



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 1 Digital Technologies 2024

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 the assessment task in this document.

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 – Matching question
- Part C – Interface you have studied
- Part D – Scenario questions
- Part E – Real-world examples.

In Part D, you are required to discuss the usability of the interfaces in terms of *mātāpono* Māori (Resource A) or the usability heuristics (Resource 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 task 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 accurate and clear use of te reo Māori (including macrons) within the interface
- whether tools such as spell-checking and word prediction work accurately with te reo Māori
- how the interface facilitates and allows for the expression and use of tikanga and mātauranga Māori.

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

- (i) What does accessibility refer to when applied to human-computer interfaces?

- (ii) Give a definition **and** example of Nielsen's heuristic 'Error prevention'.

- (iii) Identify and describe one usability principle that can be seen on the image below.



Source: <https://www.eventcinemas.co.nz/cinebuzz/landing>

Usability principle:

Description:

- (iv) The image below has been reproduced with labels numbered 1, 2, and 3. At each of these numbers, one or more of Nielsen's usability heuristics can be observed. Refer to Resource B for a full list of usability heuristics.



Source: <https://www.spotify.com/>

1. Which heuristic(s) can be seen at number 1?

2. Which heuristic(s) can be seen at number 2?

3. Which heuristic(s) can be seen at number 3?

- (v) Why should usability principles be considered and applied to human-computer interfaces?

PART B – Matching question

In this question, match Nielsen's usability principles with their description.

Number	Description of usability principle
1	All interface elements should be consistent within the website or application.
2	The interface should follow common practices followed on websites.
3	The interface should reduce unnecessary elements and simplify the layout.
4	The interface should always keep users informed about what is going on, through appropriate feedback within a reasonable time.
5	A message showing that the level of stock is low.
6	The importance of providing clear assistance and guidance to users whenever they need it.

In the table below, enter the number of the description that correctly matches each usability principle. One of these has been completed for you.

Aesthetic and minimalist design	3		Visibility of system status	
Consistency and standards			Help and documentation	

PART C – Interface you have studied

In the following question you will refer to an interface you have studied.

Name of your interface:

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

Usability principle (1):

Usability principle (2):

PART D – Scenario questions

Choose ONE of the following scenarios and write your answer in the box provided.

- (a) The school website needs updating. Discuss ways of incorporating Māori principles, such as integrating te reo Māori and honouring tikanga Māori, into the update of the website and its content. Discuss at least two practical examples of applying Māori usability principles to ensure the interface effectively serves the needs of the whole school community.

OR

- (b) Imagine you are developing a program for students to use in the library to reserve laptops. How would you apply usability principles to create an interface that meets their needs? Discuss at least two Nielsen's usability principles you would consider, and how you would implement them.

Scenario chosen:

☐ (a)

OR

☐ (b)

PART E – Real-world examples

- (i) Compare the usability of BOTH real-world examples below in terms of usability heuristics. The videos below show the user setting up an account on two different websites. Discuss **at least two** usability principles in your answer.

Video 1: Noku



Source: <https://noku.co.nz>

Video 2: Air New Zealand



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

- (ii) Compare the usability of BOTH real-world examples below in terms of usability heuristics. The videos show the user adding and removing an item from a playlist on two different websites. Discuss **at least two** usability principles in your answer.

Video 3: Spotify



Source: <https://www.spotify.com/>

Video 4: Other playlist



Source: <https://music.youtube.com/>

- (iii) Suggest improvements for enhancing the usability of ONE interface from any of the four videos above. Justify your suggestions by referring to usability principles.