000 to less than \$60,000", etc., (Notice here that the ranges **do not** overlap).

An example of an unacceptable Survey Question:

What is your employee ID?

This example fails on multiple counts:

- There can be "no purpose" in asking this question (see Task 2).
- It's likely the interviewee will decline to answer any further questions (for privacy reasons), or they will deliberately answer the remaining questions untruthfully.
- It would not be possible to represent the data gathered in any meaningful manner (see Task 5).

Guidelines

Guideline One – Word Count

The following word counts are a **guide** only (however your overall word count needs to be within the range 1600 words to 2400 words):

Part A – Survey Questions

Task 1: each survey question you create (inc any options you may incorporate) should be approximately 10 to 25 words (i.e., **200 to 500 words** in total for your 20 questions).

Task 2: when you explain the purpose of your question, you should allow approximately 30 to 40 words per question (i.e., **600 to 800 words** in total for your 20 questions).

Task 3: when you indicate the type of variable for each question you will use a minimal number of words.

Task 4: when you indicate the level (scale) of measurement for each question, you will use a minimal number of words.

Task 5: when you describe the type of visualisation for your question, you should allow approximately 25 to 35 words per question (i.e., **500 to 700 words** in total for your 20 questions).

Part B – Collection of Survey Data use approximately **300 to 400 words**.

Therefore, if you follow the above guidelines, your assignment should be no less than 1600 words and no more than 2400 words overall (i.e., 2000 words, plus or minus 20%).

Guideline Two – Response Option Principle

Ensure your questions are constructed such that any possible answer is both:

- a. **Mutually Exclusive** (i.e., the user's response cannot be applied to more than 1 option), and
- b. **Collectively Exhaustive** (i.e., the options provided cover all possible answers).

Guideline Three – Variable Type

When you design your twenty (20) questions, not only do you need to indicate the type of variable that is most appropriate to your question, but you must also adhere to the following minimum

counts for these variables:

- a. 9 **Categorical** questions.
- b. 9 **Numeric** questions, of which at least:
 - i. 3 need to be **Discrete**, and
 - ii. 3 need to be **Continuous**.

Guideline Four – Level (Scale) of Measurement

For each question, you must nominate which of the following **level (scale) of measurement** applies:

- a. Nominal.
- b. Ordinal.
- c. Interval.
- d. Ratio.

Guideline Five – Reference list

In this assignment, you must reference all sources used in your assignment, including words and ideas, facts, images, videos, audio, websites, statistics, diagrams, and data. Although there are many different types and styles of referencing, we recommend that you use the APA7 **method**. To assist you, the University has provided the online guideline [Deakin guide to referencing](#) and the Deakin guide to APA7. There is also a resource called “**Academic Integrity and Referencing Guide**” in the Unit’s “Assessment Task 1” folder in CloudDeakin.

Learning Outcomes

This task allows you to demonstrate your achievement towards the Unit Learning Outcomes (ULOs) which have been aligned to the [Deakin Graduate Learning Outcomes](#) (GLOs). Deakin GLOs describe the knowledge and capabilities graduates acquire and can demonstrate on completion of their course. This assessment task is an important tool in determining your achievement of the ULOs. If you do not demonstrate achievement of the ULOs you will not be successful in this unit. You are advised to familiarise yourself with these ULOs and GLOs as they will inform you on what you are expected to demonstrate for successful completion of this unit.

The learning outcomes that are aligned to this assessment task are:

Unit Learning Outcomes (ULOs)		Graduate Learning Outcomes (GLOs)
ULO 1	Apply the fundamentals of quantitative reasoning to solve real-world problems	GLO1: Discipline knowledge and capabilities: appropriate to the level of study related to a discipline or profession

Submission

Your completed work should be a **single Word** document divided into two sections:

Part A. Survey Questions

Your results should be listed question by question (e.g., for question 1, you will list Tasks 1 to 5).

Part B. Collection of Survey Data

There is no need to have a Table of Contents; an Executive Summary; an Introduction; or a Conclusion. You **must**, however, include a cover page that includes your name and student details and a section containing your references (this section not included in the total word count).

You must submit your assignment in the Assignment Dropbox in the unit CloudDeakin site on or before the due date. When uploading your assignment, name your word document using the following syntax: **<your family name_your given name_your Deakin student ID number_[unitcode].doc (or '.docx')**. For example, 'Jones_Barry_123456789_MIS770.docx'. **Note:** CloudDeakin is the **only** method of submission acceptable.

Submitting a hard copy of this assignment is not required. You must keep a backup copy of every assignment you submit until the marked assignment has been made available to you in CloudDeakin. In the unlikely event that one of your assignments goes missing, you will need to submit your backup copy.

Any work you submit may be checked by electronic or other means for the purposes of detecting collusion and/or plagiarism and for authenticating work.

When you submit an assignment through your CloudDeakin unit site, you will receive an email to your Deakin email address confirming that it has been submitted. You should check that you can see your assignment in the Submissions view of the Assignment Dropbox folder after upload and check for, and keep, the email receipt for the submission.

Marking and Feedback

The marking rubric indicates the assessment criteria for this task. It is available in the CloudDeakin unit site in the Assessment folder, under Assessment Resources. Criteria act as a boundary around the task and help specify what assessors are looking for in your submission. The criteria are drawn from the ULOs and align with the GLOs. You should familiarise yourself with the assessment criteria before completing and submitting this task.

Students who submit their work by the due date will receive their marks and feedback on CloudDeakin 15 working days after the submission date.

Extensions

Extensions can only be granted for exceptional and/or unavoidable circumstances outside of your control. Requests for extensions **must be made prior to 12 noon on the 10th April, 2024 (the submission date) using the online Extension Request form under the Assessment tab on the unit CloudDeakin site.** All requests for extensions should be supported by appropriate evidence (e.g., a medical certificate in the case of ill health).

Applications for extensions after 12 noon on the submission date require University level special

consideration and these applications must be submitted via StudentConnect in your DeakinSync site.

Late Submission Penalties

If you submit an assessment task after the due date without an approved extension or special consideration, 5% will be deducted from the available marks for each day after the due date up to seven days*. Work submitted more than seven days after the due date will not be marked and will receive 0% for the task. The Unit Chair may refuse to accept a late submission where it is unreasonable or impracticable to assess the task after the due date.

*'Day' means calendar day for electronic submissions and working day for paper submissions.

An example of how the calculation of the late penalty based on an assignment being due on a Wednesday at 8:00pm is as follows:

- 1 day late: submitted after Wednesday 11:59pm and before Thursday 11:59pm – 5% penalty.
- 2 days late: submitted after Thursday 11:59pm and before Friday 11:59pm – 10% penalty.
- 3 days late: submitted after Friday 11:59pm and before Saturday 11:59pm – 15% penalty.
- 4 days late: submitted after Saturday 11:59pm and before Sunday 11:59pm – 20% penalty.
- 5 days late: submitted after Sunday 11:59pm and before Monday 11:59pm – 25% penalty.
- 6 days late: submitted after Monday 11:59pm and before Tuesday 11:59pm – 30% penalty.
- 7 days late: submitted after Tuesday 11:59pm and before Wednesday 11:59pm – 35% penalty.

The Dropbox closes the Wednesday after 11:59pm AEST/AEDT time.

Support

The Division of Student Life provides a range of **Study Support** resources and services, available throughout the academic year, including **Writing Mentor** and **Maths Mentor** online drop ins and the **SmartThinking** 24 hour writing feedback service. If you would prefer some more in depth and tailored support, **make an appointment online with a Language and Learning Adviser.**

Referencing and Academic Integrity

Deakin takes academic integrity very seriously. It is important that you (and if a group task, your group) complete your own work in every assessment task. Any material used in this assignment that is not your original work must be acknowledged as such and appropriately referenced. You can find information about referencing (and avoiding breaching academic integrity) and other study support resources at the following website: <http://www.deakin.edu.au/students/study-support>

Your rights and responsibilities as a student

As a student you have both rights and responsibilities. Please refer to the document Your rights and responsibilities as a student in the Unit Guide & Information section in the Content area in the CloudDeakin unit site.

Marking Rubric

	Poor	Needs Improvement	Satisfactory	Good	Very Good	Exemplary
Part A: Develop Survey Questions (Marks: 12) Create survey questions that are aligned with the Scenario	0 points Proposes no valid questions which indicates no comprehension of the task 0 – 3.5 Marks	3.6 points Proposes only a few valid questions that indicate little comprehension of the task 3.6 – 5.9 Marks	6 points Proposes several more satisfactory creative questions that indicates satisfactory comprehension of the task 6 – 7.1 Marks	7.2 points Proposes a reasonably good number of creative questions that indicates a good comprehension of the task 7.2 – 8.3 Marks	8.4 points Proposes many very good creative questions that indicates a deep comprehension of the task 8.4 – 9.5 Marks	12 points Proposes comprehensive creative questions that meets best practice and are grounded in empirical theory. All questions reflect a high level of judgement 9.6 – 12 Marks
Part B: Method of Survey Implementation (Marks: 5) Describe how the Survey is to be conducted and how to select the target audience	0 points Provides no direction as to how the survey might be implemented 0 – 1.4 Marks	1.5 points Provides little direction as to how the survey might be implemented 1.5 – 2.4 Marks	2.5 points Provides acceptable direction as to how the survey might be implemented in a satisfactory manner 2.5 – 2.9 Marks	3 points Provides a good direction as to how the survey might be implemented 3 – 3.4 Marks	3.5 points Provides a detailed and insightful direction as to how the survey might be implemented 3.5 – 3.9 Marks	5 points Provides outstanding detail and insightful direction as to how the survey might be implemented 4 – 5 Marks
Overall Assignment Presentation (Marks: 3)	0 points No attempt has been made to follow assignment particulars. Always uses citations and references incorrectly, inadequately or inconsistently. Poorly presented 0 – 0.8 Marks	0.9 points Little attempt has been made to follow assignment particulars. Often uses citations and references incorrectly, inadequately or inconsistently. Unsatisfactorily presented 0.9 – 1.4 Marks	1.5 point Most of the assignment particulars have been followed. Generally, the use of citations and references has been made correctly. Satisfactorily presented 1.5 – 1.7 Marks	1.8 point Majority of the assignment particulars have been followed. Mostly uses citations and references correctly and as required. Good presentation 1.8– 2.0 Marks	2.1 points All of the assignment particulars have been followed. Frequently uses citations and is skilled in using referencing correctly. Very good presentation 2.1 – 2.3 Marks	3 points All of the assignment particulars have been dealt with meticulously. Expertly uses citations and is skilled in using referencing correctly. Faultless assignment presentation 2.4 – 3 Marks