

## Analysis of a single interaction

How might the developer consider the pupil's viewpoint and understanding of a program? Imagine you are a pupil who is part way through a program and has to make a choice. As a pupil, you are taking the program seriously and are trying to behave rationally. An analysis of what happens and what could go wrong is summarised in this diagram:

Assuming you are engaged in the exercise, not mindlessly pressing keys, you consider what to do next. Perhaps you want to sell potatoes, lag the loft, or free the Suffragettes? Your intention may be inappropriate, or result from a conception of the game which differs from the developer's and/or teacher's. Your intention may not be achievable within the program.

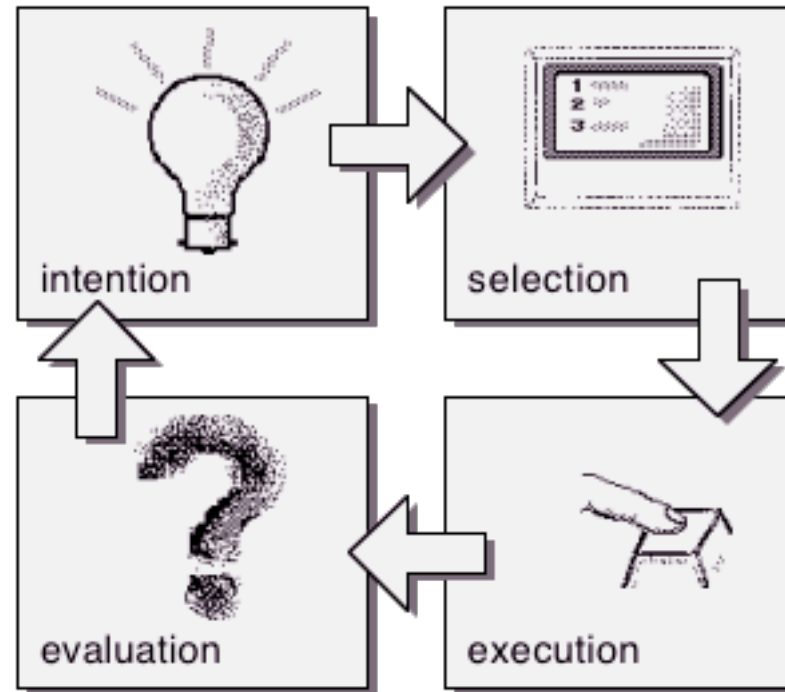
You look for events or changes to see the immediate results of execution. You are likely to miss changes which affect the program but are not displayed, subtle changes embedded in a cluttered screen or changes which occur quickly while you are distracted or looking at the keyboard.

You must interpret the changes which you have noticed. Was your choice executed correctly, was the right choice selected, was your intention satisfied? If you interpret the consequences correctly and are satisfied with results, all is well and a new intention may be formulated. Otherwise, reformulation of the intention, a new selection or correct execution is called for.

You have to relate (map) your intention to the choices offered by the program. The choices you believe are open to you may be different in reality from those offered by the program. You may have forgotten the choices or they may not do what you think they do (words and icons may have different meanings for you as pupil). You identify the choice that will satisfy your intention from those which you think are available.

You physically implement your selection by pressing keys in a suitable sequence (or move a mouse, touch a concept keyboard...). You may press the wrong key(s) by accident, press them in a wrong sequence,

stop part way through a sequence without realising it is incomplete or change your mind part way through.



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