ISSUES IN QUESTION DESIGN WITHIN A NATIONAL HIGH-STAKES PROGRAMME

Susan C. Woodger, Helen S. Ashton and Cliff E. Beevers

Issues in Question Design within a National High-Stakes Programme

S C Woodger, H S Ashton and C E Beevers School of Mathematical and Computer Sciences, Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS s.c.woodger@hw.ac.uk, h.s.ashton@hw.ac.uk, c.e.beevers@hw.ac.uk

Abstract

The process of designing questions for online assessment requires a different approach to the design of paper based questions. The change in medium now requires the item writer to become conversant with design processes normally associated with engineering disciplines and to become much more precise in what is being measured. It is the areas of design and testing that ensure a question is acceptable. Item writers therefore should not be deterred by the technical aspects of creating a question in a web based environment - the implementation should only contribute approximately 10 to 20% of the costs.

The item writer however, whether academic or technical, has to become aware of issues surrounding quality assurance, accessibility and usability to ensure the question holds up to scrutiny. Not only does a question on the web have to be valid, reliable and assess the appropriate learning objectives it must now also be robust, conform to legislation (such as the SENDA bill [1]) and be guided by heuristics (such as W3C guidelines [2]).

The item writer is also faced with a plethora of different question types available so how can they decide which is the correct type for the question they wish to ask? This issue will be explored further in this paper.

This paper charts the experiences of the PASS-IT project in designing questions for piloting in schools throughout Scotland from conceptual design to rollout (the history of the project can be found on the PASS-IT website [3]). The presentation discusses the collaboration of subject specialists, learning technologists and software developers and the issues involved in the design, implementation and delivery of the questions in subjects across the secondary curriculum in Scotland. An example of some of the issues and questions that will be discussed in the paper can be found in the PASS-IT Good Practice Guide in Question and Test Design demo [4]. The project was also very conscious of designing accessible questions and of exploring special needs issues. An independent report by the BRITE group gave a positive review and indicated avenues for future development [5]. Discussions will also

include experiences when the PASS-IT team took their questions to pupils at the Royal Blind School in Edinburgh.

References

[1] Special Educational Needs and Disability Act 2001 (SENDA), http://www.hmso.gov.uk/acts/acts2001/20010010.htm

[2] World Wide Web Consortium (W3C), http://www.w3.org/

[3] Project on Assessment in Scotland – using Information Technology (PASS-IT) website, http://www.pass-it.org.uk/

[4] *Good Practice Guide* documentation and demonstration, http://www.calm.hw.ac.uk/pass-it.html

[5] An evaluation of the PASS-IT model of computer-mediated assessment when used in conjunction with a range of assistive technologies, BRITE, http://www.pass-it.org.uk/project_materials.asp