

# Australian *Flexible Learning* Framework

## Supporting Flexible Learning Opportunities

### Blended chocolate - Shareable learning objects for the baking/pastry industry

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#### Executive summary

The project investigated the implementation of a shareable learning model (see Figure 17) for the baking industry and explored the possible different outcomes for students, teachers and industry. The baking industry relies heavily on traditional training and learning models. For this project, measurement of delivery of content using technology and shareable resources and comparison of outcomes against traditional face-to-face methodology was used. An integrated model for delivering flexible content will be suggested from the outcomes and findings. Measurement of success to date has included feedback surveys and analysis of enrolment, participation, attrition, course and module completions.

The Hunter region is constantly growing as a tourist destination<sup>1</sup>. The baking/pastry section at Hunter Institute has an excellent reputation and relationship with various industry stakeholders in the baking/pastry industry. There are approximately 54 Bakers Delight stores, 18 Brumbies stores, 45 Woolworth's, 36 Cole's and many independent bakeries that we offer training and assessment to. The section has strong industry partnerships with Baker's Delight, Goodman Fielder and Sara Lee and is currently negotiating Memorandum of Understanding (MOU) with Woolworth's, Cole's and Brumbies.

This research project seeks to further enhance these relationships and enable the transfer of current knowledge, skills and technical applications from successful industry players to fellow staff and students. Providing examples of international techniques will enable ongoing improvement in the creation and execution of dessert and pastry items to fulfil increasing customer demand.

Opportunities exist to share material from the Callebaut plant in Singapore and to send students there. It will assist in the establishment of a network with key employer groups in Australia to support delivery through multimedia learning objects. The analysis made in this context will allow the adaptation of the implemented system to maximise outcomes with a strong customer focus.

The research adopted an approach of comparing two groups of students currently studying the baking trade's course. Ninety students agreed to partake in the research process. These 90 were divided into two groups. The

<sup>1</sup>. Report in Newcastle Herald, 5<sup>th</sup> March 2004 - 'Weekend getaway' - ranked the Hunter as the seventh most visited destination in Australia

first were to be called the 'face-to-face group'. Content was delivered in a traditional learning environment. The lessons were teacher-centred and all content was delivered within the classroom. The second group we designated 'hybrid'. These students were given tasks to complete before each lesson. These tasks were delivered via SMS, email and a website that was designed for this project at [www.blendedchocolate.com](http://www.blendedchocolate.com). The lessons conducted on campus were student-centred and self-paced. The teacher was now a facilitator and mentor. The data to be collected was to compare the knowledge and skill level of the two groups. Would students access resources outside the traditional learning environment? How much time would be spent using these and how much time would be saved accessing the campus? Would the participants have a higher skill and knowledge level? Do students feel comfortable using technology as a resource and does the baking industry support this?

In this era of flexible and self-paced learning, workplace delivery and assessment and e-learning, the project was designed to compare and identify the outcomes of these and traditional face-to-face delivery methods for this particular trade area. In the TAFE NSW Student Satisfaction Survey (2004), it was shown that the most popular student reaction to the question, "My program of study would better meet my needs through..." was "finish my course in less time" and "less class time". In this context, the project wanted to identify methods of making e-learning be more effectively integrated to meet the needs of this industry sector. The literature research revealed that there are no flexible learning models currently being employed in the baking industry in Australia. The current training climate within the educational sector for this particular industry is very antiquated. All training is conducted on campus. No workplace training is offered; flexible learning environments are not considered.

For TAFE to have access to contemporary and relevant resources, industry partnerships must be established. Barry Callebaut has been producing cocoa and chocolate products for more than 150 years. They are a fully integrated company that masters every step; from the sourcing of cocoa beans, to the shelf. Callebaut are a major supplier to the baking industry.

Today, they are the world's leading manufacturer of high-quality cocoa and chocolate products. They have a global network with about 30 state-of-the-art production sites and some 9,500 employees in 17 countries in Europe, Africa, North and Latin America and Asia/Pacific. Barry Callebaut has strong traditional roots in Europe, is headquartered in Switzerland and listed on the SWX Swiss Exchange.

The resources Callebaut have developed, (DVD, audio and manuals, for in-house training and promotion) are of the highest quality. A partnership was formed between Callebaut and the Hunter Institute of TAFE for this project, so we could share these resources and knowledge. In return, they could use the completed website for international training of their chocolatiers.

Chocolate work is a growth area in the industry with more educated customers raising the level of expertise and finish of products.

High-end chocolate skill sets often do not exist within the current lecturer groups. Lecturers and instructors from a variety of registered training organisations (RTOs) and industry will be able to access up-to-date international information negating the need for individual visits to specialised schools such as the Callebaut School in Singapore. Industry will be able to expand its knowledge base through access to the learning models. The content focuses on the latest trends within the industry, with ease of updating, due to the nature of the online environment.

The learning object model will form an ideal platform for expansion to other content once the viability of the concept has been proven through the research analysis. This project will build on previous research sponsored by the *Australian Flexible Learning Framework (Framework)* such as: Exploring Educational Design (2003), VET Learning Object Repository, Good Practice Models for Flexible Learning. Jurisdictional issues include copyright and intellectual property considerations.

The baking/pastry industry has a high degree of variable work hours and a high level of casual employees. Workers have difficulties accessing traditional institution-based training due to these constraints and distance. The Hunter Institute provides training for students through block release and flexible options from Hornsby in Sydney's north to Murwillumbah on the far NSW North Coast. Forty-four percent of the baking students currently enrolled at Hamilton travel from outside the Hunter region. These students must leave their workplace, family and homes to access the campus and training facilities for a period of three weeks twice a year. The proposed delivery model focused on customer needs and accessibility. The research underpinned a future delivery model and allow for adaptations of the learning objects following user feedback and input from stakeholders. The proposal will be able to build upon existing models of blended delivery and expand these findings upon the new target groups.

This project identified a number of possible ways to remove barriers to the effective uptake of e-learning. It incorporates a wide range of significant previous framework projects including the following:

- Exploring Educational Design (2003)
- VET Learning Object Repository
- Access & Equity
- Good Practice Models for Flexible Learning

Engaging industry in flexible learning, VET Interoperability Framework areas relevant to this project include content format, packaging and intellectual property considerations.

## **Recommendations**

### **Training Providers**

- that training providers find a balance of delivery needs between industry, learners and teachers in the growth industry of Tourism and Hospitality helping to service the high performance training needs in Australia.
- that training providers adopt a shareable learning object approach to the management and development of learning materials, resources and assets, ensuring sustainable, scalable and manageable delivery of flexible learning.
- that training providers develop a blended learning model to reflect current industry practices and resources (e-learning) to enhance learning in specialist fields.
- that RTOs engage practitioners in a complete cycle of contemporary e-learning development to develop better solutions through staff development programs.
- that training providers involve the relevant industry organisations and employer groups in a collaborative approach to share the findings for improved processes and relevance of training to reflect a continuous improvement philosophy.
- that RTOs approach relevant industry bodies to improve and expand industry partnerships to allow access to shareable resources to enhance training and learning.
- that training providers make digital resources freely available for potential enrolments to view before actually enrolling. The resource then becomes a promotional tool as well as an educational tool.
- that training providers collaborate to investigate the possibility of networking bakeries, kitchens and classrooms to allow online access to students and teachers.

### **Baking industry**

- that the baking industry supports structured training in the workplace for apprentices and trainees. Apprentices access a TAFE campus 36 days per year, all remaining training occurs in the workplace. This training is not recognised by assessment within the TAFE sector. By introducing quality structured workplace training and using resources

that have been developed through partnerships and consultation with relevant industry bodies, far more relevant and cost effective training will occur

- that the bakery industry share resources with RTOs to assist in developing better models of learning. Within this research project, we have demonstrated that sections of the baking industry will support the use of their resources if quality outcomes can be demonstrated.
- facilitate training partnerships and Memorandums of Understanding with RTOs.
- that the industry acknowledges and appreciates that apprentices attend 36 days per year at a TAFE campus. All other training occurs in the workplace. If resources are developed to support, enhance and improve training, then the baking industry must support the use of these.
- that companies set aside designated times for their employees, so that formal training can occur in the workplace.
- that the baking industry work with TAFE Institutes to examine more efficient and effective means of training apprentices, recognising the potential for e-learning as a useful and successful tool for the training of staff.
- that supports in the baking industry change. The baking industry needs to examine more efficient and effective means of training apprentices. The industry must recognise that e-learning, if delivered correctly, is a useful and successful tool for the training of staff.