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# Crynoldebau / abstracts

In the Liminal Space: Software Design as a Threshold Skill

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This presentation focuses on some research done on "Threshold Skills" which have been proposed as a complement to Threshold Concepts. Threshold Skills have many of the same characteristics as Threshold Concepts

(see http://www.ee.ucl.ac.uk/~mflanaga/thresholds.html) , with a slightly different focus. They are troublesome, transformative, integrative semi-irreversible and unlike Threshold Concepts they must be practiced. We wished to apply this definition to graduating computer science students’ learning of software design: the phase of software development that takes a description of what is to be built and creates a detailed description of how it should be built. Software Designers must break a problem down into parts and describe solutions to those parts and how they will fit together, using diagrams and other computing language. We asked a group of final year computing students to ‘design a super-alarm clock that University students could use to manage their sleep patterns’. By examining students’ designs, we were able to examine both skill – what they do when asked to design – and something of what they understand of the concept of design. Is software design a Threshold Skill? Using the definition above, the answer is ‘probably yes’. In addition, while learning to master software design, students exhibit some of the characteristics of being in liminal space. How can we use this analysis in our teaching of software design? Although this presentation uses Computing students and concepts as a basis, the general ideas of Threshold Concepts, Threshold skills and liminal space and how we can use them in teaching and learning are of interest to all.