

**Assessment Schedule – 2024****Digital Technologies: Demonstrate understanding of usability in human-computer interfaces (92006)****Assessment Criteria**

<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
<i>Demonstrate understanding of usability in human-computer interfaces involves:</i> <ul style="list-style-type: none"> <li>describing the purpose of human-computer interfaces</li> <li>describing usability principles and their use in human-computer interfaces.</li> </ul>	<i>Examine the usability of human-computer interfaces involves:</i> <ul style="list-style-type: none"> <li>explaining how usability principles have been applied in human-computer interfaces</li> <li>explaining the usability of human-computer interfaces in terms of usability principles.</li> </ul>	<i>Evaluate the usability of human-computer interfaces involves:</i> <ul style="list-style-type: none"> <li>comparing the usability of human-computer interfaces</li> <li>applying usability principles to suggest improvements to human-computer interface usability.</li> </ul>

**Cut Scores**

<b>Not Achieved</b>	<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
0–2	3–4	5–6	7–8

## Evidence

N1	N2	A3	A4	M5	M6	E7	E8
<p><b>Partially describes</b> what accessibility refers to when applied to human-computer interfaces.</p> <p><b>Attempts to define</b> and give an example of 'Error prevention', OR gives an example without defining.</p> <p><b>Identifies, without description</b>, a usability principle from the Cinebuzz interface.</p> <p><b>Identifies</b> one or fewer usability heuristics from the Spotify interface.</p> <p><b>Partially describes</b> why usability principles should be considered and applied to human-computer interfaces.</p> <p><b>Matches</b> one usability principle (or none) with its description.</p>	<p>Partially describes what accessibility refers to when applied to human-computer interfaces.</p> <p>Attempts to define and give an example of 'Error prevention', OR gives an example without defining.</p> <p>Identifies, without description, a usability principle from the Cinebuzz interface.</p> <p>Identifies one or fewer usability heuristics from the Spotify interface.</p> <p>Partially describes why usability principles should be considered and applied to human-computer interfaces.</p> <p>Matches one usability principle (or none) with its description.</p>	<p>Partially describes what accessibility refers to when applied to human-computer interfaces.</p> <p><b>Gives a definition</b> and / or example of 'Error prevention'.</p> <p><b>Identifies and describes</b> a usability principle from the Cinebuzz interface.</p> <p>Identifies THREE suitable usability heuristics from the Spotify interface.</p> <p><b>Partially describes</b> why usability principles should be considered and applied to human-computer interfaces.</p> <p>Matches TWO usability principles with their descriptions.</p> <p>Some parts of the descriptions may be partial or weak.</p>	<p><b>Describes</b> what accessibility refers to when applied to human-computer interfaces – <b>easily accessed / understood</b>, and <b>used by people with diverse abilities</b>.</p> <p>Gives a <b>definition</b> and <b>example</b> of 'Error prevention'.</p> <p>Identifies and describes a usability principle from the Cinebuzz interface.</p> <p>Identifies at least THREE suitable usability heuristics from the Spotify interface.</p> <p><b>Describes</b> why usability principles should be considered and applied to human-computer interfaces.</p> <p>Matches THREE usability principles with their descriptions.</p>	<p><b>Explains</b> how TWO usability principles were implemented in their chosen interface.</p> <p><b>Discusses</b> at least TWO usability principles and how they could be implemented into the library laptop scenario.</p> <p>OR</p> <p><b>Discusses</b> at least TWO practical examples of applying Māori usability principles to the school website scenario.</p> <p>Some aspects of the explanation and discussion may be partial or weak.</p>	<p><b>Clearly explains</b> how TWO usability principles were implemented in their chosen interface.</p> <p>Discusses at least TWO usability principles and how they could be implemented into the library laptop scenario.</p> <p>OR</p> <p>Discusses at least TWO practical examples of applying Māori usability principles to the school website scenario.</p>	<p><b>Compares the usability</b> of TWO interfaces in <b>either</b> the setting up an account or playlist examples, explaining how one is more successful overall in applying usability principles.</p> <p><b>Recommends</b> TWO improvements to one of the interfaces, explaining how these would enable the interface to better address usability principles.</p> <p>Some aspects of the comparison and recommendations may be partial or weak.</p>	<p>Compares the usability of interfaces in BOTH examples, explaining how one is more successful overall in applying usability principles.</p> <p>Recommends TWO improvements to one of the interfaces, explaining how these would enable the interface to better address usability principles.</p>

**Sample Evidence**

Part	Achievement	Achievement with Merit	Achievement with Excellence
<p>A</p> <p>(i)</p> <p>(ii)</p> <p>(iii)</p> <p>(iv)</p> <p>(v)</p>	<p>The candidate identifies and defines usability principles. For example:</p> <p>Accessibility means designing a human-computer interface so that everyone can easily view it, understand it, and use it as intended. This could include avoiding small fonts to cater for users with eyesight issues or including multiple language versions of the interface.</p> <p>‘Error prevention’ means designing the human-computer interface so that it prevents any errors happening in the first place. An example of this would be a calendar for selecting dates for a booking, with invalid dates greyed out and unable to be selected.</p> <p>Flexibility and efficiency of use is seen by the ‘Remember selection’ option. This makes the interface efficient and easier to use, as users would not need to re-select their region each time they visit the website.</p> <p>Match between the system and the real world is seen by the red heart by the ‘Favourite cinema’ heading. The use of the heart icon and the colour red make it intuitive for the user to know what they are clicking on, as in the real world, red hearts are associated with love.</p> <p>1. Consistency and standards OR Aesthetic and minimalist design OR Flexibility OR Match OR User control and freedom.</p> <p>2. Match between the system and the real world OR Recognition over recall OR Aesthetic and minimalist design OR Consistency.</p> <p>3. Consistency and standards OR User control and freedom OR Flexibility.</p> <p>Usability principles should be applied to human-computer interfaces in order to make it easier for users to achieve what they want to do when using the interface. If an interface is difficult to use, users could get the wrong results, or could get frustrated and leave.</p> <p><b>Keywords:</b></p> <ul style="list-style-type: none"> <li>• Usability</li> <li>• User experience</li> <li>• User satisfaction</li> <li>• Productivity</li> <li>• Accessibility</li> <li>• Errors</li> <li>• Efficiency</li> <li>• Navigation</li> <li>• Feedback.</li> </ul>		

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B	<p>The candidate successfully matches at least TWO of the usability principles with their definitions:</p> <p>Visibility of system status: 4</p> <p>Consistency and standards: 2 or 1</p> <p>Help and documentation: 6.</p>		
C		<p>The candidate identifies two usability principles in an interface they have studied and explains how effectively they were implemented. For example:</p> <p>Usability principle (1): Aesthetic and minimalist design</p> <p>The interface implements the usability heuristic 'Aesthetic and minimalist design' effectively. It does this by having a simple, uncluttered design with plenty of white space and no unnecessary content on the page. This means the user is less likely to be overwhelmed by content and it is therefore easy for them to find what they are looking for. In the navigation bar, options are grouped logically under drop-down menus, meaning there are fewer links in the navigation bar to confuse the user. On the search results page, each result only has a single image, the name of the item, and its price. This means users can easily see what they have found without being overwhelmed, and if they want to know more they can just click on the result.</p> <p>Usability principle: Mātāpono Māori</p> <p>The interface implements mātāpono Māori effectively. Te reo Māori has been used accurately throughout the website, with correct macrons. When signing up for an account, users can identify their iwi, showing that the business cares about their Māori heritage. Additionally, when selecting their iwi, as the user types the name, a list of options is filtered further with each keystroke, enabling users to quickly find their iwi. Finally, the interface implements mātāpono Māori well in the search bar, as when users search for an item in te reo Māori instead of English, they still get the same results. For example, searching for kete and basket both return the same items on the results page. This makes it easier for Māori users to find what they are searching for.</p>	

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D		<p>The candidate selects a scenario and discusses how they could implement at least TWO usability principles into the chosen interface. For example:</p> <p>Scenario (a) – school website</p> <p>Including the use of te reo Māori throughout the school website, with links in both English and Māori, would give mana to the language, as well as supporting those who want to use it but are not as confident with it. The school could also have a fully Māori version of the website for those who are fluent and / or have Māori as their first language. This gives further mana to the language. Including a history of the school and its people is whanaungatanga, enabling the school to build closer relationships with people in the community by finding common connections.</p> <p>OR</p> <p>Scenario (b) – laptop reservation program</p> <p>The program's interface should follow the 'Aesethics and minimalist design' principle, and therefore be uncluttered and only contain relevant information, making it easier for students to use. When selecting the time / day to reserve the laptop, the interface should use a calendar, as this will be consistent with other websites or applications (following the 'Consistency and standards' principle), and the application could grey out invalid times ('Error prevention').</p> <p><b>Note:</b> If a candidate uses a combination of explaining User Heuristics and Māori usability principles, this is acceptable.</p>	

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E			<p>The candidate compares the same tasks being completed on two different interfaces, in terms of usability. For example:</p> <p>Noku vs Air New Zealand</p> <p>When the user enters their address, the Air New Zealand website uses 'Recognition rather than recall' to make it easier for the user. As the user types their address, a dropdown list of possible addresses appears, enabling the user to quickly select theirs. This is better than Noku, which makes the user type in each part of their address in a different field. Air New Zealand's website is easier to use and also reduces the chance of an error from a user mistyping their address, better following the 'Error prevention' heuristic. The Air New Zealand interface also supports Mātāpono Māori better, enabling users to enter macrons if necessary. It follows the 'Help and documentation' heuristic well, as it clearly explains to the user how to enter the macrons.</p> <p>Neither website informs the user of any minimum requirements for the password complexity, and both only require the user to enter their password once, which is poor use of 'Error prevention'.</p> <p>Spotify vs Other playlist</p> <p>Both interfaces make good use of 'Consistency and standards', with the 'three dots' icon enabling users to easily access a menu of options for each song. They both also use 'Match between the system and real world' effectively, as they use icons such as a house for Home and a magnifying glass for Search. However, the Other Playlist is slightly better, as it uses more icons, like the compass for Explore. The Spotify interface makes use of 'Flexibility and efficiency of use' in the 'three dots' menu, as users can select to create a new playlist with the selected song in it. This is faster than the Other Playlist, as in that one, users have to create the playlist before they select and add the song. Another reason Spotify is better is that it allows users to add images to their playlists, enabling them to recognise them more easily in a long list of playlist titles, which follows 'Recognition rather than recall'.</p>
(i)			
(ii)			
(iii)			<p>The candidate suggests improvements to ONE interface from either (i) or (ii), justifying by referring to usability principles. For example:</p> <p>The Noku website should have two fields for entering the password, making the user enter it twice. This is better 'Error prevention', as currently if the user enters their password incorrectly, they won't know until they try to login later on. Another improvement could be giving the input fields a red border when something is entered but not correct, such as an invalid email format, with the border turning green when the information entered is valid. This 'Match between the system and the real world' will help the user, as they will understand that red indicates that something is wrong, and that green means it is now correct. This improves 'Visibility of system status' for the user.</p>