Project Report

2006 Victorian Equity Projects – An Office of Training and Tertiary Education initiative

Project title
Adaptive Technologies – WYNN software

Organisation/lead agency
University of Ballarat

Project coordinator
Pam Woodward

Contact details
(03) 5327 8178  
p.woodward@ballarat.edu.au

Project summary

University of Ballarat’s equity project involved two parts; firstly trialed and evaluated the efficacy of WYNN software (an adaptive technology that converts text to audio output whilst highlighting the spoken word) to assist students who experience literacy challenges. Secondly, ascertained the feasibility of installing WYNN software onto University of Ballarat’s network, making it available to all students.

The learners

The target group for this trial was selected from two sources; the first cohort was identified by University of Ballarat’s Disability Liaison Unit; these students had indicated on their enrolment form they had recognised they had difficulties with literacy. The second group was drawn from a class designed to address students who had experienced long term serious learning difficulties; where each student was paired with a volunteer tutor to support their learning.

The first cohort involved students were studying a trade, under 20 years and mostly young males. The second cohort was more diverse group, ranging from 17 to 50 years of age.

The challenge

University of Ballarat’s Equity project considered the question of whether an adaptive software technology could successfully reach the developer’s claim of simultaneously highlighting written text as it was spoken in an accurate, audibly and intuitive manner. If so; was the software an effective tool for students to assist their learning?

There were a number of issues/challenges the project confronted during 2006, they were:

1. a number of pedagogical concerns, such as;
   • how to best implement the software to be accepted and hence utilised by students,
   • different ways the software can be utilized to optimise its potential as a learning tool,
   • evaluate the ease of use for students; and
   • whether students’ considered it a valuable asset to support their learning.

2. The cost and support involved in converting large volumes of hard copy learning resources into WYNN documents – and which party was responsible for meeting these costs?

2006 Equity Projects: Report
3. The copyright implications associated with making digital copies of copyright learning materials.

4. The technological issues involved in installing the software onto the university’s network. It was deemed early during the project that if the software was only loaded on a few standalone computers then two issues would arise; that is not being readily available to students and importantly may be identified as computers for people with literacy concerns.

5. Initially Version 4 WYNN software was purchased and was able to be successfully installed onto our network, but Version 5 WYNN overcame this issue and was installed successfully.

6. Next, the license requirements for a limited number of concurrent users, other software was considered to manage the number of concurrent users and restrict access to only the limited number of users. After much negotiation with the software vendors regarding the cost; it became feasible to purchase a license for an unlimited number of users; hence not requiring any counting software.

University of Ballarat’s approach

The approach was that:

1. Students were identified and approached regarding their interest in being involved in the pilot trial.

2. The consenting students were issued with a laptop with the WYNN software installed for individual use both in class and at home during the period of the trial (8 months).

3. Students were then trained in the use of the WYNN program and their learning resources was either scanned or copied into the appropriate format for WYNN software

4. The teachers and volunteer tutors working with these students were also trained in the use and the capabilities of the software.

5. Students were visited in their work /study place on a number of occasions – these visits formed part of the qualitative evaluation collected during the trial.

6. During the trial period the issues regarding installing the software onto the network and the costs of a full license was investigated and addressed.

The results

The evaluation methodology used to measure the success of our project was largely collected during informal discussion forums. These discussion groups included the teachers, the tutors and students. The data was qualitative and addressed the question stated earlier in this report, that was:

...whether an adaptive software technology can successfully achieve the developer’s claim to simultaneously highlight written text as it is spoken in an accurate, audibly and in a intuitive manner. And if so; whether it was an effective tool for students to assist their learning.

The developer’s claim that WYNN software satisfactorily converts written text to audio whilst highlighting the spoken word was fully supported by all users as most successfully achieved. All users were largely impressed with the functionality of the program and found the user interface both intuitive and easy to use.

The evaluation of the second part of the question as to whether WYNN can be used as an effective tool for students to assist their learning revealed many comments. These comments would be useful to quote at this stage.

“...students using the software program, it will still depend on a student's motivation”, “Information is now more accessible”, “...some students will not go near a computer, for these students this software program will not assist them”, “I like that the Internet is now more accessible”, “.. I think it would help improve my spelling”
The overwhelming response from all participants in the trial was to fully support the implementation of WYNN software at the university and that all participants greatly anticipated the benefits for many learners, if the software was to become readily available.

Lessons learned

The project was a good example of the benefit of a number of teams within the university working together to successfully satisfy the aim of the project. The Disability Liaison Unit identified the need for the software, identified suitable students with literacy difficulties and finally to address the equity concern for this software application being available to all students without any stigma attached. The Information Services Unit had to work through the technological issues and to successfully install the software onto the university’s server. The TAFE Development Unit worked with the other teams to address some of the challenges identified earlier, and also to evaluate the efficacy of the software as a tool to support students’ learning.

The Copyright Act, Part 3 – Individuals with a Print Disability partially addresses the issue of copying books, sound recordings and other material for the purpose of research or study without permission.


WYNN software required a digital document in either of the common formats; Microsoft Word, Acrobat PDF, Microsoft PowerPoint and others, these could then be converted into WYNN format. This was successfully done by the software, but when hard copies needed to be initially converted to a digital format by scanning the document, the quality now relied on the capabilities of the scanning software. The scan required to be read by Optical Character Recognition (OCR), but this involved students needing to proof-read the documents and understand when errors had been made. The images suffered more so from incorrect interpretation from scanners, but if the student had the hard copy whilst working with the WYNN software they could make the corrections when necessary.

The link to WYNN software (an adaptive technology that converts text to audio output whilst highlighting the spoken word) was http://www.freedomscientific.com/LSG/products/WYNN.asp.

Contact details for queries regarding the project

Pam Woodward
University of Ballarat
(03) 5327 8178
p.woodward@ballarat.edu.au