

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"> ● how to teach students about HCI ● the value of designing good interfaces for people to use ● there are processes that can enable us to design good systems
<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"> ● HCI is an important consideration when writing programs. ● We want our students to be able to write good, 'user friendly', programs by being aware of the needs of the end-user.
<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"> ● Good evaluation and design of interfaces can reduce difficulties in using software. ● When students focus on getting programs working, they often overlook making it usable.
<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"> ● 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 ● Students need to write programs in a way that's mindful of the user. ● HCI appears explicitly in CT for DT progress outcomes 4, 5, 6, and 8.
<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"> ● Knowing how to evaluate an interface is useful both for critiquing someone else's interface and when writing your own program ● The 'Think aloud' protocol, HCI heuristics, and understanding how humans function in everyday life are important things to consider when writing programs.
<p>Heuristics for evaluating interfaces</p>	<p>The key point of this section is:</p> <ul style="list-style-type: none"> ● There are sets of heuristics that can be used with students for evaluating interfaces. ● (Note that the term "heuristic" also comes up in the study of algorithms; this is a different

<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"> ● Interfaces are all around us. ● Some interfaces are more helpful than others. <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"> ● Teaching about HCI can be incorporated into existing teaching programmes.
<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"> ● To be able to create good computer programs it is important to have a good understanding of human-computer interaction (HCI). ● A combination of good programming skills and empathy for the end-users of the system makes for a more effective interface.