ICL Workshop

Making Construals as a Vehicle for Interactive Collaborative Learning.

Meurig Beynon

Aims:

This workshop introduces and promotes 'making construals' as a new digital skill that is complementary to computational thinking, well-suited to interactive collaborative development, and – in the spirit of constructivism – blends learning and construction.

Main topics:

1. Construals as interactive digital artefacts that embody provisional understanding of a situation through capturing characteristic patterns of observation, dependency and agency.
2. Pedagogical, computational and philosophical perspectives on making construals.
3. The basic concepts, principles and practice of making construals.
4. Reviewing and demonstrating a practical online instrument for making construals, accessible at the url: **http://jseden.dcs.warwick.ac.uk/scifest16**
5. Illustrative applications of making construals to support interactive collaborative learning.
6. Hands-on experience of making elementary construals.
7. An evaluation of making construals as a vehicle for ICL activities.

Target Group:

The workshop is addressed to teachers and learners interested in principles and instruments for giving computer support to interactive collaborative learning across all disciplines and all sectors of education: primary and secondary schools, universities, vocational training and lifelong learning.. Participation and feedback from experts in the ICL field will be particularly appreciated.

Background knowledge expected of the participants:

No previous knowledge is expected.

Workshop Activities:

The workshop will have three aspects: an overview of making construals, highlighting relevant projects and publications and summarising empirical findings based on experience of interacting with several hundred computer science students, tens of school teachers and pupils, and several educational consultants: some practical experience of using the MCE for ICL, as illustrated by construals drawn from mathematics, computing (“unplugged”), medicine and music; and a final discussion in which participant feedback will be welcomed.

The Presenter:

Dr. Meurig Beynon is an Emeritus Reader in Computer Science at the University of Warwick in the UK. He received his BSc (1969) and his Ph.D. (1973) degrees from King's College London in Pure Mathematics. Following a research assistantship at the Open University (1972-3) and an SERC Research Fellowship in Mathematics at University College Swansea (1973-5), he joined Computer Science at Warwick in 1975. He has also held short-term visiting research appointments at British Telecom Research Laboratories (1986) and the Graduate School of Education at National Taiwan Normal University, Taipei (2009). Over his career, his research interests, as represented in more than 140 refereed publications, have encompassed pure mathematics (with particular reference to geometric aspects of ordered algebraic systems associated with the Baker-Beynon duality), theoretical computer science (including a notion of computational equivalence that was applied to the characterisation of planar monotone Boolean functions) and 'Empirical Modelling', a research programme directed at developing a broader conceptual framework for computing which he has pioneered with colleagues and students in Computer Science at Warwick over the last thirty years. He is currently the Scientific Coordinator of the EU Erasmus+ CONSTRUIT! Project (2014-7), which aims to disseminate 'making construals' – the core practical technique which underlies Empirical Modelling – as a new digital skill for creating interactive open educational resources that has wide application across educational sectors and disciplines. Educational technology – and constructivist and experiential perspectives on learning in particular – is a prominent theme in Empirical Modelling research that has been the subject of some 20 research publications.