

German Bread Making – attracting and retaining apprentices in the Australian industry



Rick Dunn

2011 Higher Education and Skills Group Overseas Fellowship

Fellowship funded by Higher Education and Skills Group, Department of Education and Early Childhood Development, Victorian Government



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i. Executive Summary

This International Specialised Skills Institute Fellowship program sponsored by the Higher Education and Skills Group (HESG) of the Victorian Department of Education and Early Childhood Development enabled the Fellow to undertake a Diploma in German Baking.

This specific course content and approach is not available at any institution in Australia and was considered appropriate for the Fellow to obtain the skills and knowledge necessary to deliver a newly accredited course in Victoria.

The course provides a comprehensive understanding of German Baking and an opportunity to study the preparation and production methods in relation to that baking industry.

Attendees at this course ranged from owner-operated bakeries, large organisations, local and international academics and those looking to become recognised as Master Artisans in their chosen field.

The Fellowship program was based on a six-week course held at the Akademie Deutsches Backerhandwerk School, in Weinheim, Germany.

Although the Fellow was enrolled in the course prior to leaving Australia, upon arrival in Europe before the course began, unplanned opportunities arose relevant to the stated Fellowship objectives and these have been included in the report.

A detailed review of the course attended, plus the additional visits to practising European Bakeries, form the basis of this Fellowship report.

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ii. Abbreviations/Acronyms

BIAV	Baking Industry Association of Victoria
BTN	Baking Training Network
HESG	Higher Education and Skills Group
IBA	International Baking Akademie, Weinheim Germany
SWTAFE	South West Institute of Technical and Further Education
TAFE	Technical and Further Education
VET	Vocational Education and Training

iii. Definitions

Artisan Bakeries

Bakery establishments run by craftsman bakers making high quality baked goods, using traditional methods.

Plant Bakeries

Bakery establishments where the products are made using a factory production line process, with limited human contact.

beroepsvervolmakend

Initial, in-service and on-going work based education.

1. Acknowledgements

Rick Dunn would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide him throughout the Fellowship program.

Awarding Body – International Specialised Skills Institute (ISS Institute)

The International Specialised Skills Institute Inc is an independent, national organisation that for over two decades has worked with Australian governments, industry and education institutions to enable individuals to gain enhanced skills and experience in traditional trades, professions and leading-edge technologies.

At the heart of the ISS Institute are our Fellows. Under the **Overseas Applied Research Fellowship Program** the Fellows travel overseas. Upon their return, they are required to pass on what they have learnt by:

1. Preparing a detailed report for distribution to government departments, industry and educational institutions.
2. Recommending improvements to accredited educational courses.
3. Delivering training activities including workshops, conferences and forums.

Over 200 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 22 leaders in their field have shared their expertise in Australia.

According to Skills Australia's 'Australian Workforce Futures: A National Workforce Development Strategy 2010':

Australia requires a highly skilled population to maintain and improve our economic position in the face of increasing global competition, and to have the skills to adapt to the introduction of new technology and rapid change.

International and Australian research indicates we need a deeper level of skills than currently exists in the Australian labour market to lift productivity. We need a workforce in which more people have skills, but also multiple and higher level skills and qualifications. Deepening skills across all occupations is crucial to achieving long-term productivity growth. It also reflects the recent trend for jobs to become more complex and the consequent increased demand for higher level skills. This trend is projected to continue regardless of whether we experience strong or weak economic growth in the future. Future environmental challenges will also create demand for more sustainability related skills across a range of industries and occupations.

In this context, the ISS Institute works with Fellows, industry and government to identify specific skills in Australia that require enhancing, where accredited courses are not available through Australian higher education institutions or other Registered Training Organisations. The Fellows' overseas experience sees them broadening and deepening their own professional practice, which they then share with their peers, industry and government upon their return. This is the focus of the ISS Institute's work.

For further information on our Fellows and our work see <http://www.issinstitute.org.au>.

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1. Acknowledgements

Fellowship Sponsor

The Victorian Government, Higher Education and Skills Group (HESG) formerly Skills Victoria, is responsible for the administration and the coordination of programs for the provision of training and further education, adult community education and employment services in Victoria, and is a valued sponsor of the ISS Institute. The Fellow would like to thank them for providing funding support for this Fellowship..

Supporters

- | | |
|----------------------|---|
| • Andrew O'Hara, | President, Baking Industry Association of Victoria |
| • Anna Spurling, | Director, La Madre Bakery |
| • Arthur Blewitt, | Chief Executive Officer, Agrifood Skills Australia |
| • Bill Murphy, | Team Leader, Centre for Food and Primary Industries, South West Institute of TAFE |
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| • Kim Banfield, | Chairman, Baking Training Net |
| • Paul Oprean, | Executive Manager—Teaching and Learning, South West Institute of TAFE |
| • Sandra Dunn | General report production and editing |

Employer Support

Dunn would like to acknowledge South West Institute of Technical and Further Education (SWTAFE) for their support and encouragement throughout the Fellowship program. It has allowed him the time to concentrate on his commitments required by the Fellowship. Thanks to the Centre for Food and Primary Industries at SW TAFE for their invaluable advice.

Organisations Impacted by the Fellowship

Government

- » Higher Education and Skills Group, DEECD (formerly Skills Victoria)

1. Acknowledgements

Industry

- » Agrifood Skills Australia
- » Baking industry collectively
- » Food processing industry
- » Hospitality and tourism industry
- » Professional Associations
- » Baking Industry Association, Victoria
- » Australian Society of Baking
- » Baking Industry Association, New South Wales
- » Baking Industry Association, South Australia
- » Baking Industry Association, Western Australia
- » Flour Millers Council of Australia
- » Artisan Baking Association
- » Bakery Training Network
- » Education and Training
- » TAFE institutes nationally that deliver courses in bakery studies
- » SW TAFE
- » Ballarat University
- » William Angliss Institute
- » Registered Training Organisations
- » Higher Education & Skills Group, DEECD (formerly Skills Victoria)
- » Australian industry trade colleges/secondary schools
- » Community
- » South-west Victoria
- » South-east South Australia

Other

New techniques and methods of training are critical to reduce the high number of those withdrawing from their apprenticeship employment. This improved approach to training will establish ways of encouraging a higher skill level of students who enter the baking industry and continue to proceed on to complete the new Certificate IV in baking.

In the past, students have seen baking as a limited career path; one that meant mandatory work at night and offering no further development opportunities. The aim of SWTAFE is to change this attitude and belief by giving these apprentices a defined career path option into Artisan Baking, Bakery Management and Food Science areas.

2. About the Fellow

Name

Ricky Alan Dunn

Employment

Teacher and Training Coordinator – Centre for Food and Primary Industries, SWTAFE

Qualifications

- Apprenticeship in Bread Making and Baking, 1988
 - » William Angliss College, Melbourne Victoria
- Certificate IV in Assessment and Workplace Training (BSZ40198), 2004
 - » South West TAFE, Warrnambool Victoria
- Certificate of Food Hygiene for Food Handlers, 1998 (Levels 1,2,3 updates 2006)
 - » South West TAFE, Warrnambool Victoria
- Diploma of Vocational Education and Training (15560VIC), 2006
 - » South West TAFE, Warrnambool Victoria
- Certificate IV in Training and Assessment (TAA40104), 2007
 - » South West TAFE, Warrnambool Victoria
- Course in Assessment of Informal Learning (21812VIC), 2009
 - » South West TAFE, Warrnambool Victoria

Memberships

- » Bakery Training Network (BTN)
- » Baking Industry Association of Victoria (BIAV)

Short Biography

Dunn has worked in the baking industry for 29 years, beginning as an apprentice in the rural Victorian town of Casterton. As a young apprentice he competed for the LA Judge Memorial award, against the best apprentices in Australia and New Zealand.

After completing his apprenticeship he owned and operated his own bakery café for 16 years. During that time he employed up to 15 staff and trained four bakery apprentices and numerous staff in retail operations.

In 2003 he sold his business and began part-time teaching work with SWTAFE. Dunn has been a full-time Trainee Coordinator in baking for SWTAFE since 2006 and in that time has helped expand their training delivery in baking. Today, Dunn also works alongside another part-time teacher in delivering baking training.

Dunn is responsible for delivering training from relevant training packages to baking apprentices using flexible teaching methods to facilitate a high-level of learning. He delivers training throughout the entire state of Victoria and parts of South Australia which has given Dunn a broader view of the entire baking industry.

Notably, Dunn has previously engaged in overseas travel to assess the viability of helping Chinese bakers migrate to Australia. He is also a valued judge at Baking Industry Association of Victoria (BIAV) baking shows.

3. Aims of the Fellowship Program

The stated major aim of the Fellowship was to undertake the Diploma in German Baking - a bakery '*masters class*' - so the Fellow could attain the skills and knowledge absolutely necessary to deliver the newly accredited Certificate in Advanced Baking in Australia. This course provided a comprehensive understanding of German baking and allowed the Fellow to study preparation and production/processing technologies in relation to the baking industry.

Another stated aim of the Fellowship was to investigate how training was delivered in Germany and other countries in Europe and to help identify new delivery methods suitable to Australian training.

4. The Australian Context

As an attempt to address and reverse the high number of apprentices withdrawing from within the baking industry, a Certificate in Advanced Baking has been developed. This qualification will help retain qualified bakers and reduce the number leaving the trade soon after qualifying by providing improved career pathways. The industry itself also identified the need to attract a higher skill level of apprentices into the trade, by providing a career pathway into management, food science or artisan-style baking.

SWOT Analysis

Strengths:

- Demand for sourdough and other artisan/high-quality breads has increased over last few years
- Ability to offer a higher-level course will help increase baking apprentice retention rates
- Availability of new training programs will help improve productivity and skill levels of staff.

Weaknesses:

- Reluctance by schools and colleges career advisors to offer baking as a career path
- Reluctance by students to enter a career which entails night and early morning work
- Low numbers of trained people - both trades and professional - in the industry.

Opportunities:

- Interaction with schools to increase awareness of different career pathways in the baking industry
- Improved productivity and skill levels of existing qualified tradespeople
- Increase baking apprentice retention rates
- Meet increased market demand for high-quality products.

Threats:

- People needing/wanting to change their diet to avoid high fat/high sugar products
- Reluctance to change production ways
- Increased cost to students/apprentices due to Vocational Education and Training (VET) fee changes.

5. Identifying the Skills and Knowledge Enhancements Required

There are examples of areas in Australian industries where there are weaknesses in innovation, skills, knowledge, experience, policies and/or formal organisational structures to support the ongoing successful development and recognition of individuals and the particular sector.

The focus of all ISS Institute Fellowships is on applied research and investigation overseas by Australians. The main objective is to enable enhancement and improvement in skills and practice not currently available or implemented in Australia and the subsequent dissemination and sharing of those skills and recommendations throughout the relevant Australian industry, education, government bodies and the community.

The areas of applied research for this Fellowship are therefore defined as follows:

Lack of suitably qualified staff in Australia to deliver accredited training for baking industry above Certificate III level

- Undertake suitable qualification through International Baking Academy in Germany and gain accreditation to deliver Certificate IV in Advanced Baking in Australia.
- Improve teaching delivery skills relevant to baking industry and gain understanding of world-class standards.

Without additional and qualified staff, the new course structure will not achieve the stated results with the apprentices involved.

Identified skill shortages in baking industry

- Ability to offer a broader range of training programs to attract and up-skill more tradespeople.
- Increase industry skills overall by offering training in international baking techniques.
- Assist business to expand their product ranges and meet contemporary consumer demands for a variety of bakery products such as pastries, sweets and sourdough bread, Danish pastries and Berliner.
- Ability to offer fee-for-service classes to increase community interest in baking skills, focusing on attracting new workers to baking industry.

Without training of additional skills and knowledge across all sectors of the industry it will struggle to raise the profile of the baking industry in Australia.

Low retention rates for apprentice bakers

- Ability to offer broader range of training programs will assist with career path development.
- Higher-level qualifications will allow bakers to develop their own skills further by offering master classes.

The knowledge gained from the Fellowship will enable current teaching staff to show apprentices the diverse career opportunities in the baking industry.

5. Identifying the Skills and Knowledge Enhancements Required

Lack of suitably qualified staff in Australia to deliver international-level ‘master classes’ for baking industry

- Undertake best practice skills training through an internationally-recognised Baking Academy in Germany.
- Assist others to develop their skills to grow the Victorian and Australian standards of baking to a recognised international level.
- Share knowledge with other trainers in the sector via BTN meetings.
- Ability to offer international-level training in regional and remote areas, encouraging workforce development and staff retention in these areas.

Find suitable ways to share the knowledge gained from the Fellowship Australia wide.

6. The International Experience

As previously stated, upon arrival in Europe, the opportunity arose to visit two internationally recognised establishments and meet with staff and management of these organisations. These visits complimented the previously stated objectives of the Fellowship and expanded the Fellow's understanding of the international activities needed for improvement in the Australian industry.

Location: La Cuisine, International Cooking School, Paris

Contact: Chef Guillemete, Teacher

La Cuisine Paris is a French cooking school in the heart of Paris, offering a variety of different cooking classes in English; from preparing a three-course meal to mastering a perfect buttery croissant.

La Cuisine Paris' staff includes a dynamic team of skilled international professional chefs (French and non-French); all talented in their own specific skill and knowledge areas.

Coming from different backgrounds and experiences, they all share a common value: the desire to share their 'savoir faire' and passion with others. To all attendees, their attitude was – "come discover our kitchen ('la cuisine'): roll up your sleeves, learn something new, share a few laughs and enjoy the entire cooking experience".

The Fellow attended this course in Paris to learn how to make macarons and gained an insight into the different techniques of preparation. The class offered a focus on the creation from start to finish of the elegant and colourful macarons that have become so popular in Australia.

Course attendees worked through the steps from dry ingredients to creating a batter, then piping and cooking to finish with a beautiful box of macarons. One of the most interesting techniques the Fellow discovered was the practice of two differing meringue techniques, being that of French and Italian.



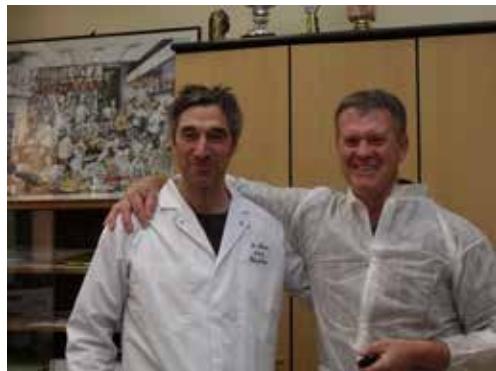
Dunn mixing Macarons



Macarons baking

6. The International Experience

Location: **Belgium Technical College, Vrij Technisch Instituut Spijker Hoagstraten, Belgium (Free Technical Institute Spijker Hoagstraten, Belgium)**



Dirk Maes and Rick Dunn



Front of Belgium College

This school profiles itself as a place where high quality technical and beroepsvervolmakend (initial, in-service and on-going work) education is offered.

By visiting this Belgium baking school the Fellow gained an insight into the process they use to train some of their apprentices. Early in their secondary schooling, students are given the opportunity and/or are assessed to learn skills within the trade sector, whilst still finishing their academic studies.

Dunn discovered that this education system not only encourages this type of training, but also provides a comprehensive program. This program enables students to have the opportunity to go to a technical type college to learn practical skills as well as completing their academic studies. The process is for students to attend the technical college for two days a week and then attend their academic school for the other three days to complete their regular studies.



Students Making Cakes

6. The International Experience

These types of courses are offered as early as their first year in secondary school, which allows students to continue to train in this manner for their entire secondary school time. This type of study allows the students the achievement of finishing their general school studies and also a competent knowledge and training of a skill that they may wish to pursue into a future career path.

These technical schools are set up in a similar way to our Technical and Further Education (TAFE) schools here in Australia. However, unlike Australia, the Belgian approach focuses on the systems and processes needed to make a clearer pathway for those students who wish to work in a trade field.

Australia has begun to offer this type of training process, with a school based apprenticeship system and Vocational Education and Training programs (VET). Both of these programs are currently run through many secondary schools; however there seem to be many barriers in the education system streams that don't allow such programs an opportunity to achieve their full potential.

While speaking with one of the higher trainers of the baking department, Mr Dirk Maes, his comments were that the school has an emphasis of teaching a skill to those interested, along with knowledge and attitudes that focus on discipline and independence. The school maintains close contact with several different industries allowing them to have a close interaction between education and workplace environments. This type of training enables the opportunity for students, as part of their technical training, to be placed in an operating business to use the skills they are trained in.

'Apprenticeships are a career choice not a last choice!' is the approach taken by the Belgian education system.



Bread Plaque and Rick Dunn

6. The International Experience



Finished Cakes by Students

6. The International Experience

Location: Akademie of Baking, Weinheim, Germany

Upon arriving at the academy the Fellow was introduced to his classmates and given a tour of the facilities used during the program and the living arrangements for the following six weeks.



Front of Weinheim Academy



Bakery Training Area

6. The International Experience

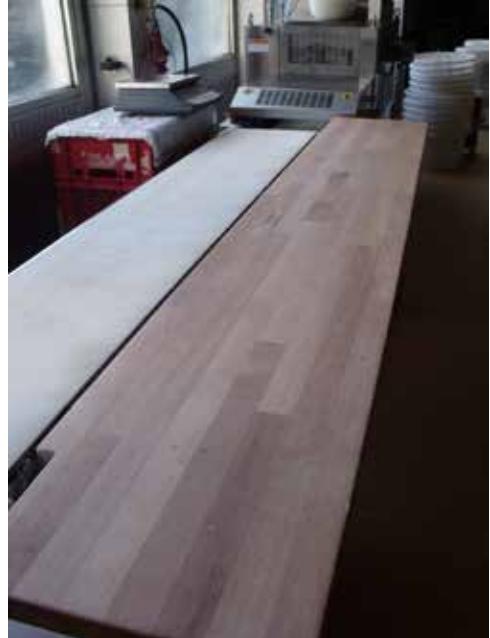


6. The International Experience

The program began early the next morning and commenced with a day of theory. This involved the studies of the German history of baking and the bread/ bakery markets in Germany. It occurred to the Fellow that this topic could be implemented in our Certificate from an Australian view point - as a module to give an insight of Australia's history of bread making and how different styles may have been introduced into our culture. It was astounding to discover that in Germany they produce the largest variety of breads and rolls in the world.

The International Baking Academy, Weinheim, Germany (IBA), believes that over 300 varieties of bread and 1200 types of small rolls and pastries are produced by craft (Artisan) bakers throughout Germany. Furthermore they also stated that since the 1990s the average consumption per person has remained at 80 kilograms plus.

The wheat / rye blends of bread are the most popular in Germany, followed by rye 90 per cent minimum content and then the mixed grain breads. An interesting fact was that they have a very high ratio of



Wooden Benches Used



Stone Floor Bread

6. The International Experience

craft (artisan) bakeries compared to plant bakeries. This is opposite to Australia where we have only a tiny per cent of smaller retail bakeries and the larger per cent being plant bakeries.

Upon finishing the theory for the day, all course attendees were given a tour of the workplace to be used for the coming weeks. The attendees were to discover that they used wooden benches for bread, not stainless steel as commonly found in Australia. Course attendees were also to learn later in weeks to come that wooden benches are commonplace throughout Germany for bread and roll making.

Most of the bread to be baked in the course was baked in electric deck ovens with stone floors. We were to learn the advantage of the oven having stone floors; it enabled the opportunity to bake the bread on the floor of the oven.

The dough was placed on trays then loaded on setters (belts that rolled product quickly into the oven) which reduced the loading time, therefore reducing the amount of heat lost.

To reduce the dough sticking to the trays, double dried potato starch was used which was beneficial in not only preventing the product sticking, but also it does not show up on the finished baked product, unlike flour or semolina.

Participants also learnt about the use of wood fired ovens as well as wood pellet ovens. The wood fired ovens are still used in some specialty bakeries, some of which are quite large, using several ovens to bake their breads.

The pellet ovens use a wood pellet made from compressed sawdust fed into the furnace from a hopper. This oven is entirely computer controlled and the heat and flames are drawn into the baking chamber until it reaches temperature and then shut down to settle and become a solid consistent heat.



Dough on Setter Belts



Wood Fired Oven

6. The International Experience



Pellet Oven

Over the weeks to come, course attendees were to make several different types of breads, rolls, cakes and pastry products, all of which would involve the learning of different techniques of bread making. Of particular interest to the Fellow was the fact that several of these techniques are not widely used in Australia.

One of the highlights in the course was to make pretzels and lye dipped rolls. As a new experience for the Fellow, Dunn found this quite interesting.

Although lye is not commonly used in Australia, the Fellow's belief is that with Australia's wide cultural diversity, such products could well be a potential profit maker. It is an area the Fellow plans to study a little more to get an opportunity to help bakers to produce them.

As the weeks continued, students made loaves of bread using the traditional German sourdoughs and pre-ferments as the basis of production of class items. Course participants learnt how to use a perpetual sour (Anstellgut) to start their sourdoughs and then make the bread the following day. Unlike most sourdough produced here in Australia, this German perpetual sour doesn't need to be fed and nurtured each day. It can be left in the refrigerator for up to a month before refreshing it.

One technique that the Fellow was to learn, also not commonly used in Australia, was that most of the rolls were all dry proofed. They are proofed upside down in wooden trays and only flipped onto the baking sheets just prior to baking.

6. The International Experience



Wooden trays



Cloths in trays

6. The International Experience



Upside down

This technique was especially common with rye breads. The dough is rolled in rye flour and then dry proofed giving the bread a rustic cracking pattern on the finished loaf. The flour dries the surface and as the loaf expands and the surface therefore cracks and the dark rye dough shows through. This was also done with sesame seeds to great effect.



6. The International Experience



Gluten free bread



Filled sweet bread

6. The International Experience



As the course learning continued, participants discovered the techniques for making gluten free breads using different flours and gums. A blend of rice flour, corn flour, potato starch, lupin seed flour and guar gum, xanthan gum and locust bean gum was used. Participants made butter toast bread, sweet bread and multigrain bread. The finished products were of very good quality and quite stable.

The course also included the making of sweet dough, monkey bread, shortbread biscuits and slices. Out of these products the one that was of interest to the Fellow, having commonly made this product previously, was the traditional German Bienenstich (Beesting). The Fellow discovered that the process they taught was very similar to the one used in Australia.

Gluten free bread



Filled sweet bread

6. The International Experience

About two weeks into the course a field trip to visit the K and U bakery in Manheim was undertaken. This is a large production bakery that still uses sourdough to produce their breads. Their production on average is over 45,000 loaves, 130,000 rolls and 45,000 pastries each year.

A tour through the bakery led to general amazement at the amount of bread produced daily and yet they still did a lot of hand moulding/finishing. Their baking techniques included using deck ovens and baking their bread on the sole of the oven. With around 200 employees processing per day (Taglichverarbeitet) 30 tonnes of flour, 1000 kilograms of butter, 1000 kilograms of cream cheese, 1500 kilograms of plums, 1000 kilograms of strawberries, 500 kilograms of apples and 500 kilograms of raspberries, isn't a small operation.

The most interesting observation and experience was that there was no compromise on quality just because it was mass production. The products they sold were all made in the same manner as the ones sold in the smaller outlets.



Sweet bread dough



Filled Sweet bread

6. The International Experience



Monkey bread



International class group

6. The International Experience

Machines were used where quality would be increased, but not if there was any chance of it being compromised.



Display case at K and U bakery



Products made

6. The International Experience



K and U bakery products

Upon arrival back at the academy, an unexpected field trip arose when the class was invited to tour a family owned and operated bakery of one of the German master students, Felix Remmele. This involved a short trip down to Ludwigsburg to stay Friday and Saturday nights.



Display case

6. The International Experience

The bakery was in the building of an old bank which was operational during the Second World War. The flour silos were in an old underground bomb shelter, as well as the heat recovery system that was used to help heat the water for the bakery using heat given off from the ovens during baking.



Felix Bakery

The tour began after hours which enabled the participants to take a look at the pastry cooking section of the bakery whilst there was no production. It was astounding to witness how much chocolate work was produced in the bakery from the most basic skill level to advanced.

Later (around midnight) the touring participants were able to re-visit this section during their full production time and although extremely busy, it was running like a well-oiled machine. Tortes, cheesecakes and all different assorted sponges were being made and decorated.

The next morning the planned visit was to the main bakery during business hours, where all the breads rolls and pretzels were made. All the staff were well organised, highly skilled and working efficiently.

Electric rack ovens and deck ovens were used; however all the pretzels were hand tied as with sourdough based products, is the only way their bread is produced.

Felix explained that most of their bakers work six days a week and everyone including the waitresses work very hard. It was not surprising at this stage of our visit to discover that all the pastry cooks, bakers and service staff have a very good work ethic and consider it a privilege to do their job.

6. The International Experience

Having enjoyed our field trip and producing lots of savoury and bread products back in the academy, the course focus changed to making cakes and tortes. Original Black Forest Cake, Sacher Torte, Roulade, decorative Roulade, traditional apple strudel and many more styles of cake were produced by participants.

It was very interesting to see how the instructors of the Diploma ensured all the products made during the course fitted into real life production situations. They also showed the participants many tips on how to use one type of product several different ways.

All the cakes and sponges produced were made from scratch using traditional German methods. Participants learnt to use gas rings under the mixing bowl to heat the eggs and sugar mixture, yet another technique that was something new to the Fellow, was doing a volume test on the batter to check for the correct amount of aeration.

Making the strudel, participants were shown the traditional method of making dough, leaving it rest and pulling it out by hand. It was a great experience. The Fellow was a bit disappointed to find out that most strudel in Germany is now made using puff pastry, as it is here in Australia.



Stollen

6. The International Experience

Something else that the Fellow found quite astounding was that even in the 21st Century, most products in Germany are still made under strict guidelines. For example, one of the most commonly baked cakes, the Sacher torte, must be three or four layers with equal parts of chocolate to flour, the jam must be apricot with at least 60 per cent fruit content and divided into 12 or 16 portions with Sacher written on every piece or every second piece with an 'S' on the alternate ones.



On the Friday we were given the opportunity to remake the apple strudel using the techniques taught earlier and were thrilled that the strudel baked fantastically. Course participants took a bit more time with preparation and had the opportunity to allow the dough to rest a bit more, so when it came to stretching it out using the backs of our hands it stretched beautifully without tearing. Most participants were able to get the dough thin enough to read our recipe through the dough.

As the end of the course was approaching, participants were given a week to concentrate on the areas of puff, sweet and Danish pastry and also croissants. Participants made Berliners, Savoury snacks and Stollen.

It was discovered that puff pastry products are not overly popular there as here in Australia. Overall the methods of production for croissants and the pastry varieties did not differ much from the production methods in Australia.

6. The International Experience

The most interesting product produced during this week was Stollen. This product is highly enriched dough with lots of fruit, butter and nuts. Once baked and cooled it is dipped into melted butter and then rolled in caster sugar. Later it is dusted heavily with icing sugar before being packed into plastic bags. Stollen has a shelf life of around twelve months as the butter and sugar coating, plus having high fat/sugar content, preserve it. Some bakeries in Eastern Germany, particularly Dresden, make approximately 80 per cent of their annual turnover on this product alone, with most sold at Christmas time. It is not surprising to find that this product is a common gift at Christmas time.



Stollen

After learning the production and history of Stollen, course participants were encouraged by the Director of the Academy, Bernd Kutscher, to take a visit to the town of Dresden. A number of course attendees took the opportunity the next weekend to travel down to Dresden and visited a bakery owned by a friend of Kutscher.

6. The International Experience



Outside Dresden bakery



Inside Bakery

6. The International Experience



Inside bakery



Inside bakery

6. The International Experience



Wippler bakery town outlet

Upon arriving at the bakery the participants were surprised to see it set in a rural countryside along a river with a museum next door and stables and horses. The Fellow was surprised at the amount of customers in the bakery considering the location of the bakery and the lack of local attractions. However, upon further touring it was discovered that the high stone wall opposite the bakery actually housed a huge castle, which explained the amount of people in the area.

Nearing the end of the course we had a few days of various products to make. A couple of days were used in the production of Mediterranean snacks and decorative breads. Most of the snacks were produced with puff pastry filled with capsicum, parmesan, olives, prosciutto and a variety of other products. Although a relatively simple product to produce, it showed a good way to use different ingredients and produce a very tasty snack.

6. The International Experience

Course participants were taught different methods to make bread plaques and animal shapes which led to different techniques of shaping and joining dough.

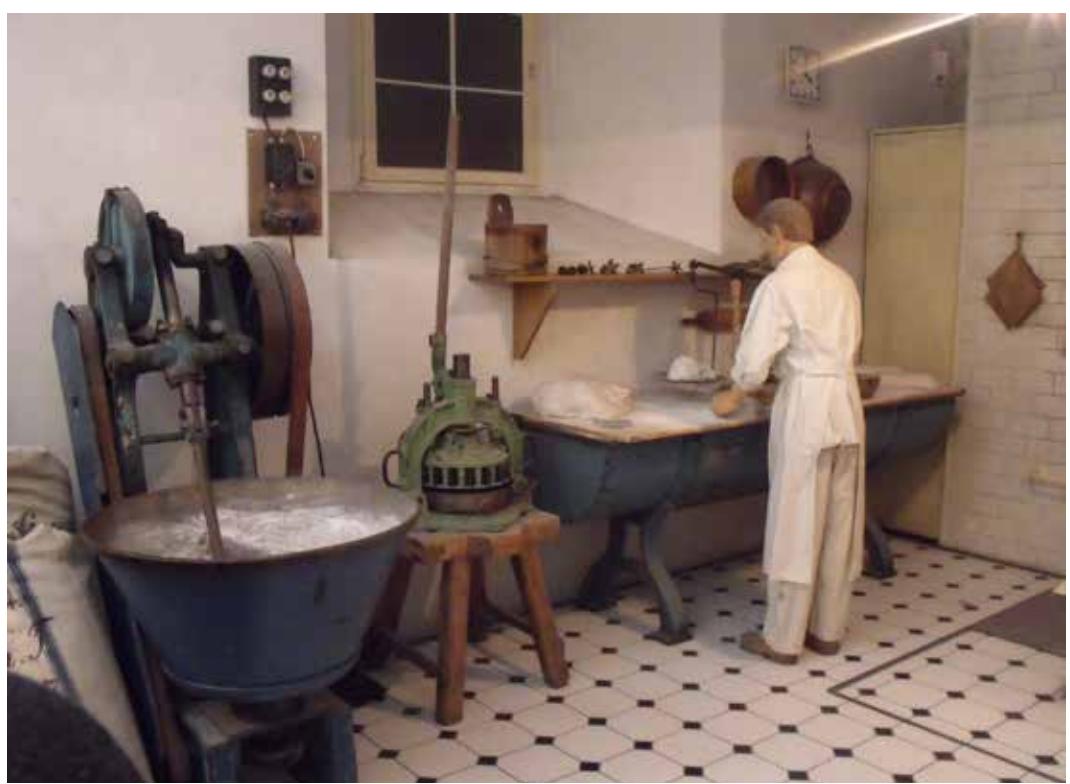


One technique that the Fellow was not familiar with was to use oil and some parts of water on others to get the oiled sections to separate and curl up when baked, thus giving the loaves made a unique appearance.



Museum der Brotkultur

6. The International Experience



Inside Museum der Brotkultur

6. The International Experience

The course presentation dinner was held at the Academy and involved all the teaching staff, along with the Director of the Academy. At the presentation ceremony following the dinner, participants received their certificates and had photos taken. This marked the end of the stay at the Academy and all went home to reflect on the knowledge gained.

Concluding Remarks

The Fellow's experience in Germany will be one that he will never forget. Dunn gained a fantastic amount of knowledge about the different techniques in which bread and other products are successfully made.

The knowledge gained in using and producing sourdough and other bread varieties was invaluable. Receiving tips on the production of the tortes and Danish pastries was also immense. The friendship and commercial networking gained from working with others from all around the world was also extremely rewarding.

Through his experience overseas, the Fellow now feels confident that he will be able to enhance his student's knowledge of bread and production methods. One of the main methods Dunn learnt that he plans to include in his teaching to baking apprentices is the more traditional style of bread production. The Fellow plans to demonstrate the use of sourdoughs as a base, to replace many of the chemical improvers currently added to bread, in both course instruction and in practising bakeries.

To be able to produce good quality breads without major disruption to normal production time and methods will be of great benefit to the Artisan and retail bakeries.

The Fellow is grateful for the opportunity given to him to work alongside other bakers from around the world and to meet other current master baking students. He is positive that the knowledge and experience gained by this course will be invaluable. To have the opportunity to talk and work with the Master Bakers of Germany was an added bonus and Dunn is now confident that these experiences will help him enhance the content of the planned Certificate to be delivered by SW TAFE.

All of the experiences and opportunities given to the Fellow during this Fellowship research and discovery trip have given him a better insight and understanding of the level of baking experience in Australia currently when compared to European levels and what level of skills and knowledge is required in Australia to train our students to complete the proposed Certificate.

7. Knowledge Transfer: Applying the Outcomes

Through regular sessions with the Fellow's students, he will be able to pass on the knowledge he has gained. The Fellow has already demonstrated the German bread method and perpetual sourdough to several bakeries that he travels to and worked with the students and the bakery owners to develop their own sourdoughs.

Dunn has developed and held several workshops in different locations on the preparation and use of the sourdough. He believes there is a massive opportunity for the smaller bakeries to take back some of the market share by producing a higher quality product comparable to that available overseas.

Under the Fellow's leadership, SWTAFE are planning to deliver a number of sessions for the general public, as well as local bakers, so they can make the breads themselves and to find out what can be offered in the way of the Certificate IV in Advanced Baking. Further sessions will be run according to public demand.

As part of the BTN, the Fellow will be passing on some of the skills learnt to colleagues at other training organisations by having a training day at a suitable location in Melbourne (possibly William Angliss, Holmesglen or Northern Melbourne Institute of TAFE (NMIT))

One very interesting fact to pass on to students and to the BTN was that Germany has a very high ratio of Craft (Artisan) bakeries compared to plant bakeries. According to data from the IBA, nearly 70 per cent are craft as opposed to 30 per cent larger plant bakeries. The percentages in Australia are nearly exactly the opposite with the retail stores capturing 28 per cent of the market compared to 72 per cent for the larger manufacturers (*The Australian Baking Industry, A Profile* - Department of Agriculture Fisheries and Forestry, 2003).

8. Recommendations

Government

The Fellow highlights the need for the government, through the education system, to encourage more students into the trade area and support appropriately apprenticeships as much as possible. Without high quality apprentices coming into the trade, keeping them in with good training, advancement prospects, guidance, job satisfaction and rewards, the trade will go backwards.

The secondary school system historically has encouraged students mainly to completing VCE and moving into university studies rather than trades and applied learning. This has changed a little over the past few years and must change further. If the majority of students who are encouraged into this trade area demonstrate low literacy, behavioural issues and a lack of motivation, what hope do any of the trades have of surviving? This trade requires dedication, a creative desire and a sense of wanting to learn and make a difference. It would be encouraging to see schools promote trades to students such as baking as a serious career choice.

Education & Training

Dunn recommends that our BTN trainers together try to get certified to deliver the Certificate IV in Advanced Baking as quickly as possible. There is a definite need for a clear career path that can lead to bakery/ business management, Artisan baking or even the scientific side of baking. This is a vital move to attract more highly motivated students.

Delivery must be done in a flexible manner to suit the needs of potential students as these students are usually older with more responsibilities both at work and home. A mixture of practical classroom based, on the job and online delivery would be best suited to a successful implementation.

Industry

The Fellow suggests that some areas and organisations in the baking industry are heading in the right direction, but others need to focus on the industry as a whole, not just their own business or store. This means that more of a focus on training of staff to allow a sense of achievement and more job satisfaction must be implemented (the bakers in Germany aren't paid any more than in Australia but have a noticeably higher job satisfaction rate). This will help with the poor retention rates once qualified and encourage new workers as they won't see it as a dead end job.

It is certain that the Certificate IV in Advanced Baking will help with this scenario. Some owners will say, "What if I train them and then they leave?" The more pressing problem and therefore question should be, "What if they stay, and you still don't train them"?

This will in time help to alleviate the problem identified at the moment where it is very difficult for existing bakers to sell their business if they wish to retire, as there is a shortage of motivated young people with a high enough skill set to be able to step up and become owners or managers.

International Specialised Skills Institute

Skills and knowledge deficiencies remain throughout the Australian Baking Industry in respect to training methods and levels of certification. The ISS Institute should provide further Fellowship opportunities in conjunction with the Government and the Australian Baking Industry to enhance levels of knowledge in these areas. The more professional have the opportunity to compare methods and knowledge and introduce those developments that will improve the industry as a whole, the better off the baking industry will be.

9. References

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