



**THE SOUTHERN  
AFRICAN SOCIETY  
FOR COOPERATIVE  
EDUCATION**

# **THE AFRICAN JOURNAL FOR WORK-BASED LEARNING**

**VOLUME 1, NUMBER 1**

**ACTING EDITOR: DR RONEL BLOM**



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Website: [sasce.net](http://sasce.net)

Email – Acting Editor: [Ronel.Blom@wits.ac.za](mailto:Ronel.Blom@wits.ac.za)



**The Southern African Society for Cooperative Education**

# **The African Journal for Work-Based Learning**

**Volume 1 Number 1**

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***Inaugural edition***

**Work-integrated learning and employability**

# The African Journal for Work-Based Learning

Volume 1 Number 1

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## FOREWORD

*Shakeel Ori*

*President: Southern African Society of Cooperative Education*

On behalf of the Southern African Society for Cooperative Education (SASCE), I welcome you to the inaugural issue of ***The African Journal for Work-Based Learning***.

While the journal is new, cooperative education and work-based learning are not. The former technikons (now called universities of technology) in South Africa introduced the practice many years ago, to the great satisfaction of students and workplaces. Likewise, cooperative education (CE) and work-based learning (WBL) have been practised elsewhere in the world for many decades. In fact, it can be argued that work-based learning was the mainstay of many a trade qualification.

Nevertheless, for those practitioners who have been involved in CE and WBL, the publication of this journal is overdue. The interface of education and work has long been seen to be problematic. Higher education institutions are keen to ensure that their graduates are valuable assets to their prospective workplaces, but the refrain for many years has been that there is a mismatch between the outputs of institutions and the expectations of workplaces. This journal will attempt to address the intersection of education and work.

The establishment of this journal comes at an opportune time in the evolution of education systems throughout the world. Academic learning integrated with work-based learning, and vice versa, has never before generated such interest. As CE becomes an ever more important strategy across the world, where industries are requiring graduates that “can do”, South Africa is amongst those countries that are entrenching this concept through its emerging post-school education system, the Nationals Skills Development Strategy and the Human Resources Development Strategy. In South Africa, several accords have been established between the education and economic sectors, not least the accord that commits employers to ‘make every workplace a training space’<sup>1</sup>. This is in recognition and acknowledgement of the fact that skills development and post-school education require partnerships and cooperation between academia and the workplace – in other words, they need cooperative education.

The SASCE Board decided on the name of ***The African Journal for Work-Based Learning*** to reflect a focus on the continent and its needs. While lessons can be learnt from the developed west, we believe that it is crucial that this journal showcases African examples of CE and WBL. African economies, more often than not, cannot be compared to the economies of first-world countries and work placements are, therefore, not the simple matter they seem to be in developed economies. Home-grown solutions and examples are, consequently, called for.

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<sup>1</sup> The slogan of the South African Minister of Higher Education and Training, Dr Blade Nzimande

Thus, this journal will welcome contributions on all aspects of CE and WBL, including work-integrated learning (WIL), service learning, learnerships, skills development, community-based learning, and other forms of WBL, especially as these relate to an African context. Once the editorial board has been established, we will be identifying a particular theme for each issue.

It is further hoped that the academy, as well as employers, will find the articles helpful. The journal, therefore, will accept reviewed research papers, discussion documents, and examples of good practice, and will provide a platform for relevant debates.

Furthermore, it hopes to become the flagship publication of SASCE, a regional body that embraces industry, government, organised business, organised labour, and public and private academic institutions as partners in education and training.

While the inaugural edition does not yet have an editorial board, the SASCE Board felt it was important that the journal not miss its first deadline of publishing by October 2013. A number of experts have been nominated to serve on the editorial board, and these individuals will be approached to take up their responsibilities and to nominate an Editor-in-Chief before the next edition in April 2014. The SASCE Board wishes to thank Dr Ronel Blom for acting in this capacity for the inaugural edition.

It is SASCE's intention to seek accreditation as an academic journal from the South African Department of Higher Education and Training (DHET). However, such a status will depend on the quality of submissions. We therefore urge the sector to submit articles for consideration. (Notes for contributors are at the end of the publication.)

SASCE is excited to spearhead the first African publication of this nature. We invite you to come along on this journey!

*Shakeel Ori*

## EDITORIAL COMMENT

Ronel Blom<sup>2</sup>

*Acting Editor*

Let me add my own words of welcome to the readers of the new ***African Journal for Work-Based Learning***. Our hope is that this journal will contribute to the increasing focus on the pedagogical value of learning through practice and experience. For this reason, this inaugural issue has been given the subtitle of *Work-integrated learning and employability*.

While there is often disagreement about the definitions for the terms increasingly being used for learning through work, the value of learning through doing is not disputed. We should, nevertheless, over time, come to some agreement as to what we mean by work-based learning, work-integrated learning, experiential learning, practice learning – the list goes on. Perhaps this journal can serve as a platform to achieve conceptual clarity on these and other emerging terms used throughout the world.

On that note, let us talk about *work-integrated learning (WIL)* and *employability*. First and foremost, WIL is about *learning*, and not about working. Work is the vehicle for learning. Employers, nevertheless, benefit from their involvement and participation in the process, not least by being able to identify the best new potential entrants to their workplaces. Likewise, *employability* is about gaining those attributes that make a young person attractive as an employee, but it does not necessarily equate to employment, nor should it create the expectation that it does. WIL and employability are not the solutions for unemployment. Rather, they enhance the learner's chances for a better fit and a seamless transition from learning to work. It would be wrong, therefore, to create the impression that if every young person gained an opportunity to undertake some form of work-based learning, the unemployment rate in South Africa and elsewhere would be reduced. However, as we see in the articles included in this journal, work experience hugely enriches the learning experience and reduces the mismatch of educational outcomes and workplace requirements. But that is not enough – for WIL to have its full benefit, we need to ensure that the regulatory environment is conducive to the practice. If every workplace is to become a training space, then the education and training system, together with business and industry, should be incentivised to undertake the necessary work to encourage implementation.

The first contribution deals with exactly this matter: Mthembu points out that systemic and institutional policies need to be put in place in order for the practice to become entrenched. He maintains that unless the steering mechanisms applied by the Department of Higher Education and Training (DHET), namely planning, funding and quality assurance, take cognisance of work-based

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<sup>2</sup> Ronel Blom is a researcher in the Centre for Researching Education and Labour (REAL Centre) in the Wits School of Education, University of the Witwatersrand.



learning, institutions have little chance of successfully implementing WIL. He proposes that a quadrilateral partnership, between government/DHET, universities and other education providers, business/industry, and interested societal organisations like the South African Society for Cooperative Education (SASCE) and the South African Technology Network (SATN), should put in place a clear policy and practice framework for WIL.

Against the background of an emerging policy framework, WIL is already practised widely. The second contribution by Rizzo exemplifies this kind of partnership. She describes the evolution of a multi-layered collaborative approach to the development of engineers. The partnership is between the Nelson Mandela Metropolitan University (NMMU), the Nelson Mandela Bay Municipality (NMBM), and the Automotive Industry Development Centre (AIDC). What makes this contribution particularly interesting is that the partners recognised that the pipeline of new engineers is just as important as the periods of work-integrated learning.

The next article by Taylor and Govender deals with workplace readiness. Working at the coalface of implementation, they found that the most basic of skills, such as seeking placement positions, developing curricula vitae, and using appropriate communication, are issues that may prevent students from gaining workplace experience, and, ultimately, gaining those employability skills that will enhance their chances to be employed. Their most important finding and recommendation is that every student, regardless of discipline, should be exposed to a module where they are introduced to those skills that will prevent them from making avoidable mistakes, including the job-search and recruitment processes; interviewing skills; business etiquette; personal branding and grooming; time management; communication; and dealing with diversity and cultural sensitivity.

Van der Merwe's article starts to talk about one of the steering mechanisms mentioned in Mthembu's input, namely the monitoring of workplace practice in order to ensure greater synergy between the classroom and the workplace. Innovative practices, such as the combined assessment of student performance by qualified radiographers working with students (the employer), the clinical lecturer (the institution), and the WIL coordinator/lecturer, seem to enhance the learning experience. Her paper also suggests some quality-assurance measures that will help to standardise WIL practice and give greater credibility to the learning taking place in the workplace.

The final contribution by Pop and Barkhuizen illuminates the attributes that will enhance the employability of candidates. Through their placement project at an information, communication and technology (ICT) company in Namibia, they discovered that both students and the employer highly value the so-called soft skills that candidates bring, including issues such as a good work ethic, understanding the workplace etiquette, and good and appropriate communication for a workplace. In terms of the expectations of the application of technical skills that students bring to the workplace, it became clear that WIL can never cover the full syllabus – in some workplaces they simply may not have access to all the technology that the student has been exposed to in the institution. Student expectations, as well as workplace/employer expectations, need to be carefully managed and planned for.

Finally, in both the last two articles, another theme has emerged, namely, the importance of mentorship in the workplace. Van der Merwe raised the issue of mentorship training, while Pop and Barkhuizen pointed out that mentorship selection is central in making the learning experience meaningful. Good mentors do not only assist with technical matters, but also with inducting young

people into the ways of a formal workplace. Since mentorship seems to be pivotal for the success of work-based learning, the April 2014 issue will be dedicated to this theme.

I trust you will enjoy this edition!

*Ronel Blom*

## ***WIL-power remains at the level of WILL and not POWER***

Panel discussion input to the World Association of Cooperative Education (WACE) plenary session during the 18<sup>th</sup> World Conference on Cooperative and Work-Integrated Education, held in Durban, South Africa, from 24 to 27 June 2013, with the theme *WIL-power – from policy to practice: exploring models of excellence*

Thandwa Mthembu<sup>3</sup>

### **ABSTRACT**

*In the first part of this short input to the World Association of Cooperative Education (WACE) plenary session during the 18<sup>th</sup> World Conference on Cooperative and Work-Integrated Education, held in Durban, South Africa, the lack of an enabling policy environment for the implementation and practice of work-integrated learning (WIL) is discussed. It maintains that policy should take cognisance of both systemic and institutional frameworks, but that institutional frameworks lack clarity because no systemic clarity exists yet. A quad-helix effort, involving partnerships between government, universities and other education providers, business/industry, and interested societal organisations, is, therefore, required for the successful wide-scale implementation of WIL. This should be strongly backed up by research of the theory and praxis of WIL.*

*The second part of the paper shares the successful Strategic Transformation of Educational Programmes and Structures (STEPS) process introduced at the Central University of Technology, and highlights the graduate attributes that are core to the outcomes of the revised programmes.*

### **Introduction**

The theme, *WIL-power – from policy to practice: exploring models of excellence*, of the World Conference on Cooperative and Work-Integrated Education presupposes that a policy for work-integrated learning (WIL) has been settled and that South Africa is now ready to move on to implementation/practice, if such a distinction between theory and practice is possible. However, in South Africa, we simply do not yet have a coherent and coordinated policy and practice framework. In a sense, *WIL-power* remains a WILL without power – there is hardly willpower to make it work systemically and institutionally. It is against this background that this input to the plenary discussion is made.

### **The policy and practice environment**

In South Africa, there are two levels of the policy and practice environment that require urgent attention, namely, the systemic and the institutional. The latter, in turn, could be sub-divided into knowledge-centre based and workplace-based institutional policy and practice. The lack of a policy framework has inhibited institutions from devising these policies and practice with any kind of

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<sup>3</sup>Thandwa Mthembu is Vice-Chancellor of the Central University of Technology.

clarity; which prevents *WIL-power* from being optimally practised by universities in partnership with industry.

Likewise, at a systemic level, the implementation and practice of work-integrated learning are being inhibited. The three steering mechanisms utilised in the higher education sector, namely, planning, funding and quality assurance, do not consider WIL at this stage. *WIL-power* seems to be a mere WILL without power for these three mechanisms. Simply put, WIL is not planned for, is not funded, nor is it quality assured. While there are commendable attempts from the Department of Higher Education and Training (DHET), including the establishment of a directorate in the department and an emergent facilitation of WIL, as well as the efforts from the Council on Higher Education (CHE) with their recent production of a WIL guideline, there is no dedicated funding for WIL, there is no quality assurance system, and WIL is not necessarily interlinked with planning.

Thus, we have a long way to go at the systemic and policy level to recognise and entrench *WIL-power*, rather than leaving it at the level of a mere WILL without power. In this respect, there should be a concerted quad-helix effort from government/DHET, universities and other education providers, business/industry and interested societal organisations like the South African Society for Cooperative Education (SASCE) and the South African Technology Network (SATN) to put in place a clear policy and practice framework for WIL. Then, with such a framework, we could move from coherent policy to coherent and coordinated practice. (In November 2009, I introduced the concept of a quadruple helix (quad helix) in contradistinction to the now famous triple helix. In addition to the university, government, and business, you need civil society and its organisations to make partnerships work.)

### **Are South African universities doing enough in research and innovation for *WIL-power*?**

Except for the Work-Integrated Learning Research Unit (WILRU) of the Cape Peninsula University of Technology (CPUT), there are hardly any other knowledge centres in South Africa that focus on work-integrated learning as theory and praxis. In the absence of a groundswell of studies producing credible research and innovations, we run the risk of WIL being seen as a hollow pedagogical claim by universities of technology, without much empirical evidence to show that it works better than many other pedagogical strategies available from traditional universities.

### **The proof of the pudding is in the eating**

Between 2010 and 2012, the Central University of Technology (CUT) embarked on a curriculum-transformation process, during which we discovered many things about the nature of a university of technology in which WIL and skills are an integral part. This innovative process is well recorded – though briefly – in a paper published in 2012. I am drawing from this paper for this input (see References).

There are at least five aspects that differentiate a university that has introduced WIL from those that have not, and these outcomes should be clearly discernible in the marketplace through (paraphrased from Mthembu, Orkin and Gering, 2012):

- The unique graduate attributes
- The labour-market-oriented niche of the curricula

- The learning environment, which encourages technologically infused teaching and learning methodologies and problem-based approaches
- The culture of entrepreneurial academics who are always focused on what happens in the work environment in theory and practice and on what innovations could be brought to bear to transform the workplace; entrepreneurial academics and academic entrepreneurs are important
- A research-inspired culture that bridges the gap between theory and practice

Below, I focus more on graduate attributes because the proof of the pudding is in the eating:

### **Graduates are *trained to do something***

Graduates are technically competent: they are sufficiently expert in the field to be able to be immediately productive and employable in the work environment:

- They are computer numerate: in other words, they are able to use the computer packages available in the specific work environment and have sufficient conceptual ability to adapt to new packages.
- They are business literate: graduates are able to write clear reports and comprehend workplace documents.

### **Graduates are *trained to question***

- Graduates are conceptually able: they are confident in terms of conceptual material, as in the more abstract elements of the syllabus.
- They are articulate: graduates are able to test ideas and raise thoughts one-on-one and in groups.
- They have problem-solving skills: graduates are able to participate in actual innovation.

### **Graduates are *trained to innovate***

- Graduates are able to plan: they are confident of their planning and project-management skills.
- They are connected: graduates are able to source, assess, and apply work-related information, e.g. from the internet.
- Graduates are innovative: they are able to use knowledge and research products to produce something new: products, processes, services.

### **Graduates are *trained to interact***

- Graduates are socialised: they are able to work with co-workers and supervisors.
- They are articulate: graduates are able to express themselves and offer ideas and opinions in discussion with peers and seniors.
- Graduates are able to work: they work both in teams and independently, as embodied in the course teaching methodology.

### **Some curriculum development initiatives: theory and praxis in action**

Following the far-reaching policy changes that transformed the former technikons to universities of technology, CUT undertook a review of who it admits and teaches, what it teaches, who teaches it, how they teach it, and what the overall outcomes should be. This review process became known as the STEPS process (Strategic Transformation of Educational Programmes and Structures process). The process culminated in nine new model programmes that fit the philosophy of a university of technology in South Africa and that could be used as models to develop or revise other curricula

across the board. These programmes are in renewable energy, water management and hydrology, transport and logistics, agricultural extension, a new Bachelor of Education (BEd) programme, visual arts and design technology, and community development work. They have all been approved by DHET and the intention is to implement them in 2014 and beyond. We believe these programmes will be equipping our students with the graduate attributes in terms of specific niche-oriented qualifications that will actually secure them mid-level jobs and viable career paths. These elements should be central to WIL.

## References

Mthembu, TZ. 2009. From academic capitalism to strategic partnerships for socio-economic development. An invited paper presented at the New Generation University Conference, Vanderbijlpark, South Africa, 17 November 2009.

Mthembu, TZ, Orkin, M, and Gering, M. 2012. Towards distinctive and developmental curricula at UoTs: the STEPS process at CUT. *South African Journal of Higher Education (SAJHE)* Vol. 26 No 2: pp. 214–231.

# **A case study of an experiential learning and graduate placement partnership between the South Africa Automotive Industry Development Centre (AIDC) and the Nelson Mandela Metropolitan University (NMMU)**

Ronel Rizzo<sup>4</sup>

## **ABSTRACT**

*This paper provides details of an experiential learning and graduate placement partnership aimed at the development of skills of young engineers entering the automotive industry in the Eastern Cape Province in South Africa. The Eastern Cape is the hub of the automotive and automotive component manufacturing industry in the country. The partnership was established in 2005 and has evolved and grown in complexity. Now it includes programmes aimed at recruiting high-school pupils to enter engineering studies, winter schools, bursaries, experiential learning, and graduate in-service training opportunities for students in the automotive industry. The current focus is to ensure that engineers are equipped with the necessary skills that will add value to the sector. The students involved are enrolled in electrical, mechanical, industrial, and mechatronic engineering disciplines. Emerging themes emanating for the study include issues such as employability, workforce development, the application of academic knowledge in the workplace, work readiness, and professional development.*

## **Background**

The Automotive Experiential Career Development Programme was initiated by the Automotive Industry Development Centre (AIDC) in 2005. The programme was presented for six consecutive years, with the last one held in 2010. The Nelson Mandela Metropolitan University (NMMU) in collaboration with the Nelson Mandela Bay Municipality (NMBM) and the Automotive Industry Development Centre (AIDC) created and developed this programme to address the shortage of learners from previously disadvantaged high schools that qualify for engineering studies and hence feed the engineering skill shortages in South Africa (Du Preez, 2012).

Figure 1 summarises the number of matriculants who wrote the final mathematics examination from 2008 until 2011 in the Eastern Cape region. It also indicates the number of learners who passed with a 30% as well as a 40% average for mathematics. A total of 157 188 learners wrote mathematics during the four-year period, with a total of 90 444 passing with an average of less than 50%. This translates to a percentage rate of 58% of the learners who wrote mathematics (90 444) during the last four years who do not qualify to study engineering at a university. Figures indicate that, on average, only about 8% of all learners have the results higher than 60% that qualify them for entry to degree programmes. These figures only indicate the potential of learners to study engineering; the reality is that most of these students choose careers in the medical, finance or architecture fields (Du Preez, 2012).

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<sup>4</sup>Ronel Rizzo is Senior Manager: Graduate and Student Placement, Nelson Mandela Metropolitan University.

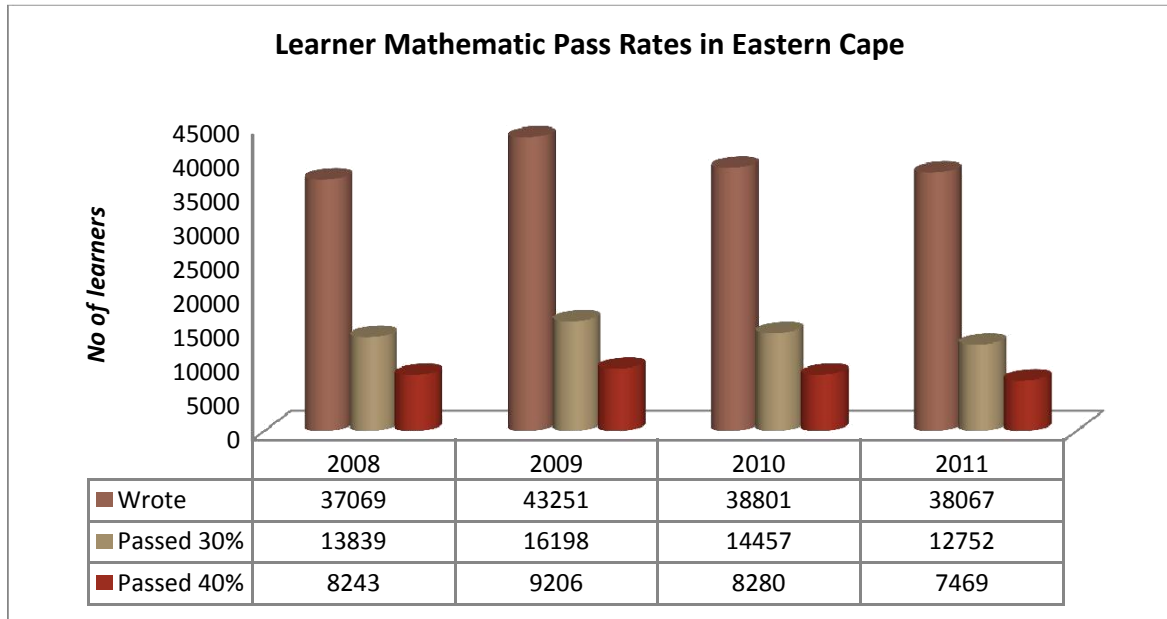


Figure 1: Mathematic pass rates in Eastern Cape (Du Preez, 2012)

The international benchmark of an average population per engineer shows that South Africa lags behind other developing countries. In South Africa, one engineer services 3 166 people, compared to Brazil's 227 and Malaysia's 543 people per engineer. The discrepancy in the benchmark points to one thing: South Africa severely lacks engineers. The NMMU introduced a development programme to overcome this skills shortage in the region. Any sustainable solution aimed at addressing the skills shortage needs to take into consideration all levels of education.

The figure summarises the process that is implemented and that potential learners can pursue.



Figure 2: Development programme (Govan Mbeki Mathematics Development Unit, 2012)

### Capacity building

NMMU and specifically the Engineering Faculty desires/strives to build its capacity in:

- Workplace-oriented training
- Technology transfer by means of formal tertiary education
- Technology transfer to local industry by means of formal certificate courses (industry) and projects
- Research and development
- Collaboration with local and national universities/institutes of learning



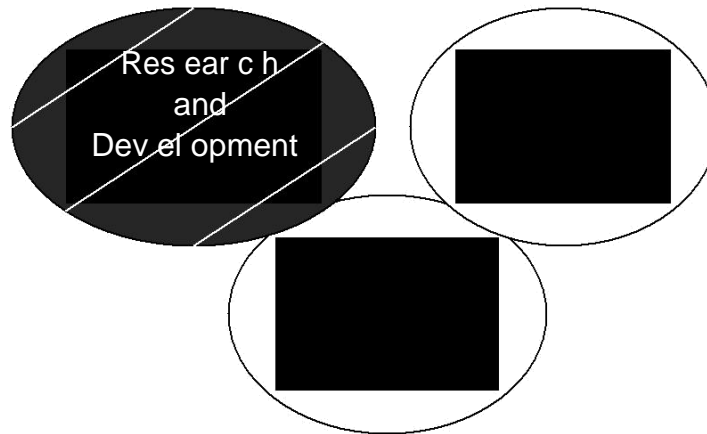


Figure 3: Collaborative capacity building model

The AIDC desires/strives to:

- Establish human resource development capacity relevant to the current and future needs of the automotive industry in South Africa
- Provide funding for the establishment of said capacity (Contract for the establishment of Human Resources Development Capacity in the Automotive Industry between the Automotive Industry Development Centre (Pty) Ltd and the Nelson Mandela Metropolitan University, 2011)

#### **Overview of the Automotive Experiential Career Development Programme (AECDP)**

The Automotive Career Development Programme (AECDP) consists of the following initiatives:

- Govan Mbeki Mathematics Development Programme (MDP)
- Engineering Winter School
- Bursary allocation
- Engineering studies at NMMU
- Employment in manufacturing industry

The MDP consists of Grade 12 learner development over a 14-week period on Saturdays for selected high schools. The programme also includes the advancement of educators through short learning programmes as well as the examination preparation of grade 12 learners.

The Engineering Winter School is presented over a period of two weeks in the June/July school holidays. Thirty learners are chosen and invited to attend the programme, but in 2009, 60 were invited. The top performing learners from the Govan Mbeki Mathematics Development Programme (MDP) are selected for the Engineering Winter School. The programme opens the world of engineering to previously disadvantaged learners and gives them an idea of what engineering entails.

The AECDP encourages local industries to award bursaries to qualifying students to follow careers in engineering. One of its major objectives is to address critical skills shortages directly within the automotive and manufacturing sectors, thereby alleviating poverty by increasing the employability of the previously disadvantaged communities within the NMBM and the Eastern Cape (Du Preez, 2012).

## High school participation in the Engineering Winter School

A total of 41 high schools have participated in the Engineering Winter School since 2005. Bethelsdorp High School has been the most active in the programme, with 20 learners.

## Bursaries

The number of bursaries offered to learners who attended the Automotive Experiential Career Development Programme Winter School totals 258. These bursaries include all learners who were registered with the NMMU.

## Impact of the Automotive Experiential Career Development Programme (AECDP)

The graphs below depict the ethnicity and gender of the students who participated in the Mathematics Development Programme (Du Preez, 2012).

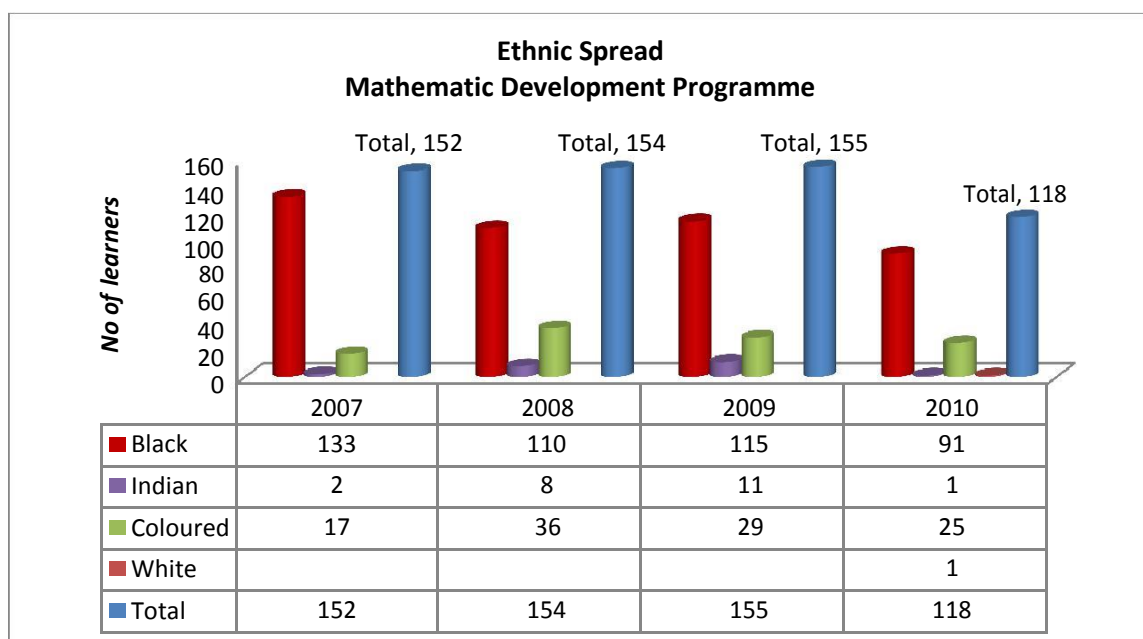


Figure 4: Participants from different population groups–MDP

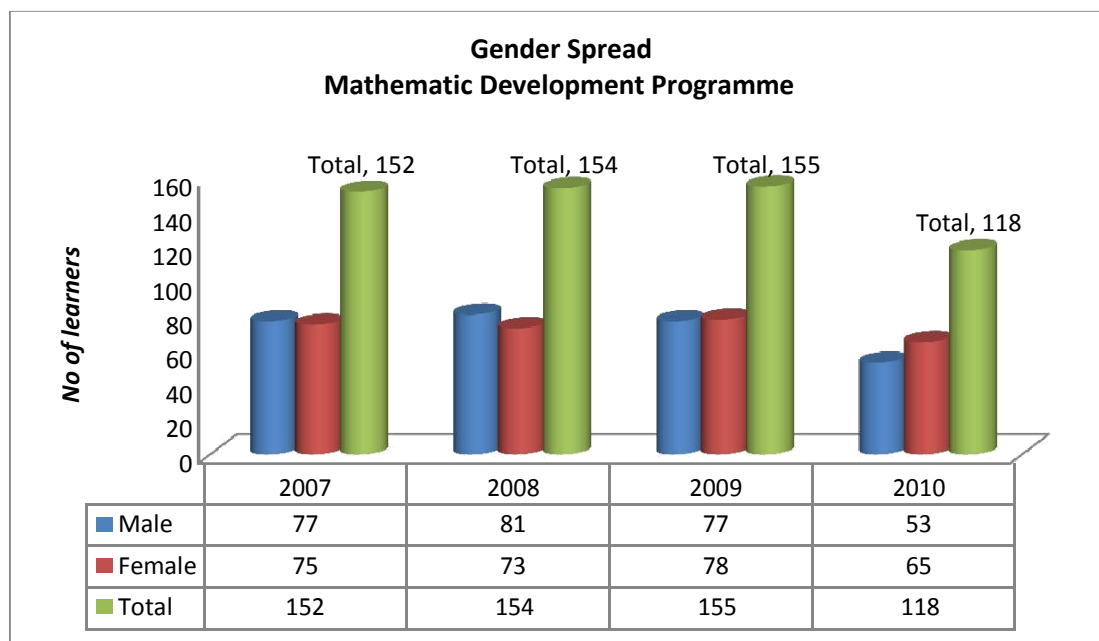


Figure 5: Participants according to gender–MDP

#### Automotive Engineering Career Development Programme (AECDP) Winter School learner statistics

The graphs below depict the ethnicity and gender of the students who participated in the Automotive Experiential Career Development Programme (Du Preez, 2012).

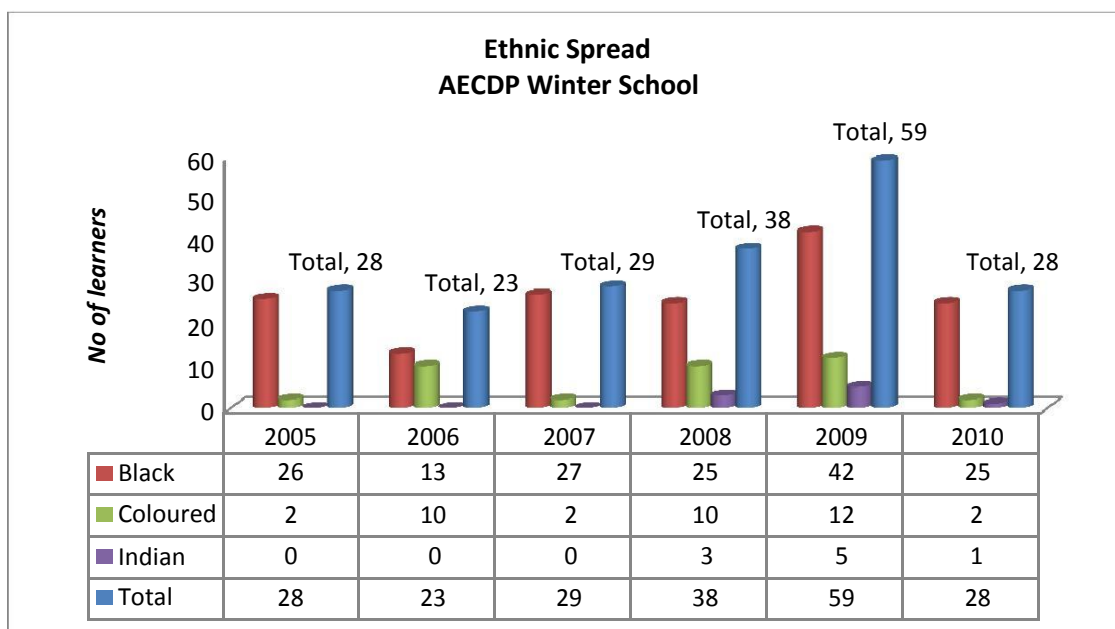


Figure 6: Participants from different population groups – winter school



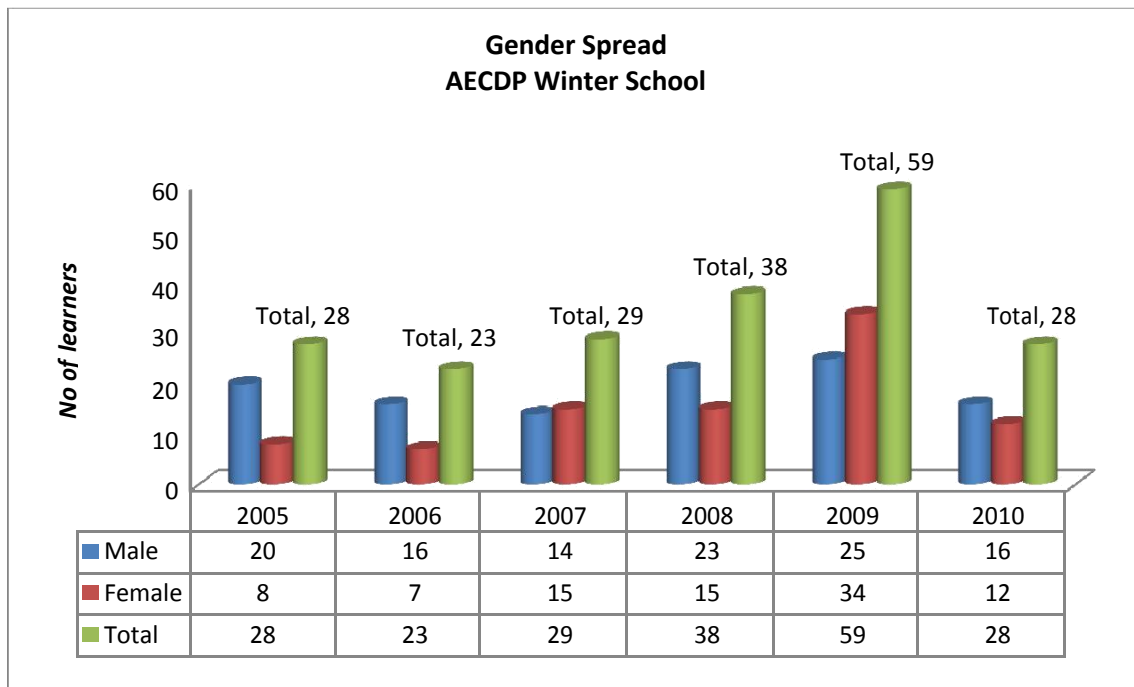


Figure 7: Participants according to gender – winter school

### Registered learners

The following graph shows the number of registered learners per discipline from 2006 to 2011.

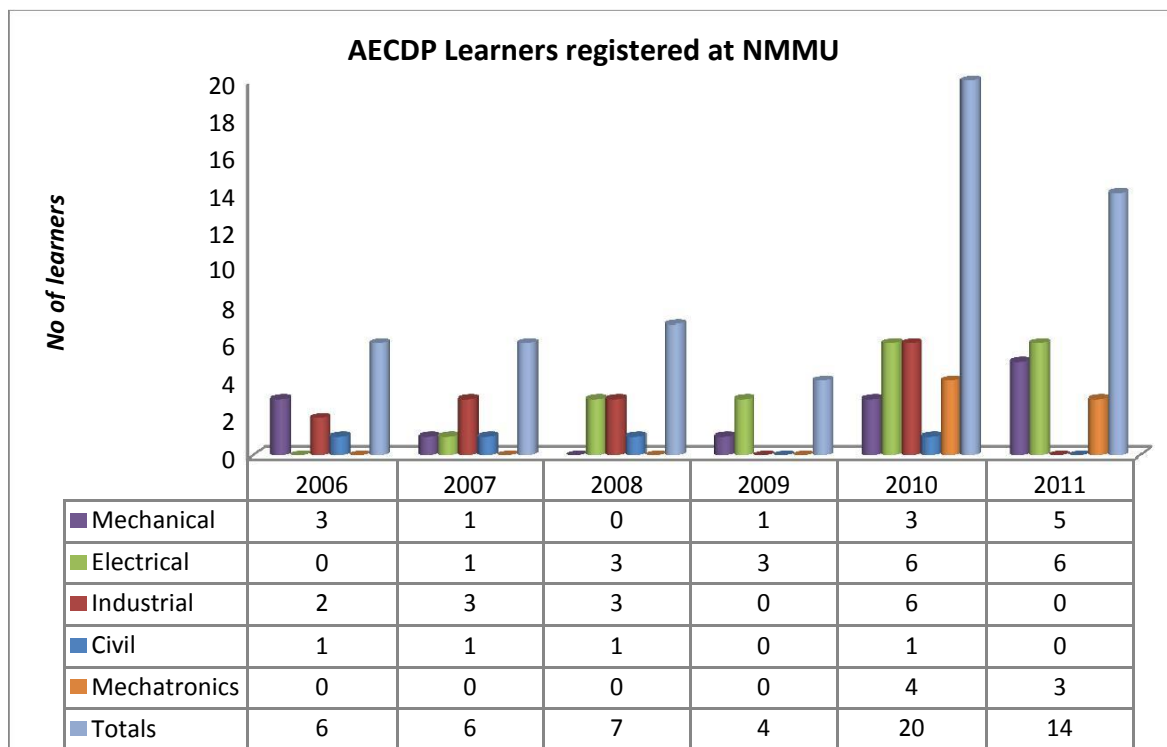


Figure 8: Registered learners in different engineering disciplines

## Automotive Industry Development Centre (AIDC) Engineering & Student Graduate Programme

This programme seeks to develop the skills of young engineers to ensure that they are equipped with the skills required to add value to the auto sector. It aims to recruit 30 NMMU students in 2013 from Electrical, Mechatronics, Mechanical and Industrial Engineering, of which 10 students would engage in experiential learning, while 20 would be graduate engineers for specified projects (Contract for the establishment of Human Resources Development Capacity in the Automotive Industry between the Automotive Industry Development Centre (Pty) Ltd and the Nelson Mandela Metropolitan University, 2011).

### Engineer Development Programme

The chart below depicts the process followed during the Engineer Development Programme as well as the disciplines catered for.

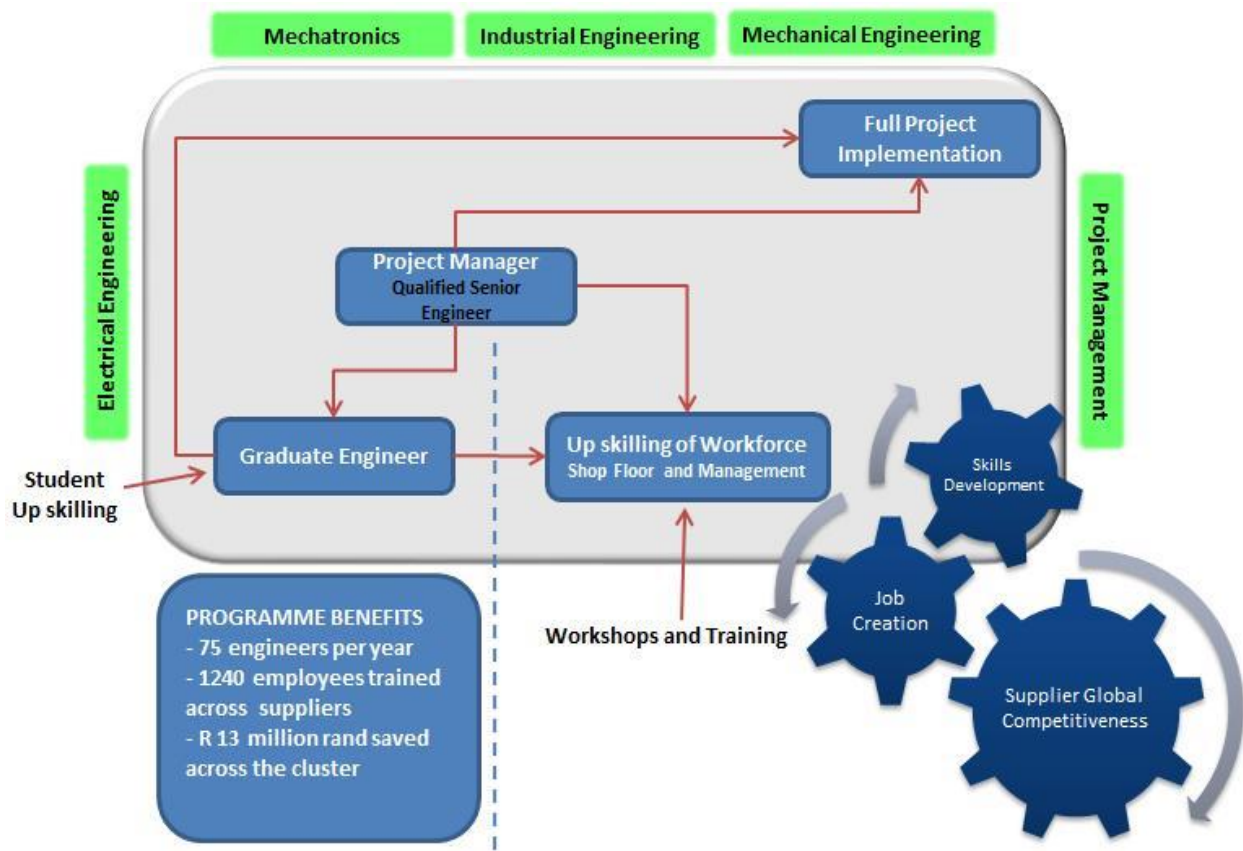


Figure 9: Engineering Development Programme

The engineering graduate programme will be enhanced for students by the inclusion of the Graduate in Training Programme. This programme will seek to develop students further by focusing on the project management elements required in many areas of the engineering discipline as indicated in the diagram above.

An analysis of student performance will be gauged through customer satisfaction reports, project manager reports, monthly review meeting (MRM) feedback reports and awards and through the need within the market. Focused training and development will be conducted for the engineers through monthly workshops based on the engineering needs analysis. The graduates will also be

mentored throughout the duration of the project (Service Provision Agreement between the Automotive Industry Development Centre and the Nelson Mandela Metropolitan University, 2012).

### Supplier Development Model 1

This model would utilise students who would be interested in completing their practical year for their qualification with a focus on industrial, mechanical and electrical engineers. Each engineer will report to an assigned project manager, depending on the skills required as defined by the project scope as explained in Figure 10 (Service Provision Agreement between the Automotive Industry Development Centre and the Nelson Mandela Metropolitan University, 2012).

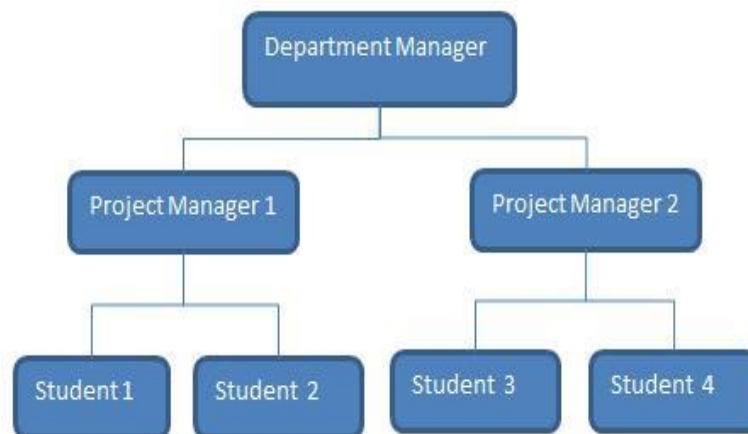


Figure 10: Supplier Development Model 1 for Industrial, Mechanical and Electrical Engineering students

### Supplier Development Model 2

The second model for the Supplier Development project would replace the engineering student with a graduate engineer who would focus on specified projects within the supplier's organisation. The qualification and content of work would be based on the set key performance indicators within the project deliverables. In this model, the graduate engineer will report directly to the project manager for additional implementation support and focused mentorship. (Service Provision Agreement between the Automotive Industry Development Centre and the Nelson Mandela Metropolitan University, 2012).

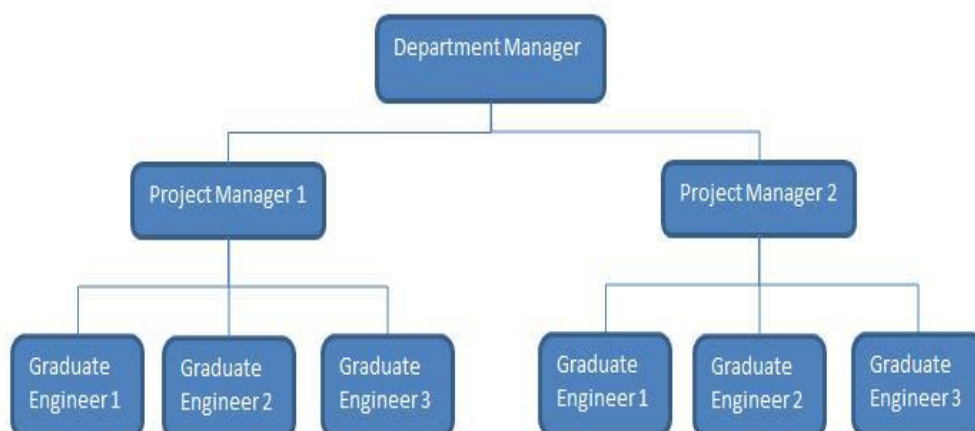


Figure 11: Supplier Development Model 2 for Graduate Engineers

## **NMMU engineering graduate and student placement**

The AIDC will give the NMMU Graduate and Student Placement Unit notice of the type of candidates required. The NMMU Graduate and Student Placement Unit will screen curricula vitae to aid the AIDC to place the highest calibre engineers.

The following criteria will be used for screening:

- There will be a BEE preference following a 80/20 split.
- Candidates should be of high academic and professional calibre.

The AIDC and NMMU would meet annually during November to review students' progress and to discuss the impact of the programmes and the effectiveness of this agreement.

## **Conclusion**

This programme has proved very effective for the enrolment and placement of engineering students and graduates at NMMU and in industry. The programme has been mutually beneficial to students and employers alike over the past five years and has contributed to higher throughput rates in engineering at NMMU, having the added advantage of industry involvement in the engineering curriculum.

## **References**

Contract for the establishment of Human Resources Development Capacity in the Automotive Industry between the Automotive Industry Development Centre (Pty) Ltd and the Nelson Mandela Metropolitan University. 2011.

Du Preez, Karl. 2012. Automotive Experiential Career Development Programme Impact Report 2005–2010.

Govan Mbeki Mathematics Development Unit. 2012.

Service Provision Agreement between the Automotive Industry Development Centre and the Nelson Mandela Metropolitan University. 2012.



## Education and training for the workplace: workplace-readiness skills

Susanne Taylor and Cookie Govender<sup>5</sup>

### ABSTRACT

*50 million people in South Africa, of whom nearly 70% are under the age of 35, a 25.2% official unemployment rate (May 2012), and a national Vision 2030 (2011a) to reduce unemployment in SA to 6% by 2030 send a strong message that education, training and skills development are important.*

*Reflections on the piloted Human Resource Management work experience project initiated by the Faculty of Management of the University of Johannesburg and the outcomes from the 18<sup>th</sup> World Association of Cooperative Education World Conference round-table session on workplace readiness are the impetus for this paper. A brief background to cooperative education and work-integrated learning will set the scene, with legislative aspects providing a backdrop to the opportunity that the South African post-school education and training sector has to make a difference in the lives of students, to empower them to enter the world of work with confidence.*

*Eleven million jobs by 2030? Reduction of the current unemployment rate to 6% by 2030? Workplace-readiness skills are proposed as one solution.*

### Introduction

A key aspect of South Africa's National Development Plan: Vision 2030 (2011a) is sustainable development, with business, government and civil society playing inter-related roles in order to improve the lives of all South Africans. The Green Paper for Post-School Education and Training (2012) is one of a range of recent skills development and human resource draft legislation that highlights the responsibility of higher and further education and training institutions to ensure that the education and training they deliver meets the needs of the economy. Other applicable legislation includes the National Skills Development Strategy III (2011c) and the National Skills Accord (2011b).

As a so-called comprehensive university, the University of Johannesburg (UJ) in South Africa offers both traditional formative education as well as vocational and professional programmes, which include a work-integrated learning component. The university's Faculty of Management aims to create 'future fit leaders', thereby aligning itself to the university's 'learning to be' teaching, learning and assessment philosophy and strategy, in order that graduates are equipped with the requisite management and leadership skills, attitudes, values and knowledge for the workplace. Within this faculty, the department of Industrial Psychology and People Management (IPPM) offers a variety of qualifications in Human Resources Management (HRM), across a range from diploma programmes to doctorates. The Human Resources Management Diploma will be introducing a work-integrated learning (WIL) component into the qualification in 2015. In order to build a base of participating WIL employer companies (future partners in skills development), the department piloted a work-integrated learning partnership model during the one-week September 2013 recess.

An overview of the HRM work experience project is provided, including the preparation for students for their workplaces and the interim feedback obtained. This, coupled with some of the outcomes from the 18<sup>th</sup> WACE World Conference round-table sessions on workplace readiness, forms the basis of the paper, which includes a brief insight into cooperative education, with references to the relevant South African skills development legislation. An outline of a proposed workplace-readiness programme is proposed. The intention is that this becomes a point of departure for discussion, with

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<sup>5</sup> Susanne Taylor is the Work Integrated Learning Coordinator, and Cookie Govender is the Human Resource Management Programme Leader, Faculty of Management, University of Johannesburg.

the aim of such a programme becoming a compulsory module to be completed prior to students entering the workplace, be it for purposes of WIL or as graduate employees.

### **Cooperative education – an education strategy centred on experiential learning**

The literature abounds with various strategies and models of education. Adult education is said to have begun in the fourth century BC, from days where students sat at the feet of a master (Coetzee, 1999). Confucius (450 BC) is attributed as saying 'Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand', proving to be a forerunner of the notion of learning by doing. Cooperative education is one such strategy, combining classroom learning with on-the-job training.

South Africa's (SA) Higher Education Quality Committee (HEQC) defines cooperative education as: 'A philosophy of learning that promotes the concept of enhanced learning based on cooperation between education institutions and industry, commerce and the public sector' (CHE: HEQC, 2004). Workplace learning was initially referred to as in-service training in SA, with the terminology evolving through experiential training, experiential learning, and, recently (since 2004), becoming most widely known as work-integrated learning. The term *experiential learning* has become an umbrella term, including concepts from service learning to work-integrated learning. The promulgation of the new Higher Education Qualifications Framework (HEQF) in South Africa in 2007 for the first time introduced the term *work-integrated learning* into a Department of Education document.

The cooperative education model is based on the concept of experiential learning, the process of making meaning from direct experience. David Kolb helped to promote the concept of experiential learning, drawing heavily on the work of John Dewey, Kurt Lewin and Jean Piaget. Kolb (1984: 41) wrote that learning is the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it. His four-stage learning cycle model is central to the learning theory: a cycle of experiencing, reflecting, thinking, and acting, which in turn creates the new experience (Kolb, 1984). In order for an individual to gain a better understanding of new knowledge and to retain the information for a longer time, it is vital for the individual to involve him/herself directly in the experience.

Advantages of the cooperative model are many. Some such advantages for the three role-players in the model – industry, the education provider, and the student – include:

- For industry, an additional productive entry-level employee with fresh ideas, skills development funding (tax rebates being one), the opportunity to gain experience in mentorship, influence curricula of higher education institutions, and the opportunity to evaluate students as prospective employees
- For higher education institutions, industry input into academic programmes, the chance for staff to remain up to date, and research topics and related opportunities
- For students, their qualification with a period of relevant work experience, remuneration (usually to assist them to support themselves and to pay their study fees, a probability of WIL resulting in a permanent placement, the opportunity to integrate classroom theory with real-life practice under supervision, enhanced employability skills, bursaries, and more

### **The post-school education and training sector in South Africa**

Since 1994, the public higher education landscape in SA has undergone many changes, resulting in 25 public universities and 50 public further education and training colleges (with almost 300 campuses). These, together with the 21 sector education and training authorities (SETAs), were placed under a newly formed Ministry of Higher Education and Training (HESA, 2009); consolidating the post-school education and training sector under one government ministry. The role of the SETAs,

which had prior to 2009 resided in the Department of Labour, is to disburse skills levy funds to organisations and to promote workplace training within specific economic sectors of SA. Linking these with the post-school education sector has many advantages for skills development.

### **The Human Resource Management (HRM) model and initial experiences**

The HRM Work Experience model initiated by the UJ Faculty of Management seeks to fast-track industry partner identification. In doing so, partnerships can be forged with individual or groups of students then being allocated to approved industry partners to be mentored and to experience a workplace environment by job-shadowing a human resource practitioner, allowing students to gain additional insights into aspects of their curriculum. The model is intended to be a viable, cost-effective and practical solution for large numbers of students to gain workplace experience, thus aligning classroom learning to workplace policy, procedures and practices. (Taylor & Govender, 2013).

The model was conceptualised as occurring in five phases:

- Phase 1: Design, development and approval
- Phase 2: Preparation for implementation
- Phase 3: Implementation
- Phase 4: Evaluation of the model
- Phase 5: Review

Phase 2 included the workplace-readiness preparation. This was completed over a two-month period and consisted of:

- Awareness and information sessions: preparation of stakeholders for the HRM project
- Distribution of WIL information packs
- Preparation of students for entry into the workplace
- Finalisation of the industry partner base

The activities required for Phase 2 with reference to the preparation of students for entry into the workplace were:

- Focus group sessions with selected students
- Focus group sessions with the lecturer
- Decisions and documents of WIL project team
- Workshops from academic support services for students (workplace readiness skills offered by the Centre for Psychological Services and Career Development (PsyCaD))
- Communication with selected industry partners
- The preparation of information packs consisting of memos, letters, brochures, portfolio of evidence (POE) criteria, and relevant forms

Of specific relevance are the basic series of PsyCaD workplace readiness workshops, aimed at empowering students with job search skills (given that they ideally should have secured their own workplace opportunity), CV writing skills (which included the importance of the cover letter and the emailing thereof), and interview skills (including matters related to punctuality and appropriate dress code). The series of workshops was arranged by the class representative from each of the two participating groups and occurred two months prior to the work placement, planned for the recess period of 2–6 September 2013.

It became apparent as the recess approached, that most students had not been able to secure their own opportunity, with only four of the 60 students securing own placements. Of the remaining 56,

54 were placed by the UJ WIL Coordinator, with ongoing attempts to place the remaining two students.

Difficulties experienced by students are illustrated below, taken verbatim from their email messages:

*miss taylor im sill waitin or you to get back to me about the company < im only attending my classes on monday s if you can stil refer me anywhere for he WIL programme i can still make it please.. iv also been trying to secue a workplace with no luck on my side*

and

*I did try few companies before and they rejected me, most of them said they are focusing on taking interns now. It's not easy when you are not connected to the right people and it also cost lots of money to go around and look for companies. Hence the reason why I and most of my fellow classmates turned to you for your help, is because we couldn't find companies. My only hope is your help, there's nothing more I can do at this point.*

Students who had been unsuccessful in securing placements were requested to submit their CVs to the UJ WIL Coordinator, the person who centrally has responsibility for overseeing WIL at UJ. From the emails containing the CVs received, the need for more in-depth workplace preparedness sessions was obvious: poor spelling and business writing skills, lack of formality in the email (no form of greeting), and inadequately constructed CVs with cell numbers and email addresses omitted).

Examples illustrate the point best:

*hi i'vent received any call yet about hrm project and it seems lyk all my classmate have received*

and

*Miss A Name Changed cover latter and a CV for the Humna Resourse Management Job Shodowing Project*

A company requested that a student be replaced with one who could write proper English, not slang, after receiving the email below:

*Tank u a rily apreciate da oppoturnity u hv granted me, I'm also looking forward 2 gain more eprience concerning HR in your organisation*

The importance of appropriate email and telephone skills is underlined by an email such as the one received from a company:

*I would love to shadow and empower anybody who is willing to learn. What I do not appreciate is a young man who has neither telephone etiquette nor understanding that there is a business language that one uses for business matters.*

*When I spoke with this young man this morning he kept on saying "Ja", "Ja", on the phone, now see the email below.*

*We are a very busy team and we would appreciate it if you could refer to us students who mean business as we will all spend our valuable time contributing to these young adults as a team.*

*Thank you*

To their credit, once students had been reminded of the importance of changing their voice mail messages and way of answering their calls and checking their spelling and general ways of sending emails, this improved greatly as evidence by the following two emails:

*Good afternoon*

*I have had no luck in finding a company. To be honest this week was pressure on me and I made no meaningful attempt to get myself a job opportunity. If anything should come up please count me in.*

*Thank you*

and

*Dear Ms Taylor*

*I have been unsuccessful in terms of getting a company to job shadow for the coming september holidays the company i was waiting for a response from declined my request yesterday.*

*Kind Regards*

*Name Surname (Cell Number).*

The students who participated in the HRM Work Experience Project are in the process of writing up their POE for submission for evaluation. Immediate lessons learned from the pilot project are the importance of sufficient student preparation so that they are aware of time lines, checking their email messages and voice mails daily during this time, that all communication should be made in a professional manner, and that initial support from the central WIL office is important. A post-experience survey will be conducted (with employers and students) to gather input on how to improve on the placement project.

### **World Association of Cooperative Education (WACE) World Conference – Round Table 7: Work-readiness**

The 18<sup>th</sup> WACE World Conference was held in Durban, South Africa, in June 2013. Part of the conference programme was a series of round-table discussions on matters of importance to WIL, providing opportunity for input from a range of stakeholders in a more informal setting. Of specific relevance to this paper are the discussions on the topic of work readiness.

Some of the main questions that were posed and responded to regarding workplace-readiness were:

- What are the skills required by students as they enter the workplace?
- What does industry/the employer expect from students?
- Whose responsibility is it to make students work ready/to offer work-readiness programmes?
- What do companies do to support students to adapt to the workplace?
- When should work-readiness programmes be presented?

The skills required by students entering the workplace were identified as:

- Self-discipline
- Time management
- Grooming
- The ability to work well with others across age, culture, experience and seniority
- Coping with diversity

- Adaptability to an unfamiliar environment
- Critical thinking
- Problem solving
- The right attitude (WACE, 2013)

This list excludes some of the basic skills required to obtain the workplace opportunity, such as the job search and CV writing and interview skills, although in the discussion on who should prepare students for the workplace, key components mentioned were email and telephone etiquette and skills, presentation and communication skills, and work ethics of life etiquette (basic good manners and behaviour). The foregoing were all to ensure that students had the best chance not only of securing a WIL work place but also of retaining the position as an entry-level graduate by not making avoidable mistakes.

The three suggestions made as an outcome of the WACE Roundtable 7 discussion are indicated below:

#### *Suggestion 1*

WACE (and other National Associations) to consider making self-training resources available via the website on these important topics. Education Institutions to direct their students to these valuable resources.

#### *Suggestion 2*

SA's Higher Education and Training Ministry to be lobbied to ensure that work-readiness programmes become a formal part of every qualification – whether a WIL component is present or not.

#### *Suggestion 3*

WACE and its member organisations and Higher Education to make concerted efforts to bring industry partners to Co-op and WIL-related conferences/workshops: industry participation is key to the success of WIL (WACE, 2013).

### **Taking action in South Africa: Suggestion 2 to be acted on at the National Skills Conference, October 2013**

South Africa's National Skills Authority, in conjunction with Dr Blade Nzimande, the country's Minister of Higher Education and Training, will be convening a skills conference that will be attended by stakeholders in the post-school education and training sector. As the proclaimed 'voice' of cooperative education in SA, the Southern African Society for Cooperative Education (SASCE) has been invited to address the national skills commission theme, *Turning every workplace into a training space*, on the topic of *Implementation of work-integrated learning in institutions*. SASCE will be taking Suggestion 2 from the WACE Conference Roundtable 7 to this conference, formally proposing there that workplace readiness become a formal and compulsory component for all post-school education students. This module should be part of the academic programme for all students, whether they require workplace experience as part of their qualifications, or not, and which should be presented in the six months prior to entering the workplace. Consideration may be given for electronic delivery, or self-study. Ideally, such a module would be registered on the National Qualifications Framework (NQF). This would follow examples as set by Australia, offering a Certificate in Work Education, a course of study that prepares students for a first experience in the workplace and assists young people to gain generic employability skills required by industry of an entry-level employee (Australia, 2013).

Various workplace-readiness programmes are available internationally, with many of the resources mentioned available as open source, attesting to the importance of such programmes. An example is the list of *Workplace readiness skills for the Commonwealth*, generated from research provided through the University of Virginia's Weldon Cooper Centre, based on employer input and 21st Century Skills ([Virginia](#), 2013).

A draft proposal to be presented for consideration at the National Skills Conference in South Africa is shown in Table 1.

**Table 1: Workplace readiness – transitioning into the world of work**

<b>Group 1</b>	<b>Entry into the workplace</b>
1.	Job search and the recruitment process  * Students bring five job advertisements from various sources of jobs in their discipline and will apply for a tax number and bank account
2.	CV writing and the cover letter  * Students bring draft CV and copies of all relevant documents for their portfolio
3.	Interview skills, including mock interviews  * Students attend dressed as if for an interview
4.	Personal branding , including business dress, telephone skills and voice mail, social media profile and netiquette  * Students send an email cover letter with their CV attached
<b>Group 2</b>	<b>Rules of engagement in the workplace – workplace practice</b>
5.	Legislation, policies and procedures  * Students are introduced to the Labour Relations and Basic Conditions of Employment Acts, appreciate contracts, confidentiality and health and safety in the workplace
6.	Basic workplace etiquette: dress, eating, hygiene, visitors, communication, telephone/cell phone usage
7.	Meeting protocols and time management, including time keeping  * Students attend a mock meeting and prepare the meeting documentation
8.	Communication in the workplace: Written (electronic , memos and reports), verbal and non-verbal

<b>Group 3</b>	<b>Interacting in the workplace</b>
9.	Teamwork and conflict management
10.	Diversity and cultural awareness and sensitivity

## Conclusions

Eleven million jobs in South Africa by 2030 with the reduction of the current unemployment rate to six% by 2030? How? The UJ work experience project is but one initiative aimed at supporting this national project, taking a positive step by developing partnerships with industry and further marketing cooperative education/WIL as a viable education model, by creating employable graduates who may be absorbed into mainstream employment. Workplace and work-readiness skills are considered important in ensuring that this process occurs seamlessly: workplace-readiness skills are key to successful entry into the workplace, and to continued employment.

Besides the requirement for policies and guideline documents for implementation of WIL with the necessary industry support, the student should be well prepared prior to applying for a WIL work place and/or a graduate employment opportunity. This was confirmed by roundtable discussions at the recent WACE World Conference and the proposal of a workplace-readiness module to become compulsory will be made at the October 2013 National Skills Conference in South Africa.

Work readiness happens through WIL. Students need to be prepared for the workplace so that they do not unwittingly disadvantage themselves by making avoidable mistakes. Education institutions have the initial responsibility, one they share with the student and the industry, to enable entrants to transition into the world of work.

Education and training for the workplace? Workplace-readiness skills are deemed to be a key component for transitioning students into the world of work.

## References

- Australia. Education, Queensland. Certificates in Work Education.  
<http://education.qld.gov.au/students/placement/work/cert.html>.  
Retrieved on 21 September 2013.
- Coetzee, JH. 1999. Temporal andragogics: Study Guide for TYDAND-G. Pretoria. University of South Africa.
- Council for Higher Education (CHE). (2004). Higher Education Quality Council.
- Kolb, D. 1984. *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, New Jersey: Prentice Hall.
- Council for Higher Education. 2011. Work-Integrated Learning: Good Practice Guide. Pretoria: Communications.
- Dewey, J. 1938. *Experience and education*. New York: Macmillan.
- Higher Education Quality Committee. 2004. Institutional Audit Criteria. Pretoria: Council for Higher Education.
- Higher Education South Africa (HESA). 2009. *Formation of the Department of Higher Education and Training*. <http://www.hesa.org.za/partnersandlinks/departments-higher-education-training-dhet>.



Retrieved on 20 September 2013.

South Africa. 2007. Higher Education Qualifications Framework. Pretoria: Government Printer.

South Africa. 2011a. National Development Plan: Vision for 2030. Pretoria: Government Printer.

South Africa. 2011b. National Skills Accord. Pretoria: Government Printer.

South Africa. 2011c. National Skills Development Strategy III (2011-2016). Pretoria: Government Printer.

South Africa. 2012. Green Paper for Post-School Education and Training. Pretoria: Government Printer.

Stats SA. 2012. Unemployment rises to 25.2%. SAnews.gov.za, 8 May 2012. Statistics SA: Pretoria. Taylor, S. & Govender, C. 2013. Towards a work integrated learning partnership model for higher education and industry—a human resource management pilot project. Refereed paper presented at the 18<sup>th</sup> World Association of Cooperative Education (WACE) World Conference held in Durban, South Africa from 24–27 June 2013.

Virginia. 2013. Virginia's Career and Technical Education Resource Centres.

<http://www.cteresource.org>.

Retrieved on 25 September 2013.

WACE. 2013. WACE Roundtable Report from the 18<sup>th</sup> World Association of Cooperative Education (WACE) World Conference held in Durban, South Africa from 24-27 June 2013. <http://www.waceinc.org/durban2013/index.html>.

Retrieved on 20 September 2013.

## Workplace and lecture hall synergy

Belinda van der Merwe<sup>6</sup>

### ABSTRACT

*Guidelines on the monitoring processes in the workplace of the radiography students at the Central University of Technology ensure that workplace learning is appropriately implemented and monitored by the higher educational institution. The purpose of the monitoring is to ensure synergy between the lecture hall and the workplace. The principles and innovative practices implemented in the radiography clinical setting can be adapted and applied in various disciplines where workplace learning forms a component of work-integrated learning. The importance of mentoring in the workplace receives particular focus.*

### Introduction

The exit-level outcomes for the radiography qualification from the Central University of Technology (CUT) describe the foundational, practical, and reflexive competencies that students should have achieved at the end of their training (SAQA, 2012). The associated assessment criteria for these outcomes guide the learning activities and assessment in the lecture room.

The purpose of the qualification is to develop a competent learner who not only has a grounding in the knowledge and skills required for the diagnostic radiography profession but who has gained experience in applying such knowledge and skills in the workplace (SAQA, 2012). The exit-level outcomes should thus be validated in the workplace because the practical competencies are influenced not only by sound theoretical knowledge but also by quality mentoring in the workplace.

Assessment during workplace learning is an essential tool to ensure continuous feedback to the student on strengths and weaknesses, as well as the targeting of areas for improvement (Michener, 2011). Assessment documentation is a tool utilised by the educational institution and the employer to keep track of student competency in the workplace. To achieve this goal, tools should be developed to monitor the placement and achievement of students in the workplace.

The radiography students at CUT are placed for workplace learning in the clinical settings of eight radiology practices in the Free State. This workplace learning of the students is monitored and assessed by different tools developed through experience gained in the past few years. The responsibility of the student, higher education institution (HEI) and the potential employer will be discussed.

### Student responsibility

The workplace learning of the students is monitored and assessed by different tools that include formative continuous assessment as well as summative practical assessments. The HEI provides the forms and a schedule for the completion of the continuous assessment but it remains the responsibility of the student to complete the assessments on time. The student requests the continuous assessment from a qualified radiographer in the clinical setting working with the student on a daily basis. The student is responsible for submitting as proof a minimum number of hours of placement in the clinical setting with a minimum number of patients examined. A portfolio of evidence guides this arrangement.

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<sup>6</sup> Belinda van der Merwe is from the Department of Clinical Sciences: Radiography, Central University of Technology.

The continuous assessment is linked to specific outcomes and proof that the criteria are fulfilled determines the successful completion of the workplace learning.

### **Training institution responsibility**

Radiography students at CUT spend a specific number of hours per week either in the classroom or in the clinical setting. Students spend time in the clinical setting with the qualified radiographers and radiologists performing various radiologic procedures. The reader is reminded that the protocols for the different radiographic examinations differ in the individual departments because of physician preferences. It may happen that a student does not observe a specific procedure because of time spent in the classroom. The possibility for the lecturers to demonstrate every procedure individually to each student is furthermore challenged by the high student numbers.

Large classes and the unavoidable absence of students or lecturers added to the challenge of exposing the students to the vast number of procedures covered in the curriculum. Video recording of the demonstrations of the different procedures seemed the obvious solution to build a library of practical demonstrations of basic concepts consistent with the classroom. The lecturers, with the assistance of the audiovisual department, recorded videos of actual scenarios in the clinical setting with standardised patients, so that students are exposed to the various protocols and have the opportunity to observe rare examinations. The videos also benefit slow learners, are a tool to encourage group discussions, and lead to deep learning by engaging the learners with specific activities.

The HEI further creates opportunities of learning by providing case studies, integrated assignments, and problem-based activities. The execution of practical demonstrations by students while being assessed by peers exposes the students to different protocols and encourages lively feedback and debate.

The clinical component of a medical radiation technology programme is arguably the most important part of the student radiographer's education. It is during the clinical practicum that the student develops the skills and attitudes necessary to become a competent practitioner (Bara et al., 2013). Those responsible for assigning students to practical settings must closely evaluate the environment in which the practicum occurs, because quality mentoring in the workplace is not guaranteed.

### **Employer/stakeholder**

The radiography programme at CUT appoints work-integrated-learning (WIL) coordinators at each practice where the students are placed. These individuals act as the link between the HEI and the employers. The coordinators are appointed and trained with the guidance of a WIL manual compiled from all the rules to organise the placement of students. The regular meetings of the HEI and the employer address day-to-day operations in terms of attendance, discipline and application of theory in practice. Ideas and challenges of the various departments are discussed at the meetings and benefit all parties involved.

The WIL coordinator at each practice plays a leadership role in influencing the qualified radiographer to mentor the students. Observation of the eight clinical practices revealed that there are gaps in terms of the skills and knowledge of the qualified radiographers, although they are considered role models for the students. *Workshops* were conducted to address knowledge gaps, for example, the training in the skills of theatre radiography.

In addition, *in-service training sessions* were scheduled at the different practices to teach the qualified radiographers how to conduct the continuous assessment of the students. The positive

result of the training sessions on assessment is that the workplace assessment mark for radiography students is calculated by input from a team, namely:

- Qualified radiographers working with the students (the employer)
- The clinical lecturer (scheduled practical assessment)
- The WIL lecturer, observing the students unannounced in the workplace

This combined assessment aims to assess a student's performance effectively by eliminating isolated incidences and bias. The attitude of the assessors in the workplace is of utmost importance and they must be trained to embrace the skill of maintaining a balance between discipline and flexibility. Most importantly, the student should always feel secure, since the ultimate goal of formative assessment should be to assist, motivate and encourage the student.

The workshops, in-service training, and change in assessment are a step in the right direction but the workplace and lecture-hall synergy has not been achieved yet. Mentoring in the workplace needs urgent attention and will be discussed in the following section.

### **Mentoring in the workplace**

It is during the clinical practicum that the student radiographer develops the skills and attitudes necessary to become a competent practitioner. To achieve this goal, the clinical leadership needs to ensure the development and support of mentors in clinical practice. The Canadian Association of Medical Radiation Technologists (CAMRT) compiled guidelines to ensure that radiographers are prepared to work in the health-care system. The five members of the CAMRT, representing four disciplines of radiography from across Canada, have roles that include clinical, preceptor and didactic education, research, supervision, and direct patient care. The committee members represent a diverse educational background that includes diploma, undergraduate, and graduate degrees (Bara et al., 2013). The guidelines are comprehensive and thorough and are, therefore, worth citing. The implementation of these guidelines is the objective of the author in the next phase in the synergy between the lecture hall and workplace in the radiography programme at CUT. The important pointers of mentoring will be discussed consequently.

To be effective, mentors require an educational foundation, ongoing support, and time to develop as mentors; it is thus a career-long challenge. The mentor plays a pivotal role in providing learning opportunities for a student, along with all other responsibilities assigned to their position. The mentor serves as a role model. The effective mentorship programme must clearly define responsibilities, formulate measurable outcomes, apply adult learning principles, develop critical thinking and independent clinical judgment. The mentoring process will positively escalate in a learning culture that engages clinical staff as mentors. The mentor should be skilful in dealing with conflict and growing in reflective practice. The development of effective mentors will benefit the workplace as it promotes life-long learning. The advantages for the qualified radiographer as role model are that it provides the opportunity not only to teach but also to control practice. The student, on the other hand, will benefit to practice clinical skills with a clinical expert (Bara et al., 2013).

### **Innovative ideas**

Years of experience led to the implementation of certain ideas in the radiography programme at CUT to bring the workplace and the classroom together and to limit confusion for the student. The ideas include combined assessment (as discussed above), an annual checklist, report back to lecturers, and a WIL newsletter.

### *Annual checklist*

The radiography student needs to utilise certain components in the execution of examinations, to name one, the protection of the patient against radiation during examinations. Lead aprons should be available for this purpose. The author compiled a comprehensive checklist for the employer to indicate the minimum requirements to which a clinical setting must adhere for students to be placed. The requirements of the list are discussed during a specific scheduled appointment and the compliance is negotiated within a reasonable period. This mediation proved to have a positive impact on the synergy between theory and practice since students have the opportunity to do things by the book.

### *Lecturer feedback*

The WIL lecturer visits the various departments on a regular basis to observe the students, to service the practice coordinator and to conduct assessments. A weekly feedback report is circulated to the lecturers in the radiography programme so that information on challenges and victories can be communicated about matters that relate to students and education. The feedback reports had the result that observation of challenges in practice could be addressed during lectures. For example, if students did not grasp a specific concept on the formation of an image on an imaging plate, this could be re-addressed in class in order to improve mastery of the concept. The feedback helps lecturers to have a finger on the pulse of the practice component.

### *Newsletter*

The WIL lecturer compiles a two-monthly newsletter that is named the *WIL Guardian*. If a knowledge gap is observed in practice, the important academic matters are addressed in a section referred to as *Streetwise*. Photos are printed of newsworthy items, for example, student orientation. A qualified radiographer of the month award is bestowed on an individual with role-model qualities. A photo of a student who does things by the book receives special attention and receives much admiration from peers. The newsletter is distributed electronically and posted on the different practice bulletin boards.

### **Conclusion**

The radiography programme at CUT sets standards to ensure that workplace learning – as part of work-integrated learning – takes place in an environment that lends itself to provide the opportunity to the student to achieve the required criteria in the shortest time possible. This can be achieved by implementing checklists to determine compliance of the clinical setting, conducting workshops and in-service training for the role models in practice, and by communication between the workplace and the classroom by means of written reports and newsletters. Training of mentors in the workplace will ensure that the shared responsibility for education and training will result in an improved quality of care delivery.

### **References**

Bara, S., Lischynski, K., Scotland, D., Tan, K. and Tarmohamed, N. *Effective preceptorship. A guide to best practice*. Canadian Association of Medical Radiation Technologists (CAMRT).  
<http://www.camrt.ca/abouttheprofession/preceptorguidelines/PreceptorGuidelines.pdf>.  
Retrieved 15 January 2013.

Michener/University of Toronto Medical Radiation Sciences Program. 2011. *Guidelines for evaluating students in the clinical setting*. Toronto: Michener Institute.

South African Qualifications Authority (SAQA). 2012. *Registered qualification: Bachelor of Diagnostic Radiography*. SAQA 0695/12. 2012-07-01.  
[http://www.hpcs.co.za/downloads/radiography/reg\\_qual\\_bach\\_diag\\_rad\\_20\\_02\\_2013.pdf](http://www.hpcs.co.za/downloads/radiography/reg_qual_bach_diag_rad_20_02_2013.pdf)  
Retrieved on 10 June 2013.

# EXPLORING THE EFFECTIVENESS OF A WORK-INTEGRATED LEARNING PROGRAMME IN CONTRIBUTING TOWARDS THE EMPLOYABILITY OF GRADUATES: THE GRADUATE INTERNS' PERSPECTIVE

Carver Pop and Nicolene Barkhuizen<sup>7</sup>

## ABSTRACT

*The objective of this study was to determine the effectiveness of a work-integrated learning programme in contributing to the employability of graduate interns. A questionnaire measuring soft skills training, technical skills training and mentorship was developed and administered among a convenience sample of graduates (N=79) in an ICT company. The findings confirmed the importance and effectiveness of soft-skills and technical skills training and mentorship in enhancing the employability of graduate interns. The findings also showed the importance of a well-structured work-integrated learning programme in improving mentorship. Recommendations for future research and practice are made.*

## Introduction

The higher education institution (HEI) has a significant role to play in a nation's wealth with its hard-edged capacity to foster intellectual capital, economic growth, stimulate development and innovation in a 'knowledge economy' (Barling, cited in Barkhuizen, 2005). In this context, HEIs have both a responsibility and accountability for building the theoretical knowledge and skills required for professional practice within a chosen field and to contribute to the employability of graduates (Bates, 2008; Costley, 2007; Heerde & Murphy, 2009; Kruss, 2004; McIlveen & Pensiero, 2008).

Research evidence, however, suggests that a tertiary qualification does not necessarily prepare students for the work environment (Kruss, 2004; Griesel & Parker, 2008; Reinhard, 2006). In practice, it is still found that not enough is done to prepare the graduates to adopt the workplace, both from a psychological (soft skill) point of view and technical capability. Consequently, employers are not able to use new graduates to fill their skill requirements because of a lack of practical skills and experience, the wrong types of graduates being produced, graduates who are not of a high quality, and graduates not suited for specialist positions (Scottish Higher Education Funding Council, 2003; Development Policy Research Unit, cited in Pop & Barkhuizen, 2010a)

Consequently, organisations invest in work-integrated learning programmes to attract, develop and retain high-calibre graduate interns (Ingram, Bruning & Mikawoz, 2009; Kanye & Crous, 2007). Work-integrated learning programmes are focused training where graduate interns are provided with an opportunity to learn from the various areas of expertise of an employer (Buhlungu & Metcalfe, 2001, p. 67). The Scottish Higher Education Funding Council (2003) maintains that programmes to assist graduates to thrive in the real-world context of the workplace by providing opportunities to maximise the assets (knowledge) they acquire through the university experience, will optimise their successful transition into organisations. Work-integrated learning thus has a significant role in the development of graduate skills and competencies and to produce graduates that are more "work ready" (Coll & Zegwaard, 2006; Costa, 2009). Researchers argue that the structure of WIL programmes provides graduates with organisational and cultural experiences that facilitate mastery in a variety of work-related areas (Ingram et al., 2009).

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<sup>7</sup> Carver Pop is Director of the Centre for Cooperative Education, Polytechnic of Namibia, Namibia. Nicolene Barkhuizen is from the Department of Industrial Psychology, North-West University, South Africa

This research sets out to explore the effectiveness of a work-integrated learning programme in contributing toward graduate employability from the perspective of the graduate interns who participated in the programme. In the next section of the paper, we will briefly discuss the relevant literature as it relates to the components (i.e. skills training and mentorship) of the work-integrated learning programme.

## **Literature review**

### *Graduate skills requirements*

The war for graduate talent necessitates the development of very specific skills required by the workplace in the 21st century. Companies are continuously assessing their current staff and future recruits on their soft and business/hard/technical skills (Clymer, Roberts & Strawn, 2001; Collective Resources, 2008). Many researchers have found that soft skills are an important contributor to the employability of graduate interns (Clymer, Roberts & Strawn, 2001; Coll & Zegwaard, 2006; Collective Resources, 2008; DPRU, 2007; Griesel & Parker, 2008; Menocelli, 2006; Pearce, 2007; Raftopoulos, Coetzee & Visser, 2009; Scottish Higher Education Funding Council, 2003). Some of the most important soft skills highlighted include, amongst others, interpersonal skills, motivation, good inter-personal communication skills, business skills and etiquette, team spirit and cohesiveness and showing interest.

In addition, researchers also identified academic and technical skills as an important category of skills required of graduates in the workplace (Clymer et al., 2001; Datta, Pellissery & Paul, 2007; Stanz & Mosoenyane, 2008; Raftopoulos et al., 2009). The lack of soft skills, workplace readiness and experience are often the key considerations why organisations require work-integrated learning programmes as a part of the student's tertiary education (Eigsti, 2009; Kanye & Crous, 2007).

### *Mentorship*

Mentorship also forms an integral part of work-integrated learning programmes (Ingram et al., 2009). Mentors play a critical role in smoothing the transition of new graduates to the workplace and in making the transition from novice to expert (Beecroft, Santher, Lacy, Kunzman & Dorey, 2006; Berezuik, 2010). In most cases, mentors are assigned to graduate interns to facilitate the learning process and guide the professional development and growth of the intern (Janse van Rensburg & Roodt, 2005).

Research has shown that mentees have greater career satisfaction, receive higher compensation, and are more committed to their careers and organisations than employees without a mentor (Henson, 2006; Ingram et al., 2009). Berezuik (2010) further maintains that new graduates can become competent and efficient more easily if they are guided by mentors. Previous research has shown that the mentorship process is an important contributor to the employability and retention of graduate interns, learners and artisans in organisations (see Mummmenthey & Du Preez, 2010; Pop & Barkhuizen, 2010b; Van Rooyen, Du Toit, Botha & Rothmann, 2010). Having a proper mentoring system and programme is therefore vital for the employability and retention of graduate interns (Beck-Howard, 2009; Eigsti, 2009; Henson, 2006; Lo & Ramayah, 2011).

Against this background, the main objective of this research is to explore the effectiveness of a work-integrated learning programme from the perspective of the graduates who participated in the programme. More specifically, we explore the graduate intern's perspective of the effectiveness of the components of the programme, i.e. soft skills training and technical skills training and mentorship toward contributing to their employability. This programme was established to appoint ICT graduates from designated groups on a work-integrated learning programme and develop them during an eight-month period to prepare them for employability and retention in the company. The programme focused on soft and technical skills training for the graduate interns in addition to mentorship. In this paper, we focus on the descriptive and qualitative findings of the research as supported by the quantitative findings in previous publications (see Pop & Barkhuizen, 2010a, b).



In the next section of the paper, we will present the research method adopted for this study followed by the research findings and discussion of the findings. We conclude this paper with recommendations for future research and practice.

### Research design and methods

An exploratory research design was followed using a combination of quantitative and qualitative data collection methods.

### Target population and sample

This research focused on an ICT company that has implemented a graduate internship programme for IT graduates. A purposive sample was taken from graduate interns (N=79), who participated in the internship programme. This represented a response rate of 61%. In this sample, graduate intern respondents were primarily male (52%), aged between 20–24 years (50%) and hold bachelor degrees (64%).

### Measurements

A questionnaire was developed to measure the effectiveness of the components (i.e. soft skills training, technical skills training and mentorship) of the graduate internship programme

- *Soft skills:* A soft skills questionnaire was developed based on the content of the soft skills training in the graduate internship programme. The questionnaire consisted of 16 items. Each respondent was asked to indicate the extent to which the programme contributed to his/her competence in the skills listed on a scale from 1 to 5: *1 = to no extent* and *5 = to a large extent*. The respondent was then asked to rank the importance of 16 listed skills on a scale from 1 to 4: *1 = Insignificant* and *4 = Very important*. After completion of this questionnaire, the respondent was asked to identify any other important skills that were not addressed in the internship training. Finally, the respondent was asked to rank the five most important graduate soft skills.
- *Technical skills:* The respondents were asked whether the technical skills training contributed to their employability. Respondents were required to answer either Yes or No.
- *Mentorship:* An adapted version of the Mentorship Role Questionnaire (MRQ) (Janse Van Rensburg & Roodt, 2005) was used to measure the frequency of interaction, quality of mentorship and the roles of the mentor from the perspective of the graduate intern. The questionnaire measured the frequency of interaction, quality of mentorship and the roles of a mentor. The MRQ measure has a 5-point intensity scale: *to no extent (1)* and *to a large extent (5)*, and *never (1)* to *always (5)*. Mentors were asked to indicate the extent to which the graduate internship programme enabled him/ her to act as a mentor on a five point scale ranging from *1 = to no extent* to *5 = to a large extent*.

Open-ended questions were included in each section to substantiate the quantitative findings. No research hypotheses were tested as the purpose of this paper is to report on the descriptive and qualitative responses of the respondents. Please refer to other publications on this research for hypotheses testing (see Pop & Barkhuizen, 2010a, b).

### Data analysis

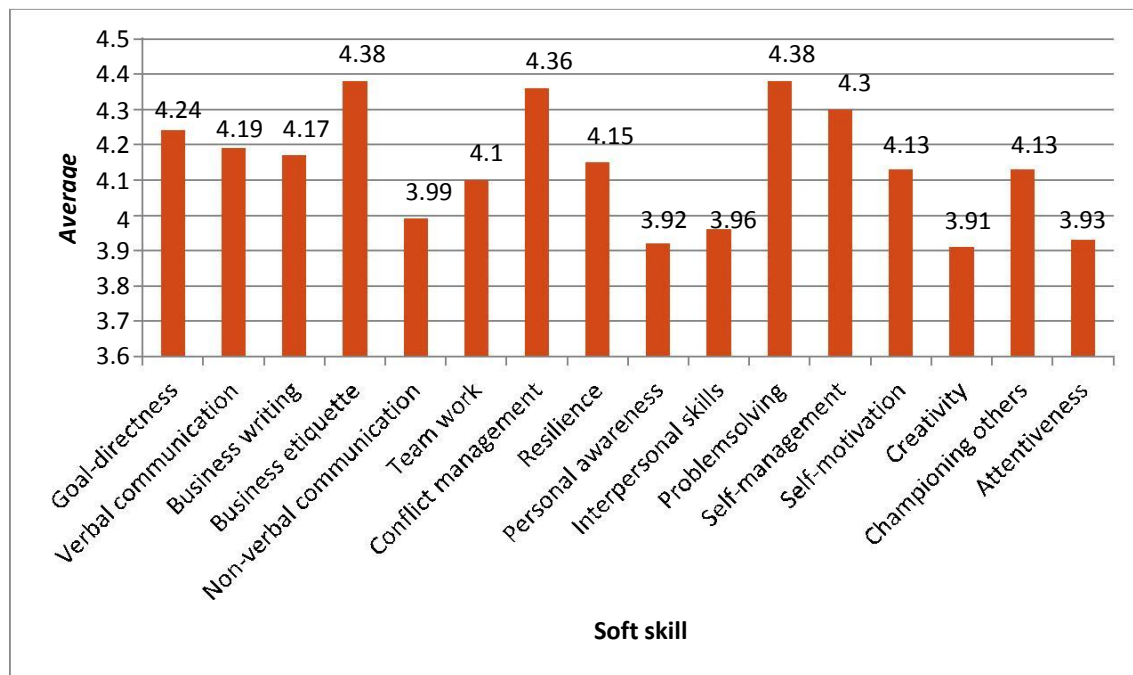
The quantitative data was analysed by using frequency analysis in SPSS. The reliability and validity of the quantitative measurements are reported elsewhere (see Pop & Barkhuizen, 2010a; 2010b). The qualitative data was analysed using content and theme analysis. In this paper, the qualitative results were used to substantiate the quantitative results.

## FINDINGS AND DISCUSSION

In the next section of the paper, the research findings are presented, as well as the discussion of the findings.

### Findings of soft skills training

The respondents were first asked to rate the contribution of the graduate internship programme to their soft-skills development. The findings are reported in Figure 1.



**Figure 1: Programme impact on intern soft skills**

The mean scores in Figure 1 show that there is a definite need for soft skills training for graduate interns as part of a work-integrated learning programme. The overall results of the soft skills training indicate that the internship programme contributed largely to the soft skills of the graduate interns. On average, the graduate interns indicated that the programme training contributed most to business etiquette, conflict management, problem solving, self-management and goal-directedness soft skills.

### Qualitative findings

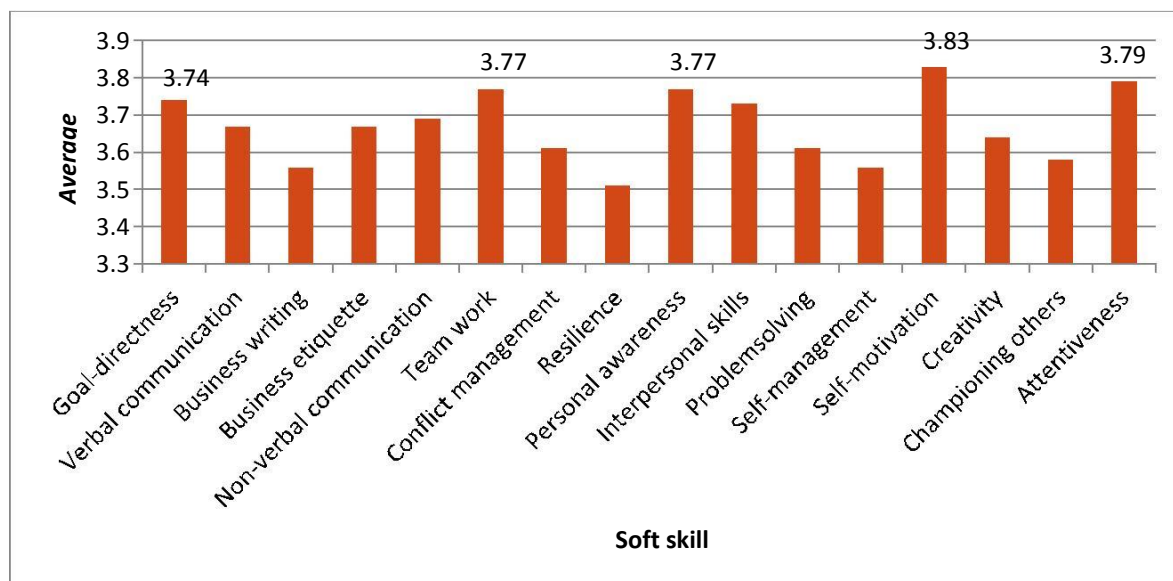
Some of the qualitative responses by the graduate interns included:

*I was looking for industry experience and I get more than I expected, the soft skill training motivates me even more. I can say the company is the best, they real know what they are doing.*

and

*Internship enables one to get an on-the-job training at the same time adjusting to a corporate world in terms of how a business is run, professional conduct, dress-code etc. If conducted effectively it can produce excellent results – both to the company and an individual. It can be a very exciting opportunity and experience, the beginning of real world that enables graduates to successfully apply their academic knowledge in the corporate world. I strongly believe that organisations should invest in Internship Programmes.*

The respondents were next asked to rate the importance of the graduate internship programme to their soft-skills development. The findings are reported in Figure 2.



**Figure 2: Importance of intern soft skills training**

The overall results indicate that the interns perceive all the soft skills in which they received training as very important. On average, soft skills such as self-motivation, attentiveness, personal awareness, teamwork and goal-directedness were perceived as the most important skills. When asked to rank the most important soft skills, graduate interns highlighted verbal team work, communication, self-motivation, goal-directedness and attentiveness as the most important.

#### *Qualitative findings*

Some of the qualitative responses by the graduate interns included:

*Internship programme helps students to acquire skills so that they can get jobs easily, so I think it is very important.*

and

*I think it's important that the company takes graduates and give them exposure to the workplace and get them ready for employment. I believe that the skills acquired during the internship programme will benefit a company in the long run.*

In addition, graduate interns indicated people management, networking skills, diversity management, time management and listening skills as soft skills in which they would prefer to receive training. One of the graduate interns, for example, mentioned:

*Ubuntu, although it might not be considered to be important by some people. The "Give a hand" project that the interns coordinated, taught us values that some of us continue to live by up until today.*

#### **Discussion of findings relating to soft skills training**

Our findings are in line with several research studies that found that the benefits of undertaking work experience while studying include developing a work ethic, developing personal skills, time management, relating to other people and workplace etiquette, communication (which in some disciplines was not considered to be taught as part of the degree), and applying learning and the ability to continue learning (see Clymer, Roberts & Strawn, 2001; Coll & Zegwaard, 2006; Collective Resources, 2008; DPRU, 2007; Griesel & Parker, 2008; Menocelli, 2006; Pearce, 2007; Raftopoulous, Coetzee & Visser, 2009; Scottish Higher Education Funding Council, 2003). Hughey and Mussnug

(cited in Raftopoulous et al., 2009) also indicated that better decision-making and problem-solving skills help employees remain employable.

### **Findings of technical skills training**

Our findings showed that 82.3% of interns felt that their technical training contributed to their technical skills, while 17.7% indicated that it was not sufficient. Some of the qualitative responses showed that the interns identified the need for more job-specific technical training for the positions they were appointed in during the internship programme.

As mentioned by one of the interns:

*Yes my expectations were met but not fully. I feel that interns need to be place in the field they had studied for at skill then let them explore other fields.*

Another graduate intern added

*I was hoping to get lots of opportunities and develop myself more in the dynamic field of Technology but to some extent, there were limitations.*

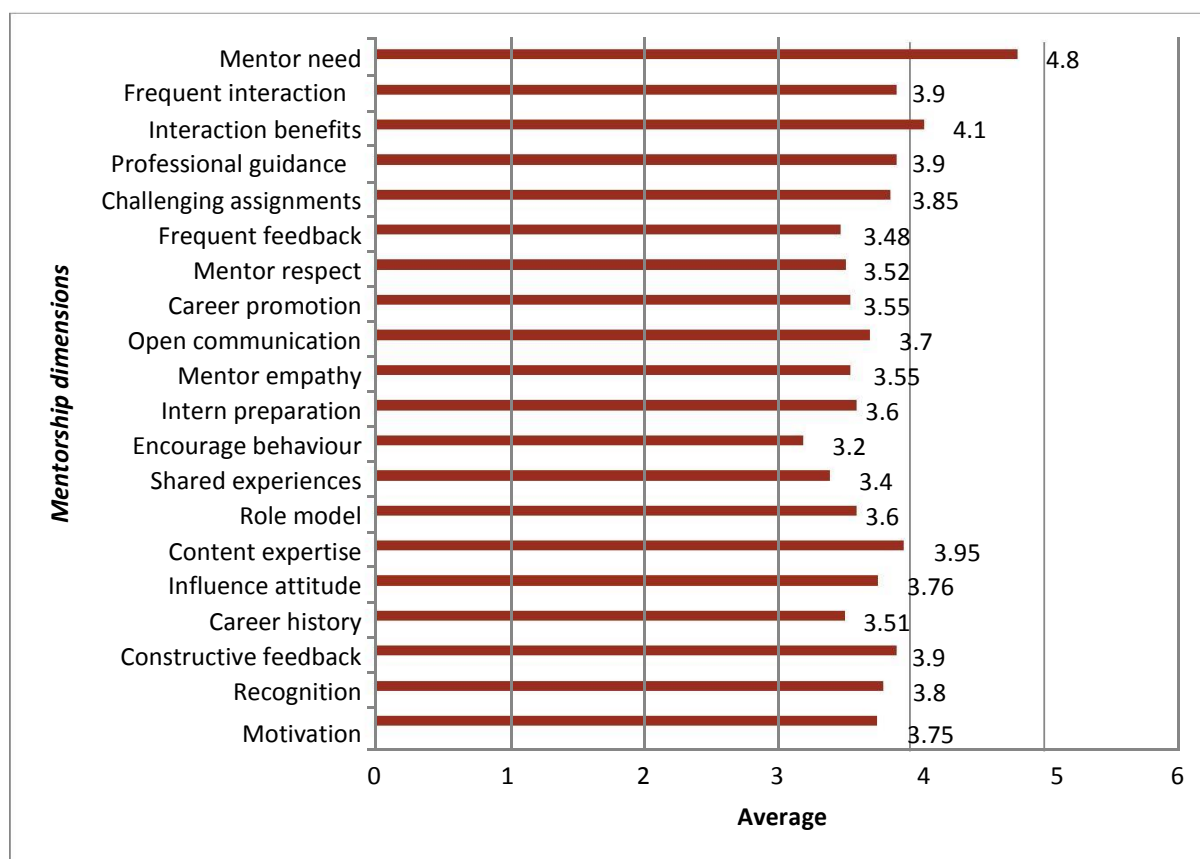
Other interns highlighted the need for the technical training to occur earlier in the programme.

### **Discussion of findings relating to technical skills training**

The above findings are important, as science and technology stakeholders place considerable emphasis on cognitive (i.e. technical) skills in the employability of IT graduates (Coll & Zegwaard (2006). Our findings are also in line with previous research indicating that learning must include practical training (Bischoff and Govender, cited by Stanz & Mosoenyane, 2008). Recent research has identified the academic and technical skills as the most important category of skills required of graduates in the world of work (Datta, Pellissery & Paul, 2007; Raftopoulous et al., 2009). Clearly, graduates need very specific skills in a technology-dependent workplace in the 21<sup>st</sup> century (Raftopoulos et al., 2009).

### **Findings on mentorship**

The findings on the mentorship roles are reported in Figure 3.



**Figure 3: Findings on mentorship**

From Figure 3, it is evident that the graduate interns perceived the mentorship experience in the organisation positively. The findings clearly indicate a need for mentorship as an integral part of the graduate internship programme. On average, other findings also indicated that the interns benefited largely from interactions with the mentor, received professional guidance from the mentor, and received challenging assignments to improve their competence. Mentors displayed content expertise and mentors provided constructive and useful feedback on intern performance.

#### *Qualitative findings*

The majority of the interns experienced the mentoring programme as positive as the programme offered them exposure and contributed to gaining more self-confidence, and this, in itself, contributed to their own motivation. As mentioned by a graduate intern:

*My mentor/s had confidence in me and instilled a lot of knowledge and etiquette of professional conduct. My mentor/s gave me practical hands-on experience and how I should handle problems.*

Another graduate intern stated:

*I personally feel privileged to have had a mentor who was concerned and interested in our development. I received more than I bargained for.*

and

*It's very important that you have a mentor who is always willing to help and guide you when you need it. I believe mentorship in internship programmes motivates interns and makes them more productive.*

A few interns experienced their mentors as unwilling to share knowledge, as they seemed threatened by the interns and, in these instances, even though mentors had a willingness to support



the programme, they did not demonstrate the required interpersonal skills to guide the intern, which resulted in a negative experience for the intern. As mentioned by a graduate:

*I think there should be a greater priority placed on finding suitable mentors as it plays a huge role in moulding an intern. It can clearly be seen that lackadaisical mentors (due to their personal growth within the company or just by nature) lead to lackadaisical interns which is not a good quality for growth.*

Another graduate intern added:

*The mentor I was placed under was not the right person to mentor young professionals coming into the business. I gained more from other senior members than I did from my mentor. I feel no background check was done when selecting mentor i.e. no consideration was given who would add the most value in development of the intern.*

### **Discussion of findings relating to mentorship**

From the above findings, it is evident that there is a need for mentorship as an integral part of the graduate internship programme. A mentor who guides, supports and counsels youth as they navigate their way through the world of work, will thus yield positive results (Stanz & Mosoeunyane, 2008). In this context, our findings support the mentee benefits as indicated (Ingram et al., 2009). Furthermore, our findings also confirm that the role of the mentor is indeed to guide the professional development of the mentee and to share knowledge, experience and organisational perspectives candidly within a context of mutual respect and trust (see Janse van Rensburg & Roodt, 2005). In addition, our findings also highlighted the need for matching the right mentor and graduate intern to ensure the success of the mentoring process (Berezuik, 2010).

### **Conclusion**

In conclusion, our research highlighted the importance of soft and technical skills training and mentorship as an integral part of an effective work-integrated learning programme. The overall findings of the soft skills training indicated that the internship programme contributed largely to the soft skills of the graduate interns, which were also viewed as important for graduate employability. Based on the findings, one can thus conclude that the graduate internship programme contributed to the most important soft skills identified for employability. The majority of the interns experienced the mentoring programme as positive since the programme offered them exposure and contributed to gaining more self-confidence and this in itself contributed to their own motivation. The results clearly indicate a need for mentorship as an integral part of the graduate internship programme.

### *Limitations*

As with any research, this study also had some limitations. Firstly, a purposive sample was used at one specific ICT company. This means that the findings of this research cannot be generalised to the wider population. Secondly, the sample size limited the research in terms of the types of data analyses that could be used. For example, the demographic distribution of the sample limited the researchers in terms of Anova analyses to test for significant differences between the components of the work-integrated learning programme. However, the type of data analyses in this paper is sufficient for the objective that we wanted to achieve for this research.

### *Recommendations*

The following recommendations for future research are posited:

The present research took the format of a post-test only. This limited the researcher in terms of determining the contribution of the soft skills training, technical training and mentorship from the intern and mentor point of view. Action research should be undertaken with intervention training where measurements can be made on a consistent basis to determine whether the internship

programme contributes to the soft skills of the graduate intern progressively. The methodology to measure soft skills should also be expanded to include observations.

The data gathered, analysed and interpreted by this research allows for the following recommendations when implementing a work-integrated learning programme:

### **Training**

- Conduct technical and soft skill training earlier in the programme.
- Align graduate qualifications with relevant business unit or department.

### **Internship programme process**

- Reduce numbers of interns in order to make the programme more manageable.
- Increase remuneration as intern shows progress and performance.
- Rotate interns in order for them to discover their interest.
- Consider extending the programme to a full year.

### **Mentorship process**

- Formalise daily activities in a more structured manner.
- Elicit more regular feedback from management on intern progress.
- Allow interns to shadow senior employees.
- Line managers and mentors need to inform their respective departments about interns being placed in their environment.
- Line managers and mentors that indicated a need for interns must ensure that enough work is available to keep interns busy.
- Implement a structured training and development plan per intern in business area appointed.

### **Mentor selection and involvement**

- Ensure that mentors are suitable and have the inclination for mentoring.
- Managers play an essential role in the success of the programme; therefore, buy-in from the enterprise to support the programme from the beginning to the end is essential.

### **References**

- Bates, M. 2008. Work-integrated curricula in university programs. *Higher Education Research and Development* Vol. 27, No 4: pp 305–317.
- Barkhuizen, E.N. 2005. *Work Wellness of Academic Staff in South African Higher Education Institutions*. Unpublished Doctoral Thesis, North-West University.
- Beck-Howard, M. 2009. A mentoring culture can boost employee retention, bottom line. *Minneapolis St. Paul Business Journal*. April.
- Berezuik, S. 2010. Mentoring in emergency care: 'Growing our own'. *Emergency Nurse* Vol. 18, No 7: pp 12–15.
- Buchlungu, S. & Metcalfe, A. 2001. Breaking the racial division of labour knowledge production: Reflection on internship programmes. *Perspectives in Education* Vol. 19, No 2: pp 67–84.
- Clymer, C., Roberts, B & Strawn, J. 2001. *States of Change: Policies and Programs to Promote Low-wage Workers's Steady Employment and Advancement*. Public/Private Ventures: Philadelphia.



- Coll, R.K., & Zegwaard, K.E. 2006. Perceptions of desirable graduate competencies for science and technology new graduates. *Research in Science & Technological Education* Vol. 24, No 1: pp 29– 58.
- Collective Resources. 2008. *A study of change patterns in the sugar industry*. Durban.
- Costley, C. 2007. Work-based learning: assessment and evaluation in higher education. *Assessment & Evaluation in Higher Education* Vol. 32, No 1: pp 1–9.
- Eigsti, J.E. 2009. Graduate nurses' perceptions of a critical nurse internship programme. *Journal for nurses in staff development* Vol. 25, No 4: pp 191–198.
- Griesel, H. & Parker, B. 2008. *Grappling with youth employability in South Africa. Employment, growth and development initiative*. Pretoria: HSRC Press.
- Heerde, J. & Murphy, B. 2009. Work Integrated Learning: An Annotated Bibliography of published refereed journal articles (2000–2008).
- Ingram, S., Bruning, S., & Mikawoz, I. 2009. Career and Mentor Satisfaction among Canadian Engineers: Are there differences based on Gender and Company-Specific Undergraduate Work Experiences? *Journal of Engineering Education*, April pp. 131–144.
- Janse van Rensburg, K., & Roodt, G. 2005. A normative instrument for assessing the mentoring role. *South African Journal of Human Resource Management* Vol. 3, No 3: pp 10–19
- Kanye, B., & Crous, F. 2007. Graduate interns' experiences: A career success orientations approach. *South African Journal of Industrial Psychology* Vol. 33, No 3: pp 84–93
- Kruss, G. 2004. Employment and employability: expectations of higher education responsiveness in South Africa. *Journal of Education Policy* Vol. 19, No 6: pp 673–689.
- Lo, M., & Ramayah, T. 2011. Mentoring and job satisfaction in Malaysian SMEs. *Journal of Management Development* Vol. 30, No 4: pp 427–440.
- McIlveen, P. & Pensiero, D. 2008. Transition of graduates from backpack-to-briefcase: a case study. *Education and Training* Vol. 50, No 6: pp 489–499.
- Menochelli, J. 2006. Collateral Learning and the Soft Skills, SBS E-talks.
- Mummenthey, C., & Du Preez, R. 2010. Implementing efficient and effective learnerships in the construction industry. *SA Journal of Industrial Psychology* Vol. 36, No 1: pp 1–11.
- Pearce, K. 2007. *Skills demand and supply: The 21st century challenge*. eSights Trends Book: New York.
- Pop, C.A., & Barkhuizen, E.N. 2010a. The relationship between skills training and retention of graduate interns in a South African Information, communication and technology company. *Literacy Information and Computer Education Journal* Vol. 1, No 2: pp 113–122.
- Pop, C. A., & Barkhuizen, E.N. 2010b. *Mentorship and retention of graduate interns in a South African Information, Communication and Technology Company*. Paper published in the peer reviewed conference proceedings of the 12<sup>th</sup> Biennial International Society for the Study of Work Values Conference, Lisbon, Portugal, pp. 281–288; 27–30 June. Shreveport, USA, ISBN: 978-0-9817997-1-1
- Reinhard, K. 2006. The German Berufsakademie Work-Integrated Learning Program: A Potential Higher Education Model for West and East. *Asia Pacific Journal of Cooperative Education* Vol. 7, No 1: pp 16–21
- Scottish Higher Education Funding Council. 2003. *Higher Education: Higher ambitions?* Edinburgh: Scottish Council Foundation.

Van Rooyen, L., Du Toit, D.H., Botha, E., & Rothmann, S. 2010. Artisan retention in an organisation in South Africa. *SA Journal of Human Resource Management* Vol. 8, No 1: pp 1–10.

## Notes for contributors: *The African Journal for Work-Based Learning*

The Southern African Society for Cooperative Education (SASCE) intends to publish a journal dealing with the increasingly important notion of work-based learning. The broader context is that of linking formal institutional learning to the requirements of the world-of-work in a holistically conceptualised curriculum encompassing theory and practice. Currently, many diverse examples of the link between learning and work exist. *The African Journal for Work-Based Learning* aims to provide a forum for a scholarly understanding of the epistemological bases for learning *for* work, learning *at* work and learning *through* work.

While it is intended that the journal will be academic in nature, it should also serve as a resource for scholars, researchers and workplaces. Examples in the form of essays or discussion papers of best practice, good partnerships and cooperation will thus also be welcomed. **Manuscripts should be a maximum of 6 000 words (15 pages), including all diagrams, tables and references.** Submissions should be in Times New Roman, 12 pt, 1½ spacing.

The journal will be published once a year – in July – and will be made freely available on the World Wide Web at [sasce.net](http://sasce.net). A limited number of hard copies will be made available at specific events.

Since this edition is the inaugural edition, an editorial board has not yet been appointed. For the moment, correspondence can be addressed to the acting editor at:

[Ronel.Blom@wits.ac.za](mailto:Ronel.Blom@wits.ac.za) /+27 11 717 3071.

This particular edition will be language edited, but not peer reviewed.

Readers are free to make copies of articles available for non-profit educational purposes. This is an open resource publication.

### Referencing style

References in the text should appear as follows:

1. Citing without verbatim quotes, e.g.

Competences of vocational teachers are considered to include subject matter specialisation, pedagogy and the knowledge of how theory is applied in practice, i.e. in the workplace (Papier, 2010).

2. If the text quoted is less than two lines long, it should be part of the sentence, e.g.

Papier (2010: 157), maintains that 'in South Africa only a few higher education institutions offer qualifications for college lecturers', but there does not seem to be agreement on the content of curricula for these qualifications.

3. If the text quoted is longer than two lines long, it should be indented, e.g.

Papier (2010: 157) therefore notes that:

...vocational teacher preparation does not rank highly in university offerings here, partly because teacher education generally is under-funded within higher education, and the viability of new vocational teacher offerings has not yet been established.

4. The references should be listed in alphabetical order in full at the end of the paper in the following format:

### **Books**

Surname(s), Initial(s). Year of publication. *Title: additional title information*. Edition (if other than the first). Place of publication: Publisher. e.g.

Nel, JP. 2010. *RPL. The concepts and procedures governing the recognition of prior learning*. Centurion: Mentornet.

### **Chapters in books**

Surname(s), Initial(s). Year of publication. Title of chapter or article. In Surname(s), Initial(s) of editor(s) or compiler(s). (Eds). or (Comps). *Title of book*. Edition (if other than first). Place of publication: Publisher. Inclusive page numbers of the chapter. e.g.

Sehoole, CT. 2002. The incorporation of the Johannesburg College of Education into the University of the Witwatersrand. In Jansen, JD. (Ed). *Mergers in higher education. Lessons learned in transitional contexts*. Pretoria: University of South Africa.

### **Journal articles**

Surname(s), Initial(s). Year of publication. Title of article. *Name of journal* volume number: inclusive page numbers. e.g.

Collin, R. 2012. Mapping the future, mapping education: an analysis of the 2011 State of the Union Address. *Journal of Education Policy* Vol. 27, No 2: pp. 155–172.

### **Theses and dissertations**

Surname(s), Initial(s). Year of publication. Title: additional title information. Unpublished PhD thesis. Location of university: name of university. e.g.

Blom, JP. 2006. The ideal of an integrated national qualifications framework. Unpublished PhD thesis. Pretoria: University of Pretoria.

### **Conference papers**

Surname(s), Initial(s). Year. Title: additional information. Description of occasion (including the name of the conference, the place at which it was held and the date(s) on which it was held). e.g.

Blom, R. 2006. Parity of esteem: Hope or despair? 4<sup>th</sup> Sub-regional conference on assessment in education, University of Johannesburg, 26 to 30 June 2006.

### Online sources

Surname(s), Initial(s). Year of publication. *Title*. Version (if any). Address of web page. Retrieved on day, month (and year if different to publication year) of visit to site. e.g.

Henschke, K. 2013. *Feeling the heat: Developing individual, social and professional agency for, in and through work placements*. <http://www.waceinc.org/durban2013/proceedings.html>. Retrieved on 12 September 2013.

# THE AFRICAN JOURNAL FOR WORK-BASED LEARNING



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### WIL-power remains at the level of WILL and not POWER

Panel discussion input to the World Association of Cooperative Education (WACE) plenary 1 session on “WIL-power-from policy to practice: exploring models of excellence”.

Thandwa Mthembu

### A case study of an experiential learning and graduate placement partnership between the South Africa Automotive Industry Development Centre (AIDC) and the Nelson Mandela Metropolitan University (NMMU).

Ronel Rizzo

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### Education and training for the workplace: workplace-readiness skills

Susanne Taylor and Cookie Govender

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### Workplace and lecture hall synergy

Belinda van der Merwe

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### Exploring the effectiveness of a work-integrated learning programme in contributing

Carver Pop and Nicolene Barkhuizen

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### Notes for contributors:

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