

AN OCCASIONAL PAPER ON THE IMPLEMENTATION OF WATER INDUSTRY TRAINING IN QUEENSLAND



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QUSITAB,NUITAB,NAC,WEITAA,UTWNWS,NWP01,
NWP07, TTSI,RPL,RCC,RTO,QF,OHS,GSA, VET,CT,
And all that Jazz.

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ABSTRACT

Most of us are aware of the current national arrangements relating to training and what follows is a whistle stop tour of my experiences over the last twenty years of water/wastewater training in Queensland over that time. Also it is probably timely I think to ask some fundamental questions about where we have been, what have we learnt, and more importantly, is our current direction going to deliver the outcomes that we currently require. But first let us remind ourselves what we have been trying to achieve through the Training Reform Agenda.

1.0 INTRODUCTION

From the outset the broad direction of the Training Reform Agenda (starting mid 1980's) has been to make Australia more competitive as a nation within a global economy well into the twenty first century. This involved interlinking the training system to the Industrial Award system through EB's (Enterprise Bargains), improving training delivery through making trainers and training organisations "outcome focussed", establishing a truly national approach to training through the Australian Qualifications Framework, transportable qualifications and National Training Packages, and installing "the achievement of Competence" as the measure of success of our efforts.

This paper is an attempt to review the performance, find some answers and pose some questions for the future in respect to some of these training issues.

2.0 DISCUSSION

2.1 A short history

Firstly – Where have we been? Training for the Water Industry in Queensland 1980 +

Early 1980's

- TAFE was a sole provider,
- Curricula and Learning materials were developed mainly by Technical Correspondence School,
- Water and wastewater treatment was not a described vocation(Trade),
- Courses on offer were CNO446 Sewage Treatment Plant Operation, CNC28 Water Treatment Plant Operation and CN715 Swimming Pool Plant Operations.

Late 1980's

- CBT (Competency Based Training) emerged where assessment was based on demonstration of "workplace competence".
- TCS became QDEC (Queensland Distance Education College) and water and wastewater courses were upgraded.

- WITA (Water Industry Training Association Qld) is formed
- 1990's**
- ANTA (Australian National Training Authority) emerged and established a training reform agenda. This led to the development of the Training Packages. TP's were poorly named as they are not about the delivery of training but are about the competencies and how they were to be assessed. The Training Package also provides the National Qualifications Framework for the water industry (AQF) and a Qualification Formula, (the combination of competencies that constitute a nationally accredited qualification)
 - ANTA also established the requirements for Registered Training Providers, established Industry Training Advisory Boards (QUSITAB, NUITAB), and NAC's (New Apprenticeship Centres), Traineeships etc. This also was accompanied by the opening up of the training "market".
 - QDEC becomes OLI,
 - WIETAA (Water Industry Education and Training Association of Australia) formed
- 1998**
- First National Water Industry Training Package (UTWNWS20198) by NUITAB (National Utilities Industry Training Advisory Board) is implemented if a bit unhappily
 - Three major streams, Treatment, Collection and Distribution and Catchment Management,
 - Qualification Framework is developed Certificates I to IV in Water Industry Operations, Associate Diploma and Diploma
- 2001**
- Second Water Industry Training Package (NWP01) is implemented. Qualification Formulas change and more competencies added.
 - Many Authorities incorporate training achievements into Enterprise Bargain Agreements
 - Water Industry leaves NUITAB and looks for another ITAB
- 2004**
- ANTA starts to disintegrate
 - number of ITAB's reduced,
 - Government Skills Australia (GSA) becomes responsible for Water Industry Training Package and starts "harmonisation" of NWPO1
- 2007**
- GSA should achieve release of NWPO7 with some significant changes eg "unnesting" of qualifications and changes to qualification formulas.
 - OLI becomes Trade and Technicians Skills Institute (TTSI) trading as SkillsTech Australia.

Questions to be asked

Have we really got a more appropriate training system?

Is the industry and its workforce really being better served by our current arrangements?

And what about the new entrants to the workforce – the school leavers?

3.0 NWPO7 – WHAT ARE THE ISSUES WITH THIS PACKAGE?

The only thing that we can be absolutely certain of is that change is inevitable and as a consequence I would like to draw your attention to what I consider some of the more important issues that will influence the delivery of training with NWP07 and some questions for the future.

3.1 RPL – Recognition of Prior Learning

One of the features of Training Packages, and Government Policy, is to ensure the Recognition of Prior Learning within the workforce or alternatively Recognition of Current Competence. What are the practicalities of this for Registered Providers and potential students? Firstly most of us would agree that that just because somebody asserts their competence doesn't necessarily mean that they can be awarded a Qualification (self praise is no recommendation). This has proved to be a considerable problem to us at SkillsTech as a Registered Provider as we believe there has to be a rigorous and defensible system in place to ensure all Applications are assessed fairly.

So what are the rules relating to RPL?

- Qualification Formula / Knowledge Component / Workplace Assessment

1. The Qualification Formula

To achieve a Qualification, applicants will have to meet the requirements of the Qualification Formula. Qualifications within the National Water Package NWP01 are called Certificates in Water Industry Operations and Diploma in Water Industry Operations defined in terms of competencies as follows:

Name	Core Competencies	Technical Electives	Pre-requisites
Certificate I WIO	3	2	N
Certificate II WIO	6	7	N
Certificate III WIO	2	7	Y (Plus completed Cert II)
Certificate IV WIO	2 (max of 2 from Cert III)	6	Y (Plus completed Cert II)
Diploma WIO	1	5	Y (max of 1 from other TP)

The competencies are listed in the Training Package along with their Elements and Performance Criteria, Range Statements and Evidence Guides. It can be seen from the table above that the Certificate II, III and IV in NWP01 are “nested” qualifications i.e. there are required prerequisites before one embarks onto a higher level of qualification from a lower qualification.

One of the more contentious changes that may eventuate in NWP07, due for release possibly in July 2007, is the “unnesting” of these qualifications, or removal of the prerequisites. The outcome of this is that students do not necessarily have to demonstrate the knowledge required of a lower level qualification before embarking on the higher level qualification. This will present major difficulties for Registered Providers to maintain standards as it may inhibit the delivery of the knowledge component to a standard required by the industry.

All this said, to get a qualification an applicant has to meet the requirements of the Qualification Formula at level.

2. Knowledge Component/Workplace Assessment

To achieve a competence (and be issued a result by SkillsTech), applicants have to provide “evidence” of their competence through production of “Results” achieved and issued by a Registered Training Provider. This is usually done through formal testing of the knowledge component and corresponding Workplace Assessment for the competence or it may be by the possession of an equivalent competence from within another Training Package (if they can be mapped across).

Applicants who don't possess formal results from a Registered Provider may also collect "recognisable evidence" relating to the "Performance Criteria" in the Water Training package and demonstrate the competence to a qualified Workplace Assessor who must then formally attest the applicants competence

3.2 The RPL Process – Practical Issues

It has been our experience at OLI (now SkillsTech) that most of the RPL applications are from applicants who wish to attain a current Certificate III because their EB will unfortunately only recognise the current qualification. I have done a number of "whole of staff" RPL exercises for some of our larger Councils eg Townsville, Gold Coast, Mackay. The general situation is that the staff will have a combination of previous TAFE Qld qualifications (CNO446,NC28,UTW20198, NWP01) and generally a large number of single issue "in house courses eg Confined Space, Chlorinator Maintenance" which are not accredited and often not delivered by a Registered Provider yet can meet some of the requirements of a particular competence.

With existing or previous TAFE courses, where we know the curriculum content and delivery standard, recognition can be easily assessed for the knowledge component, as they are largely equivalent. Such students may however have to still demonstrate "Workplace Competence" as prior to 1998 this was not done in any courses. In these cases they are generally assessed by us on site. Then should they have satisfied both components of the evidence, the underpinning knowledge and the workplace assessment, they will be issued with the competence for use in achieving a qualification.

To simplify this process further, at SkillsTech we have produced a guide to applicants who may hold any of the prior qualifications (CNO446, CNC28, UTW20198, and NWP01). They should then be able to readily assess their current potential for RPL. Applicants should also be aware that there is a charge, currently \$1.30/SCH that is applied to all applications for RPL by TAFE.

3.3 "Unnesting"

One of the more contentious changes that may eventuate in NWP07, due for release in July 2007, is the "unnesting" of the Water Industry qualifications, or the removal of the lower level prerequisites. To be fair, this "initiative" is direct from Canberra and it was a requirement that the Water Industry Advisory group had to comply with. The thinking behind this is that if the Competence descriptors at level are correct they should stand alone, but it could be easily argued that a students knowledge base/competence in the water industry requires both the breadth and depth, (student/intellectual growth is required to be effective at any higher level in the workforce to my thinking).

As a consequence a more sequential pathway providing for the necessary knowledge development would most probably deliver a better outcome in terms of necessary depth. (Most students tell me that they need more time rather than less.)

Also the practicalities of teaching with "unnesting" in place is that students do not necessarily have to demonstrate the knowledge required of a lower level qualification before embarking on the higher level qualification. This will present major difficulties for the student, and the teacher, in developing their understandings and subsequently for the Registered Providers in maintaining standards as time restraints may inhibit the delivery of this essential knowledge component to the a standard required by the industry.

4.0 RESOURCES

One of the primary objectives of the Training Reform Agenda has always been to achieve nationally recognised qualifications at Level across the country. This has always been a problem for providers as the Training Packages are not about Curriculum; they are about “outcomes”. (The Curricula defines the course content for the teacher i.e. what is to be taught). It would therefore seem reasonable in a national system that the standards to be reached by students in any State should be the same as the “Performance Criteria” in the Training Package and that learning outcomes are the same throughout the nation.

However this does not take into account the regional variations that exist brought about by different work structures, (Regional Water Authorities vs. large Local Authorities vs. small Community Councils), different enterprise bargain arrangements, different State Legislations eg Environmental/OH&S legislation, different community expectations and levels of technology eg Major Metropolitan Vs Aboriginal/Regional Council, and even different language/terminology, to say nothing about differences in student capacities or background

To my mind the simplest way to achieve a consistent national standard of delivery and therefore a national qualification that can reasonably be described as transportable across State borders and equivalent in standard is to have a consistent curriculum with nationally developed learning resources to support the agreed curriculum. This has not yet been achieved and as a consequence to my mind after almost twenty years of reform we have not yet achieved one of the primary objectives of the Reform Agenda, i.e. Transportability of Qualifications.

Similarly many of the difficulties of RPL could be overcome if we were all singing from the same song sheet. All that is needed to meet this objective is a national Project funded to develop the consistent curricula and learning resources to support Training Package outcomes across all streams. Unfortunately a recent application to the \$2 billion National Water fund by GSA for support to create national curricula and national Learning Resources was unsuccessful. I still live in hope as the water industry recently attracted a \$10 billion package, yet how much will ever get to the training sector that supports this industry? I often question whether our political masters are at all serious about Vocational Education and Training.

4.1 An Emerging Issue

We are all aware of the drought in SE Queensland and the governments responses to it, most contentiously Recycling of treated wastewaters, Desalination and other investigations into the use of non traditional water sources eg coal seam water. These are all very reasonable initiatives for politicians but let us consider for a moment what the impact could be on the national training system.

Firstly a National Guideline for Water Recycling has recently been released for comment. It can be downloaded from http://www.ephc.gov.au/ephc/water_recycling.html should you feel inclined to read the whole 414 pages. Although Phase one of these guidelines makes a very limited mention of training as a necessary and essential component of public health maintenance when using recycled water, I would have thought it to be a major issue. As a consequence I have submitted my thoughts to the working party generating these new Guidelines for further consideration.

Issues that I would believe to be important with respect to training because of the changes to source water quality include the need for licensing of Operational Staff and Registration of Plants. The tragedy of Walkerton (Canada) is not that far distant that we should forget the recommendations of the Royal Commissioner. These were:

Recommendation 59

“The Ministry of Environment should continue to require mandatory certification of persons who perform operational work in water treatment and distribution facilities. Education, examination and experience are essential components of ensuring competence”.

The Commissioner makes the point that a minimum Year 12 education as a prerequisite for all levels of Licence. “A formal education is necessary to ensure that the individual is literate, has problem solving abilities and possesses mathematical and other skills. The successful completion of a high school Diploma or equivalent is a precondition to competency and should be enforced”.

Recommendation 60

“The Ministry of Environment should require water system operators who currently hold certificates obtained through the grand parenting process to become certified through examination within two years and it should require operators to be recertified periodically”.

Recommendation 61

“The Ministry of Environment should require all applicants for an operators Licence at entry level to complete a training course that has a specific curriculum to ensure a basic minimum knowledge of principles in relevant subject areas”.

The Commissioner writes “That at present it is not necessary for a prospective operator to complete a training course that has a specific curriculum”

Recommendation 62

“The Ministry of Environment should develop a comprehensive training curriculum and should consolidate the current annual training requirement of ministry approved training into a single integrated program approved by the Ministry of Environment”.

The Commissioner makes the point that it was “the inconsistent enforcement of training” and “that currently there is no requirement that training focuses on technical issues involving water treatment or human health” and “there is no requirement that training be tailored to the class of facility in which an operator works” as issues contributing to the break down in technical standards.

The Commissioner goes on to advocate 36 hours every 3 years of continuing education (post qualification) consisting of formal courses taught by qualified instructors and subject to end of course evaluation. These courses are to be government approved and are a condition of “Licence renewal”.

Recommendation 63

“The Ministry of Environment should take measures to ensure training courses are accessible to operators in small remote communities and that courses are tailored to meet the need of the operators in these small systems”.

The commissioner makes the very pertinent point “The existence of good training

materials for operators will help ensure the delivery of safe drinking water”.

Recommendation 64

“The Ministry of Environment should meet with stakeholders to evaluate existing training courses and to determine the long term training requirements of the waterworks industry”.

To my mind these recommendations all make eminent sense. Similar provisions also exist in the USA and most of Europe and are very applicable to the position the Australian water industry finds itself in.

4.2 Unfinished Business

In reviewing the issues that the Training Reform Agenda has delivered us some questions arise that need to be addressed, some of these questions follow:

1. Does the “practice” of Competency Based Training challenge students sufficiently to become effective workers?

Many VET courses can now be best described as “monkey see monkey do” and that may be all very good if all students were monkeys however I am sure this is not the case. As a consequence most teachers recognise different measures of success in relation to career or lifelong learning. Would skills such as:

- (a) effective thinking,
- (b) a capacity for problem solving and
- (c) innovation and reflection be more useful to an employers future and also ones career into the future. If so, when are they going to get a mention in the Training package?

2. For how long should workers be deemed to be competent?

Without the above mentioned skills how long should anyone be deemed competent in the world of fast changing technologies that characterise the water industry? Good trainers and training organisations should be characterised by their capacity to stimulate and maintain a students desire for intellectual growth within their vocation, hopefully throughout their career, and thus minimise the requirement for re training.

3. Further to the above it could it be reasonably asserted that Competence Based Training is perhaps more about yesterdays performance rather than today’s or tomorrows. Whatever happened to the aim of the Reform Agenda “to improve Australia’s competitiveness into the future”. Such an aim requires that whatever training is delivered be flexible dynamic and progressive to deliver this outcome, definitely not static. This is a problem for a rigidly structured CBT system. Unfortunately there is no funding to encourage Providers and their students to go beyond what is defined as competent in the training package

The Water Industry knowledge base is extensive and extends over the fields of Environmental and Civil Engineering, Process Engineering and Chemistry, Agriculture and Management/Administration.

Each of these fields of knowledge has a particular structure which has been developed over the many years and it is a considerable challenge for teachers to extract the essential body of knowledge in a coherent and cohesive fashion to reasonably satisfy the requirements of the achievable yet limited outcome statements (the competencies).

How can our knowledge base be best managed to ensure a culture of organisational and personal development through becoming more enlightened rather than potentially more confused through being fed morsels (knowledge bytes) of somewhat unrelated information in the various competencies often delivered in an extremely unstructured way by a number of providers.

5.0 ACCRONYMS:

EB	Enterprise Bargain
AQF	Australian Qualification Framework
CBT	Competency Based Training
TP	Training Package
TAFE	Technical and Further Education
TCS	Technical Correspondence School
QDEC	Queensland Distance Education College
OLI	Open Learning Institute
WITA	Water Industry Training Association
ANTA	Australian National Training Authority
QUSITAB	Queensland Utilities and Services Industry Training Advisory Board
NUITAB	National Utilities Industry Training Advisory Board
NAC	New Apprentice Centres
WIETAA	Water Industry Education and Training Association of Australia
UTWNWS20198	The first Water Training Package
NWP01	National Water Package 2001
NWP07	National Water Package 2007
TTSI	Trade and Technicians Skills Institute
RPL	Recognition of Prior Learning
RCC	Recognition of Current Competence
RTO	Registered Training Organisation
QF	Qualification Formula
OH&S	Occupational Health and Safety
GSA	Government Skills Australia
VET	Vocational Education and training
CT	Credit Transfer

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