Exploring Tikanga and mātauranga Māori

This worksheet asks questions about the CS Field Guide section on [Usability principles relating to mātāpono Māori](https://www.csfieldguide.org.nz/en/chapters/human-computer-interaction/m%C4%81t%C4%81pono-m%C4%81ori/#tikanga-and-matauranga-maori), and the article by Te Taka Keegan, (2017). [Māori language interfaces](https://drive.google.com/file/d/1c2Twe_AKuXrbR1bQQICWSHolByiL3Qu6/view).

As you work through this worksheet, highlight the correct answer or write a sentence or two of your own to the short answer sections.

It may also be useful to use a text to speech tool such as [Read Aloud](https://chromewebstore.google.com/detail/read-aloud-a-text-to-spee/hdhinadidafjejdhmfkjgnolgimiaplp?hl=en), this is especially true of neurodiverse students. Please note that this software has some issues pronouncing Māori words which itself could be failing in some aspects of Mātauranga Māori.

# Step 2.1: Defining important terms

First check out the first section of the [CS Field Guide](https://www.csfieldguide.org.nz/en/chapters/human-computer-interaction/m%C4%81t%C4%81pono-m%C4%81ori/#tikanga-and-matauranga-maori) defines a few terms that are important for understanding the Māori terms related to the mātauranga Māori. Read the CS Field Guides definitions and then try to reword them in your own way. It may be useful to google other definitions of these terms to broaden your understanding.

| **Māori term** | **CS Field Guide Definition** | **My Definition** |
| --- | --- | --- |
| **Manaakitanga** | Which is based on the word “mana” - upholding a person’s mana, or showing respect for them. |  |
| **Rangatiratanga** | The right to exercise authority and self determination. |  |
| **Whanaungatanga** | Building relationships with people, which usually starts with finding common connections through places and people. |  |
| **Kaitiakitanga** | Which is guardianship and protection of the resources entrusted to you. |  |

After you have compiled your own definitions you may want to share these as a class and practise some manaakitanga to broaden your own and others understanding.

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# Step 2.2: CS Field Guide Questions

Read each section of the [Field Guide on 4.5](https://www.csfieldguide.org.nz/en/chapters/human-computer-interaction/m%C4%81t%C4%81pono-m%C4%81ori/#tikanga-and-matauranga-maori) Usability principles relating to mātāpono Māori and answer the following questions.

## Section 4.5.1 Tikanga and mātauranga Māori

### **Multiple Choice Questions**

1. **What is manaakitanga primarily about?**
   * A) Upholding authority and self-determination
   * B) Showing empathy and compassion for others
   * C) Upholding a person’s mana and showing respect for them
   * D) Guardianship and protection of resources
2. **Which principle directly relates to rangatiratanga in the context of HCI?**
   * A) User control and freedom
   * B) User engagement and satisfaction
   * C) User interaction and feedback
   * D) User error prevention and correction
3. **Whanaungatanga in interface design emphasizes the importance of:**
   * A) Respecting the user's autonomy
   * B) Building relationships with users and finding common connections
   * C) Ensuring users do not make mistakes
   * D) Protecting user data
4. **According to the text, a good interface should:**
   * A) Focus solely on preventing user errors
   * B) Raise a person’s mana by helping them achieve their goals
   * C) Limit user control to avoid mistakes
   * D) Be complex to challenge the user
5. **In the context of software development, the role of a developer as a kaitiaki involves:**
   * A) Focusing only on the technical aspects of the software
   * B) Understanding every single user in detail
   * C) Valuing users and ensuring updates are in their best interests
   * D) Designing software that limits user freedom for safety

### **Short Answer Questions**

1. **Explain the concept of manaakitanga and its importance in interface design.**
2. **How does rangatiratanga relate to the principle of “user control and freedom” in HCI?**
3. **Why is whanaungatanga important when designing user interfaces? Provide an example.**
4. **Describe the role of a software developer as a kaitiaki. Why is this role significant?**
5. **What are some questions developers should ask themselves to show aroha when designing an interface?**

### **True/False Questions**

1. **True or False: Manaakitanga is about building relationships with people by finding common connections.**
2. **True or False: A key aspect of rangatiratanga in HCI is ensuring users have control over their actions and can undo mistakes.**
3. **True or False: Aroha involves understanding the user's environment, goals, and constraints.**
4. **True or False: The concept of kaitiakitanga in software development means developers should update software without considering user feedback.**
5. **True or False: Whanaungatanga is less relevant in interface design compared to other Māori values mentioned.**

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## Section 4.5.2 Use of te reo Māori

### **Multiple Choice Questions**

1. **Why is it important for a system to speak the user's language?**
   * A) To avoid technical jargon
   * B) To ensure the user can use the system comfortably and effectively
   * C) To reduce system complexity
   * D) To increase system security
2. **What was the result when users interacted with a system in te reo Māori according to the study mentioned?**
   * A) They made fewer usage requests
   * B) They found the system harder to use
   * C) They made 21% more usage requests and made better use of the system
   * D) They chose not to use the system
3. **What feature does BNZ offer in their online banking to support learners of te reo Māori?**
   * A) A full immersion version
   * B) Terms in both languages for learning
   * C) A simplified version in English
   * D) Financial advice in te reo Māori
4. **Why can't translations for interface elements be done by simple word substitution?**
   * A) Dictionaries are not accurate enough
   * B) Translations may vary based on context and can be ambiguous
   * C) Users prefer English terms
   * D) It is too time-consuming
5. **What is the significance of tohutō (macrons) in te reo Māori?**
   * A) They add aesthetic value to the text
   * B) They indicate pronunciation and differentiate words
   * C) They are optional characters
   * D) They simplify the language

### **Short Answer Questions**

1. **Explain how the use of language in an interface affects its usability for users with te reo Māori as their first language.**
2. **Describe one way a system can support learners of te reo Māori in using the interface.**
3. **What are some challenges associated with translating technical terms for an interface?**
4. **Why is it important for an interface to support the character set of the user’s language, specifically with regard to tohutō in te reo Māori?**
5. **How can spelling correction features negatively impact the user experience for those typing in te reo Māori?**

### **True/False Questions**

1. **True or False: Translating an interface only involves changing the surface elements like menus and buttons.**
2. **True or False: Using double vowels instead of macrons in te reo Māori was originally due to technical limitations of early computers.**
3. **True or False: It is universally accepted in New Zealand that double vowels should be used instead of macrons for te reo Māori.**
4. **True or False: Having incorrect spellings of names due to character limitations in an interface can be insulting to users.**
5. **True or False: URLs can easily support tohutō without any additional security risks.**

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## Section 4.5.3 Avoiding cultural appropriation

### **Multiple Choice Questions**

1. **Why is it important to follow appropriate tikanga (rules and processes) when using cultural imagery and text?**
   * A) To enhance the aesthetic appeal of the interface
   * B) To ensure respect and proper representation of the culture
   * C) To meet legal copyright requirements
   * D) To increase user engagement
2. **What should you look for when evaluating an interface that uses cultural symbolism or language?**
   * A) The visual appeal of the imagery
   * B) Whether the imagery matches the color scheme of the site
   * C) An explanation that reflects consultation with the cultural group
   * D) The cost of obtaining the imagery

### **Short Answer Questions**

1. **Explain why the phrase "Kia ora mate" was problematic in a campaign by a soft drink company.**
2. **Describe the approach Air New Zealand takes in using the koru in their recruitment material. Why is this considered appropriate?**

### **True/False Questions**

1. **True or False: Using cultural imagery without understanding its significance can be disrespectful.**
2. **True or False: It is sufficient to consider copyright alone when using cultural imagery and text.**

Step 2.3 Māori language interfaces

In the realm of software design, language choices profoundly impact usability. While convention often favours English interfaces, [this paper](https://drive.google.com/file/d/1c2Twe_AKuXrbR1bQQICWSHolByiL3Qu6/view?usp=sharing) delves into the implications of offering interfaces in te reo Māori. By exploring the intersection of usability and linguistic diversity, it advocates for the integration of Māori language in software interfaces as a crucial step in safeguarding its vitality and relevance for future generations.

## Step 2.3.1 Introduction

### **Multiple Choice Questions**

1. **What is the primary basis for making language decisions for a software interface?**
   * A) The preferences of the software engineer
   * B) The target audience and usability of the interface
   * C) The complexity of the programming language
   * D) The availability of translation tools
2. **Why is it important for te reo Māori to be used in modern technologies according to the text?**
   * A) To increase the software's market value
   * B) To ensure the survival and relevance of the Māori language
   * C) To simplify the software development process
   * D) To compete with other languages like Spanish and French

### **Short Answer Questions**

1. **Explain why the language displayed in software text boxes is critical to usability.**
2. **What is the significance of younger generations in the survival of the Māori language as mentioned in the text?**

### **True/False Questions**

1. **True or False: From a computational perspective, a software interface can only be effectively programmed in English.**
2. **True or False: Studies have shown that interfaces are easier to use in te reo Māori than in other languages.**
3. **True or False: The text suggests that making te reo Māori available in modern technologies is a key factor in its survival.**

## Step 2.3.2 Historic Māori language interfaces

### **Multiple Choice Questions**

1. **When did the first computer interfaces in te reo Māori appear?**
   * A) More than 50 years ago
   * B) In the early 2000s
   * C) More than 30 years ago
   * D) In the 1990s
2. **What was Te Kete Pūmanawa?**
   * A) A training system for Māori language teachers
   * B) A software suite with an interface entirely in te reo Māori
   * C) A bilingual computer operating system
   * D) A hardware system for educational purposes

### **Short Answer Questions**

1. **Name one of the early Māori language interfaces mentioned in the text and briefly describe its purpose.**
2. **Why is there limited information on the actual usage of early Māori language interfaces according to the text?**

### **True/False Questions**

1. **True or False: The Kōhanga Reo National Trust developed a bilingual Māori language training system in 1986.**
2. **True or False: The NZCER set up a bulletin board in 1990 with all menu items and messages in both English and te reo Māori.**

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## Step 2.3.3 Microsoft software in te reo Māori

### **Multiple Choice Questions**

1. **When did Microsoft first release versions of Windows and Office with te reo Māori interface options?**
   * A) 2000
   * B) 2005
   * C) 2010
   * D) 2015
2. **What was a major barrier to the usage of Microsoft products in te reo Māori in Māori medium schools according to the 2012 survey?**
   * A) High cost of the software
   * B) Lack of technical support
   * C) Inability to access the interface and lack of awareness that it existed
   * D) Poor software performance

### **Short Answer Questions**

1. **How many words and strings were involved in the translation of Microsoft Windows and Office into te reo Māori?**
2. **What percentage of Māori medium schools were using Microsoft products in te reo Māori, and what were the main reasons for the low usage?**

### **True/False Questions**

1. **True or False: Microsoft has only translated Windows XP and Office 2003 into te reo Māori.**
2. **True or False: The survey found that almost all Māori medium schools agreed that software should be available in te reo Māori and emphasized the importance of it being user-friendly.**

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## Step 2.3.4 Two Degrees smart phones in te reo Māori

### **Multiple Choice Questions**

1. **When did Two Degrees launch the Huawei IDEOS X3 with a bilingual interface?**
   * A) 2010
   * B) 2011
   * C) 2012
   * D) 2013
2. **What was the primary reason given by participants in the usability study for preferring to use the Māori interface on the IDEOS X3 phone?**
   * A) It was easier to use
   * B) It had more features
   * C) It promoted and supported the Māori language
   * D) It had better performance

### **Short Answer Questions**

1. **Describe the results of the usability study conducted on the IDEOS X3 phone regarding participants' awareness of the phone and their experience using it.**
2. **Why did three-quarters of the participants in the usability study express a preference for using the interface in Māori?**

### **True/False Questions**

1. **True or False: The Huawei IDEOS X3 was launched with a bilingual interface in 2017.**
2. **True or False: All participants in the usability study found the English interface to be quicker and easier to use than the Māori interface.**

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## Step 2.3.5 3M library kiosks in te reo Māori

### **Multiple Choice Questions**

1. **Since when has 3M New Zealand been using an interface option for te reo Māori in their library SelfCheckTM machines?**
   * A) 2003
   * B) 2010
   * C) 2013
   * D) 2016
2. **What was the main feedback from the brief usability study conducted on the 3M library kiosks in 2013?**
   * A) The interface was easy to understand in both languages
   * B) The interface lacked essential features
   * C) Participants found the Māori interface difficult due to unfamiliar words
   * D) Participants preferred the English interface because it was faster

### **Short Answer Questions**

1. **Describe the participants' feedback regarding their experience using the 3M library kiosks with the te reo Māori interface.**
2. **What was the participants' overall preference regarding the language of the interface, despite finding it difficult to understand in Māori?**

### **True/False Questions**

1. **True or False: The 3M library kiosks were first introduced with a te reo Māori interface in 2013.**
2. **True or False: All participants in the usability study found the te reo Māori interface easier to use than the English interface.**

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## Step 2.3.6 Other interfaces in te reo Māori

### **Multiple Choice Questions**

1. **Which company has translated their web search page into Māori and made available their translator toolkit for te reo Māori?**
   * A) Microsoft
   * B) Apple
   * C) Google
   * D) Amazon
2. **Since when have the ATM terminals at BNZ banks had a Māori language option?**
   * A) 2005
   * B) 2007
   * C) 2010
   * D) 2015

### **Short Answer Questions**

1. **Name two companies besides Google that have adopted a Māori language interface for their technology according to the text.**
2. **What is one example provided in the text of Māori language usage in the video game industry?**

### **True/False Questions**

1. **True or False: ANZ was the first bank to introduce a Māori language option for ATM terminals in 2016.**
2. **True or False: According to the text, there are more smart phone apps with Māori language interfaces available on Google Play than on Apple's App Store.**

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## Step 2.3.7 Authors Comments

### **Multiple Choice Questions**

1. **What is one of the main reasons highlighted in the text for creating Māori language interfaces despite their difficulty of use?**
   * A) Economic benefits for businesses
   * B) Necessity for all speakers of te reo Māori
   * C) Users' excitement and pride in seeing Māori language interfaces
   * D) Availability of alternative bilingual interfaces
2. **According to the text, what strategies could be used to encourage the usage of Māori language interfaces?**
   * A) Translation tools and language courses
   * B) Default language settings and financial incentives
   * C) Nudge Theory and Active Offer
   * D) Marketing campaigns and celebrity endorsements

### **Short Answer Questions**

1. **What challenges do Māori language interfaces face in terms of usability according to the text, and how do users respond to these challenges?**
2. **Explain why the development and usage of Māori language interfaces are considered crucial for the future survival of te reo Māori.**

### **True/False Questions**

1. **True or False: The text suggests that there is no economic benefit for businesses in creating Māori language interfaces.**
2. **True or False: All speakers of te reo Māori are bilingual and proficient in English, so a Māori language interface is unnecessary according to the text.**