



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 1 Digital Technologies 2025

92006 Demonstrate understanding of usability in human-computer interfaces

Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of usability in human-computer interfaces.	Examine the usability of human-computer interfaces.	Evaluate the usability of human-computer interfaces.

Complete ALL parts of this examination.

You should aim to write no more than **1200 words** in total.

INSTRUCTIONS

The task in this assessment is in five parts:

- Part A – Short-answer questions
- Part B – Identifying usability principles
- Part C – Interface you have studied
- Part D – Scenario questions
- Part E – Real-world examples.

In Part D, you are required to discuss the application of usability principles in the development of a phone app (scenario A) or examples of the incorporation of usability principles into the design of a new website (scenario B).

In Part E, you may play, pause, and restart the videos as often as you like.

Note: the videos have no sound.

Read all parts of the examination before you begin writing.

Usability principles can refer to any of the following:

RESOURCE A: Mātāpono Māori

Mātāpono Māori relevant to usability could include the following aspects:

- The clear and accurate use of te reo Māori (including tohutō/macrons) within the interface.
- Whether tools such as spell-checking and word prediction work accurately with te reo Māori.
- Manaakitanga – the interface is welcoming and respectful of users.
- Rangatiratanga – users have control over the interface.
- Whanaungatanga – the interface design fosters connections and relationships.

RESOURCE B: Nielsen's 10 usability heuristics

'Usability heuristics' are general principles or 'rules of thumb' to help measure the effectiveness of a user interface. You will be familiar with Jakob Nielsen's 10 usability heuristics listed below.

1. Visibility of the system's status



10. Help and documentation

Source (adapted): Nielsen, J. (1994, updated 2020), 10 usability heuristics for user interface design. Nielsen Norman Group. <https://www.nngroup.com/articles/ten-usability-heuristics/>

RESOURCE C: Usability concepts

- Internal and external consistency
- Accessibility.

PART A – Short-answer questions

Table 1: Nielsen’s usability principles

Number	Description of usability principle
1	The interface should take into account the diverse range of people who might be using it and enable all users to achieve their goal.
2	The interface should always keep users informed about what is going on, through appropriate feedback within a reasonable time.
3	The interface should reduce unnecessary elements and simplify the layout.
4	Users should be able to undo actions if they make a mistake.
5	The importance of providing clear assistance and guidance to users whenever they need it.
6	The interface design should prevent users from making a mistake in the first place.

- (a) Using Table 1 above, complete the boxes below by entering the number of the description that correctly matches each usability principle. One of these has been completed for you.

Aesthetics and minimalist design	3		Visibility of system status	
Error prevention			Accessibility	

- (b) Give a definition and example of Nielsen's heuristic 'Match between the system and the real world'.

- (c) One example of using mātāpono Māori is observing the correct use of tohutō/macrons and spelling of Māori words. What is another way mātāpono Māori has been incorporated into an interface you have studied?

[illegible]

PART B – Identifying usability principles

- (a) Identify and describe TWO usability principles that can be seen in the image below.



Source: <https://makodesign.co.nz/collections/necklaces-and-sets>

Usability principle 1:

Description:

Usability principle 2:

Description:

- (b) Identify and describe TWO usability principles, **different from those identified in (a) above**, that can be seen in the image below.



Source: <https://www.jbhifi.co.nz/search?query=PS5>

Usability principle 1:

Description:

Usability principle 2:

Description:

PART C – Interface you have studied

In your response to part C, refer to an interface you have studied this year.

Name of your interface:

Describe the purpose of this interface:

Explain how effectively two usability principles were applied in your chosen interface, **and** how they enabled the interface to achieve its purpose.

Usability principle (1)

Usability principle (2)

PART D – Scenario questions

Choose ONE of the following scenarios and type your response in the box provided.

In your response, do not repeat material used in earlier questions.

EITHER

- (a) Imagine you are designing a phone app for students to track their NCEA credits. How would you use usability principles to create an interface that meets their needs? Discuss at least TWO usability principles you would consider, and how you would implement them.

OR

- (b) Imagine you are designing a website for a New Zealand artist who wants to promote and sell their work. They are passionate about promoting the Māori language and culture through their work. Discuss at least TWO practical examples of incorporating usability principles to ensure the interface effectively meets the needs of the artist and the end users.

Scenario chosen:

☐ (a)

OR

☐ (b)

Write your answer here.

PART E – Real-world examples

Watch the two videos below before answering the questions that follow. The videos show the user using two different websites. On each, they set up an account and then search for an item to purchase. They add an item to the shopping cart and then remove it in each interface.

Note: the videos have no sound. Each video can be enlarged by clicking the full-screen icon in the bottom-left corner of the window, and returned to the original size by clicking the same icon at the end of the video. The videos may be viewed as many times as you like.

Video 1: Māori by Design



Source: <https://www.maoribydesign.co.nz/>

Video 2: The Warehouse



Source: <https://www.thewarehouse.co.nz/>

- (a) Compare the usability of BOTH real-world examples. Which of the two websites is the most effective in enabling the user to achieve their purpose? Justify your choice by discussing THREE usability principles.

In the box below, enter the name of the website you believe to be the most effective.

Discuss your first usability principle in the box below.

Discuss your second usability principle in the box below.

Discuss your third usability principle in the box below.

- (b) Suggest TWO improvements for enhancing the usability of ONE interface from either of the videos above. Justify your suggestions by referring to usability principles.

Improvement 1:

Improvement 2: