

# CTDT Human Computer Interactions (HCI) Evaluation (EMP16)

## Facilitation Notes:

### Purpose

These notes are intended to support teachers and leaders facilitate the pīkau *CTDT Human Computer Interactions (HCI) Evaluation (EMP16)* to a group of teachers, for example, in a staff meeting.

### Pre-requisites

This pīkau can be used in isolation, but there is some scene-setting material in pīkau 09 (“Getting programs right: the end-user, and fast algorithms?”), so it can be helpful to have covered pīkau 09 first.

### Preparation

Complete the pīkau yourself.

Ask participants to bring their laptops if you would like them to work through the quiz in pairs rather than as a whole group

#### **Related pīkau:**

Pīkau 09: *Getting programs right: the end-user, and fast algorithms*

### Facilitation notes

These are arranged in the order that the content appears in the pīkau.

Access to a data projector or shared screen and speakers to present the pīkau is recommended.

We strongly encourage showing each video on every page.

Estimated time: 46 minutes

Section	Facilitation notes
<p>Introduction and What you'll learn</p> <p>Time: 1 minute</p>	<p>The key points of this section are that you will learn:</p> <ul style="list-style-type: none"> <li>● how to teach students about HCI</li> <li>● the value of designing good interfaces for people to use</li> <li>● there are processes that can enable us to design good systems</li> </ul>
<p>Why this matters...</p> <p>Time: 1 minute</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● HCI is an important consideration when writing programs.</li> <li>● We want our students to be able to write good, 'user friendly', programs by being aware of the needs of the end-user.</li> </ul>
<p>Links to existing knowledge</p> <p>Time: 1 minute</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● Good evaluation and design of interfaces can reduce difficulties in using software.</li> <li>● When students focus on getting programs working, they often overlook making it usable.</li> </ul>
<p>Bad interfaces are everywhere</p> <p>Time: 13 minutes</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● There are many examples of confusing interfaces on digital systems. Students need to become sensitive to recognising when it is the fault of the programmer rather than the user</li> <li>● Students need to write programs in a way that's mindful of the user.</li> <li>● HCI appears explicitly in CT for DT progress outcomes 4, 5, 6, and 8.</li> </ul>
<p>How can you evaluate an interface?</p> <p>Time: 11 minutes</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● Knowing how to evaluate an interface is useful both for critiquing someone else's interface and when writing your own program</li> <li>● The 'Think aloud' protocol, HCI heuristics, and understanding how humans function in everyday life are important things to consider when writing programs.</li> </ul>
<p>Heuristics for evaluating interfaces</p>	<p>The key point of this section is:</p> <ul style="list-style-type: none"> <li>● There are sets of heuristics that can be used with students for evaluating interfaces.</li> <li>● (Note that the term "heuristic" also comes up in the study of algorithms; this is a different</li> </ul>

<p>Time: 10 minutes</p>	<p>topic, although the general meaning of heuristic in both cases is following a “rule of thumb”. Because it may be a new term for some teachers, they might confuse the two contexts.)</p>
<p>Interfaces in everyday life</p> <p>Time: 5 minutes</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● Interfaces are all around us.</li> <li>● Some interfaces are more helpful than others.</li> </ul> <p>Lead a discussion around examples of different interfaces experienced in the group. Examples could include TV recorders, ATMs, online shopping sites... Prompt teachers to think about when they've been frustrated getting a task done; it is unusual for everyone in the room to have had nothing but positive experiences with digital devices!</p>
<p>Exercise</p> <p>Time: 2 minutes</p>	<p>Work through the questions either as a group or in pairs.</p>
<p>Link to programme design</p> <p>Time: 1 minute</p>	<p>The key point of this section is:</p> <ul style="list-style-type: none"> <li>● Teaching about HCI can be incorporated into existing teaching programmes.</li> </ul>
<p>Wrapping up and where to next</p> <p>Time: 1 minute</p>	<p>The key points of this section are:</p> <ul style="list-style-type: none"> <li>● To be able to create good computer programs it is important to have a good understanding of human-computer interaction (HCI).</li> <li>● A combination of good programming skills and empathy for the end-users of the system makes for a more effective interface.</li> </ul>