

Cineris Solutions: *Automated feedback for personalised learning*

Quality education and training requires top quality feedback.

Feedback is the flywheel that enables students to master learning. The big challenge in education is for students to examine what they initially gather as factual information, and understand how it fits together to enable their progress in learning, training, and employment. Feedback points out what they overlook, asks questions to extend their understanding, and encourages them into habits of practice and reflection.

Reduce the time Mentors spend writing feedback, and maximize its quality. Writing personalised feedback leads to labour-intensive, repetitive, and potentially inconsistent staff work. Feedback may be delivered late; be difficult to read; and lacks sufficient explanation. Feedback does not connect automatically with existing training resources. It ought to provide links to digital learning resources that support self-improvement: pages of textbooks, manuals, objective questions, simulations, and videos. Cineris provides the tools to deliver top quality feedback, to guide and motivate learners.

Cineris' computer-based learning products for personalised feedback:

Referee makes personalised ***feedback reports***, with notes from assessors, pre-loaded feedback text, and hyperlinks to instructional material. Hyperlinks also link feedback reports to Cineris objective questions that work without assessor input, to deliver intelligent feedback to learners.

Computer marked objective questions for practical learning are designed to help learners practice the real-life application of learning. They contrast with multiple choice questions, which can be somewhat monotonous to work at, and which may not present problems in a way that they are encountered in real life. Using the Rules Based Marking (RBM) system, Cineris Questions provide immediate, on-line and personalised feedback, which give explanations that are relevant to errors submitted by individual learners. Exam / test questions can be answered either on-line or on paper.

Cineris' products offer different, complementary savings to e-Portfolios

e-Portfolios bring significant savings to the ***administration*** of Portfolio assessment, feedback and completion. In general they make little contribution to the actual ***content*** of the feedback materials that are delivered to individual students.

Cineris' products can be used in conjunction with an e-Portfolio, or without any e-Portfolio. All feedback issued by Cineris products is archived for safety and inspection, on a secure server. Feedback is available for students as attractive PDF files, or prints thereof.

Cineris Referee gives feedback for creative work.

Evaluation of project work, presentations, reports, etc., cannot be done by computer. Evaluation is done by Assessors / Mentors, who can then use the web-based tool **Cineris Referee** to select, annotate, compile and deliver top quality personalised feedback.

Case Study - Cineris Referee CV is now a core application for the Temporary Resource Service (TRS) of Tower Hamlets College, London. The course goals are to:

- create an effective CV
 - develop student communication
 - increase employment opportunity.
- Benefits:**
- mentoring times halved per student
 - web-based support to analyze skills and plan evidence-based CVs
 - encouraged students write their CVs in their own style.
- Outcomes:**
- good personal statements
 - students won more interviews and job offers
 - Referee helped to 'transform' student attitudes to job-preparedness and positivity.

Cineris Solutions: *Automated feedback for personalised learning*

Cineris RBM engine: feedback for advanced objective questions

Automatic Evaluation of Objective Questions is well established for serving multiple choice questions (MCQ), where learners choose one correct answer from 4-5 options. MCQs are used in exams of rote learning, but are too simplistic to help advance learners' concepts in Assessment for Learning, and their ability to understand and solve more realistic problems.

Cineris offers a much wider range of question styles than the industry standard. The new styles can be created from wizards, derived from templates, or customised *de novo*, to offer more practically-oriented sets of objective problems. Problems are marked automatically to detect the skills and knowledge that individual learners have *failed to use*, and to provide explanatory feedback.

Rules-Based Marking (RBM) was developed by Cineris so that, for the first time, a regular objective question engine could mark answers to styles of question that more closely match the context in which the learner would use the knowledge in practice. Since RBM detects procedural and logical errors within an answer, it can both *evaluate* answers and *select* the pre-loaded feedback that is needed to remediate specific errors within each answer.

Intelligent feedback. On question-by-question basis, effective feedback should be personalised to the errors of individuals' answers. Because of the control that RBM exerts over the selection and display of Cineris feedback, Cineris uses the term: *intelligent feedback*.

Cineris Objective Questions can readily be designed with sufficient choices of answers ('options') to be genuinely challenging, and hence support NVQ courses at level 3 upwards, where there is a greater requirement for understanding, and hence a greater demand on assessors to provide quality explanatory feedback. The **Cineris RBM Engine** displays such questions in a web browser, and enables *traditional marking schemes* to be converted into marking instructions for the computer. The Engine provides a means to create logical marking instructions, without writing computer code. Wizards and templates are available for multiple choice, multiple response, matching, cloze, text selection, text & numeric entry, tabulation, and sequence questions (ordered lists). Cineris offers a full service including writing questions for clients.

Support of Assessment for Learning. Challenging objective questions are best designed so the learner has to make several objective responses. These help check for consistency of response, and the ability to deal with different components of the question. For these reasons, learners are not expected to get questions completely right first time. The Cineris question interface is designed to encourage learners to re-attempt questions until they complete them correctly. Feedback is available each time an answer is submitted, and we find that learners rarely disengage from a question before they have submitted the correct or virtually correct answer. As a consequence, students can spend several hours working at challenging questions in a subject. We believe this to be a useful contribution to learning.

Assessment for Learning is vital to help learners identify errors, omissions and misunderstandings in their personal work. Assessment for Learning (AFL), or formative assessment, is a major strand of teaching practice, in which feedback is used to help students adopt a more mature style of learning. AFL is championed by Government, and international research shows the benefits of AFL on improved motivation to learn, and learning outcomes.

Contact:

Pud Christmas (07817 614404; pud.christmas@cineris.com)
Roger Sutcliffe (07740 434468; roger.sutcliffe@cineris.com)

Cineris Limited, First Floor, 3 North Hanover Street, Glasgow G1 2AD

Company Number 05252539

© Cineris Limited

VAT Registration Number 888 3807 62