

LANSA Case Study

Western Australian students benefit from on-screen marking

Most of us go at least once in our life through high-stake examinations, such as school leaving or university entrance exams, or for a professional certification. Reliable and accurate marking is critical, as future career options may well depend on the outcome. On-screen marking technology helps to ensure that marking is impartial, consistent and fair to all. This is because of features like real-time monitoring of markers, insertion of quality assurance scripts and easy implementation of best-practice methods such as blind double marking.

The Western Australia School Curriculum and Standards Authority uses MarkManager, an on-screen marking solution, to mark the exams held at the end of year 12. The solution, implemented on a Software as a Service (SaaS) basis, involves the scanning of completed examination response booklets that authorized markers can access over the Internet. Using the LANSA tool set, MarkManager was originally developed by the Board of Studies, Teaching and Educational Standards in NSW Australia for its own use as a certifying authority.



The Challenges

The Western Australia School Curriculum and Standards Authority (the Authority) is responsible for setting standards of student achievement, the assessment and certification of student achievement, curriculum development and assessment, developing and accrediting courses, and maintaining a database of related information.

The Western Australian Certificate of Education (WACE) examinations, which take place at the end of year 12, are a huge logistical exercise for the Authority. Tasks include hiring and training the markers, printing the examination papers, distributing them to the examination centres, collecting the scripts and getting them securely transported to the markers. Approximately 17,000 candidates sit for the WACE examinations, each doing on average an exam in four courses. Over 68,000 exam booklets are printed and nearly 1,000 markers are involved in marking of the scripts and another 350 markers are involved in scoring the non-written (practical) exams, such as music performances and drama.

One of the major challenges faced by the Authority is due to Western Australia's vast land area. This makes it hard for teachers from regional areas to take part in traditional marking, which by its nature requires access to hard-copy scripts and hence a more centralized marking approach. Not only does this impact the number of available markers, it also means that fewer teachers have the opportunity to improve their curriculum and assessment skills by participating in the marking process.

Another challenge is the overhead in catering for blind double marking, which the Authority had found effective in improving reliability and accuracy. In blind double marking,



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two markers assess a script, unaware of the scores awarded by the other marker and unable to view each other's annotations. When the two scores differ by more than a predefined variance tolerance, a reconciliation procedure follows. In a traditional marking environment, separate mark-sheets are required to conceal earlier marks, adding to the cost and causing delays.

A final challenge is the ability to monitor the performance of markers in a timely manner. In a traditional marking environment there may be a delay before a supervisor notices a drop in consistency. Not being able to take corrective action promptly may result in a backlog of incorrectly awarded marks building up.

To overcome these challenges, the Authority was already using on-screen marking technology for some of its WACE exams. Since the accuracy, security and timely progress of marking are essential, the Authority continuously strives for improvement and reviews its marking technologies every few years.

Snapshot

Customer: The Western Australia School Curriculum and Standards Authority is an independent statutory authority that is responsible to the Minister for Education. www.scsa.wa.edu.au

Challenge: To provide fair, accurate, secure and timely marking results for high school examinations.

Solution: Use MarkManager for on-screen marking of written examinations.

Key Benefits: Good quality control because of the ability to monitor the standard of marking as it is occurring and because of easy implementation of reference scripts.

Product Used: Visual LANSA, LANSA for the Web, LANSA Integrator.

The Authority put out a request for proposal for a managed services solution for on-screen marking. After a comprehensive tender evaluation process, the Authority selected MarkManager, an online marking solution developed by the Board of Studies, Teaching and Educational Standards in NSW, Australia (BOSTES), commercialized with assistance from LANSA.

Jenny Morup, Manager, Examinations Logistics for the Authority, explains, "We selected MarkManager because it met our criteria and offered value for money. The fact that the solution had proven to work well for the high school examinations in another state and that BOSTES would provide implementation assistance were also important factors."

The Solution

"The team from BOSTES was very knowledgeable, helped us with the planning and gave very good support. Together we set up an operational plan that worked exceptionally well throughout the project," says Morup.

In its first year of implementation, 2012, the Authority used MarkManager for nine exams. The Authority's marking process started with color-scanning of scripts (examination response booklets completed by the students), which were uploaded in PDF format into MarkManager. During that process student and exam centre identification details were masked. For some exams, the pages were re-sequenced, so that markers only got to see the exam section they were assigned to mark.

The Authority doesn't use marking centres and markers use their own equipment to access the scanned scripts remotely over the Internet, usually from their home. The solution ensures that no marks or scripts ever reside on the marker's desktop. Markers can set their individual screen preferences, such as to display mark boxes left or right, and they can view a list of the scripts they have been working on. They can add notes for themselves or for the attention of the chief marker.

Chief markers can upload practice scripts that markers have to complete satisfactorily before they are allowed to start marking real scripts. They can also set up a frequency for inserting control scripts in between real scripts, to check that markers remain on the ball.

Chief markers have a real-time dashboard view of what markers are doing and can go to any script to look at the marker's notes and marks awarded. They can view the statistics, such as how the spread of markings for an exam section is evolving, how many scripts are marked and still need to be marked.

MarkManager's ability to let chief markers and markers exchange messages is considered extremely helpful, especially since the Authority's markers work remotely. Messaging is used, for example, when a marker wants the opinion of the chief

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marker about a certain script. Likewise, a chief marker may feel the need to comment on the marking of a certain script.

Melanie Jasper, Senior Consultant Written Examinations (Marking) at the Authority, says that the feedback from the markers was very positive "They found the application easy to use and liked the fact that they could adapt the screens to suit themselves. Access to the scripts was easy and the speed very quick. Markers were able to work on one script after another without experiencing any slow uploads. The system was quick, even in peak periods."

The Benefits

"The ability to monitor the standard of marking as it occurs is exceptionally important," explains Morup. "In addition to blind double marking, we also have good quality control because of the control scripts that can be placed throughout the marking process. If a marker starts scoring outside the expected range, the chief marker can take immediate action. The solution helps us to achieve accurate and unbiased marking."

The Authority aims to select markers from the teaching community. Morup explains why, "It is good professional development to experience the high standard of WACE examination marking. They learn to mark using the proper marking keys, which are the explicit statements about what the examiner expects of a candidate. They can take that knowledge back into their schools and classrooms and use it to prepare their students better."

"Online marking enables us to take the marking process across remote regions, while we can still closely monitor the quality and the process. We have international schools that do our courses and we can now also include markers that are based overseas. So they can benefit as well," continues Jasper.

"Having the scripts online is safer and more convenient. Script confidentiality is enhanced and the risk of misplaced scripts reduced."

Jasper finds the ability to split an exam into sections very beneficial, "It gives you a lot more choices of how you are going to mark an exam and who is going to mark which section. We can configure the program ourselves to split an exam into sections, for example combine questions 2, 5 and 8 in a section because they all relate to a particular mathematics concept, or separate short answers from extended responses. We can give markers those particular sections that they are specialized in. The examination scripts are still available intact, so we can still look at the whole paper as well."

Conclusion

"The implementation of the new system went exceptionally well. It worked very successfully right from the beginning. The BOSTES team was very responsive. They understood our requirements and adapted the program where needed. The success of any project is the communication," concludes Morup.

"The training and the manuals for the chief markers were extensive and relevant. The chief markers particularly commented on the facility of real-time monitoring of markers and the completeness of the reports. The only issue they had was that they didn't have enough time to try out all of the reports. But as they gain more experience next year, they will be able to explore more of the reporting."



Training session for markers. The Authority aims to select markers from the teaching community, as it is good professional development to experience the high discipline of exam marking.

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