Evaluation: It's Role in Planning Educational Programs – A Personal Reflection

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The purpose of this paper is to show how evaluation is an integral part of teaching and learning. The paper begins with a reflection of my personal journey of discovering the value of evaluation in learning and teaching and its role in curriculum and program planning. This reflection is set against a backdrop of Bloom's Revised Taxonomy that reminds us that evaluation is one of six important dimensions of learning.

Two case studies of recent evaluation consultancies undertaken in Australia are then presented to illustrate how developmental evaluation approaches can be used to refine education policy at the macro level, and to assist teachers to make informed decisions about planning and implementing educational programs at the micro level.

The paper concludes that evaluation is, therefore, a necessary competency for all practising educators to possess, and is integral to the work of schools as they closely reflect on the evidence of what they do to enhance the learning outcomes of their students. As such, it is an essential component of teacher education programs.

Key words: School evaluation, Developmental evaluation, Curriculum planning, Bloom's Revised Taxonomy, Teacher education.

Introduction

Education is one of the best investments countries can make. Lifelong learning is a necessity to underpin our development as a society and a productive workforce. Schools are the foundation of building an appreciation for learning as a part of daily living and working. However, there are many issues, both continuing and emerging, that are impacting on school curricula, methods of teaching and how schools are organized. Some which I believe to be significant are:

- increased competitiveness (regional, national and international);
- involvement of technology in learning and teaching;
- increased complexity and diversity of students;
- translating research into effective improvement in teaching practice; and
- increased accountability of schools and teachers.

Together these issues make teaching and school organization less certain in terms of how to respond to them within given financial and human resources. Also, when initiatives are taken, how do we know that they actually make a difference to student outcomes?

Schools are also very different in location, setting and make up of student and teacher profiles. Therefore, it is important to understand how school based initiatives which address current educational issues work and don't work, to what standards, and under what conditions (Coe, 1999).

Such multi-contextual perspectives of implementation present many challenges to education authorities at the macro level and schools at the micro level in evaluating and monitoring what is happening both in classrooms and the broader setting of the school. This complexity is further compounded by pressures from governments to produce evidence of outcomes and, as Coe (1999) claims, politicians "feeling the need to act, or at least to be seen to be acting, despite the absence of

any clear evidence about what action is most appropriate" (p. 3) is ever present.

In this paper, I aim to show how evaluation is an integral part of teaching and learning, and how it is essential for all educators to have knowledge about it and skills in undertaking it. This will be explained by reflecting on some of my observations over 35 years in professional practice and my 30 years as an educator.

Two important questions emerge from these reflections:

a) What is realistic for teachers to do in evaluating educational programs?

b) What pre-service, inservice, and postgraduate education in evaluation is best for teachers and others with education roles?

A Personal Journey of Using Evaluation for Learning

Teaching and learning does not always happen in schools. My first qualification was a Diploma of Fashion Design and Production and I worked in the fashion industry for four years. I learned many things. For example, how to:

- research and analyse markets;
- work in a team, and the importance of each team member's contribution to completing major projects on time;
- negotiate with clients and colleagues;
- maintain high standards, what quality means to clients and customers, and what is involved in making decisions when compromises between cost and quality need to be made; and
- develop ideas to create new products with given materials and limited resources.

It was only after I studied for my next qualification, a teacher education certificate, that I understood the interrelationship of these skills and attributes in terms of Bloom's Taxonomy of Educational Objectives (See Figure One (Krathwohl, Anderson, & Bloom, 2001) revised version) and how useful it is to situate learning within a real work or problem-solving context.

This belief was strengthened during my 11 years of teaching in a secondary school that was known for its innovative approach to schooling and flexibility in meeting the needs of a diverse range of students, some of whom were difficult to engage in learning. In this school, students were grouped into four sub-schools which were essentially four small communities of students, teachers and parents. Home group teachers worked with students to negotiate individual learning programs according to their needs and interests, and teachers often worked together on integrated curriculum projects. The aim was to provide a social and learning environment where these students felt that they and their ideas were valued and, at the same time, challenged to listen to other people's (that is, students', parents', teachers') perspectives. They were also taught to analyse the collective information, and then apply it to an issue or problem, whether it was in relation to their classroom work, personal learning programs or resolving a conflict with teachers or other students. With encouragement and a solid foundation of thinking skills, many of these students excelled in their studies, or at the very least, found relevance in attending school.

One of the advantages of teaching in a 'lighthouse' school such as this one was that because of its culture of innovation, it attracted attention and its teachers were often asked to participate in broader professional or policy development initiatives. This was also encouraged by the principal who saw benefits for the school as a whole in terms of both promoting its philosophy in mainstream education, and bringing in new ideas to the school community. It also gave teachers access to exciting professional learning environments where they could be involved in the creative work of education policy formation.

Such work also broadens professional networks and my participation in these networks eventually led to an invitation to become a lecturer in design and technology studies in a tertiary teacher education institution. Here I found myself drawing on stories of my professional life as a teacher to illustrate teaching, learning and classroom management concepts to give life and energy to education theory. The students, like me, were recruited from industry to become school teachers of technical subjects. This work opened up a new field of enquiry to me – adult learning. And so theorists

Figure One

Bloom's Taxonomy
2001 REVISION

Remembering
Recognise, list, describe, identify, retrieve, name...

Can you RECALL what you have seen or heard before?

Understanding
Interpret, exemplify, summarise, infer, paraphrase...

Can you EXPLAIN or show that you UNDERSTAND?

Applying
Implement, carry out, use...

Can you USE the new knowledge or show how it connects to other things you know or can do?

Analysing
Compare, attribute, organise, deconstruct...

Can you BREAK DOWN the information in some meaningful way?

Evaluating
Check, critique, judge, hypothesise...

Can you JUSTIFY a decision with evidence of reasoning?

Creating
Design, construct, plan, produce...

Can you CREATE a new product, idea or a new way of looking at things?

such as Knowles (1984) became anchors for my teaching.

The teacher training course at the Institute was also based on theories of Fuller (1979), and Hall & Hord (1987). This research showed that, as adult learners, teachers went through stages of development from initially concerns about self and identity as teachers, then concerns about teaching tasks, and only much later are they able to focus on the impact of their work on their students when anxieties about the first two stages dissipated and their confidence grew. This framework informed the structure of the course and it meant that the sequence of program activities began with the micro aspects of daily teaching and engaging with young people. It also provided opportunities to learn from each others' experiences in the classroom which ncluded lots of debriefing. The broader educational implications of teaching practice were addressed much later in the course when discussion and assessment tasks challenged student teachers to be more critical, reflective and creative in what they offered to their students.

Having completed my Masters in Educational Studies degree, my work expanded from teacher education pre-service in secondary schools to teaching people who were working as teachers and trainers in other sectors of education. They included nurse educators in hospitals, teachers in Technical and Further Education Institutes, industry trainers, and community development personnel. I have also taught students from religious organizations who train people in preaching and other work that clergy undertake. The most unusual fields of work in which I have coached students were prisons and grave digging which was part of landscape gardening apprenticeship programs in which they taught. However, common to all these fields was that these teachers were teaching basic competencies or specific skills which, for assessment purposes, are broken down into very precise categories. My role in working with these students was to assist them to think more holistically about the job roles in which the competencies were situated, so that they were able to: (1) assist their students to see the interrelationships between the competencies; (2) understand the necessary structures and scaffolds that need to be in place to assist transfer of learning in the workplace; and (3) create programs that embed these principles and take account of constraints of workplace settings.

My interest in curriculum and program design, engaging young people in study that was meaningful to them, and workplace learning, led me to undertake a study of school-industry programs for my doctoral research. It was at this time that I undertook studies in evaluation which informed my theoretical framework for my thesis. I studied the program logic or program theory evaluation approach which lent itself to understanding the key elements and their interrelationships and the necessary supporting conditions for achieving further education and employment outcomes for school leavers.

The research in this thesis identified a number of key elements that were fundamental to the successful establishment of vocational programs in schools. These included:

a) local community stakeholders having a shared common purpose to address local youth unemployment and industry skill shortages; and

b) members of the board of management and program staff having the commitment and knowledge and skills to bring about structural change.

The research found that external enabling factors were very important in establishing and sustaining these kinds of programs. These were timely government funding and visionary education authority personnel who were able to bring stakeholder groups together.

The research showed that there were clearly identifiable factors that underpinned operation of school-industry programs. These were: good strategic and business planning processes; negotiating work-placements with employers and courses with training providers on behalf of local schools; running induction and skills programs to increase students' work readiness; supporting teachers to integrate workplace learning into the curriculum; supporting workplace supervisors to mentor students; and linking the school-industry program to complementary employment placement programs.

The research also demonstrated that if certain conditions are met in industry and schools, school-industry programs could advance vocational education and training in their local communities. These conditions are concerned with the state of the local economy, community identity, willingness to contribute education and training of young people (industry); and schools' demonstrated commitment to vocational education and training through resource allocation and flexible timetable structures.

Evaluation in Education Programs – Case Study 1

I have maintained an interest in vocational learning through my work in research and evaluation. In the last two years I have led three evaluations for the Victorian Qualifications Authority (VQA)[1] that have informed policy decisions in government. The paper now describes two of these evaluations that have led to policy refinements. Both evaluations focused on a relatively new senior secondary certificate, that is, the Victorian Certificate of Applied Learning (VCAL).

This certificate was introduced in 2002 by the Victorian Government, and based on recommendations of the *Ministerial Review of Post-Compulsory Education and Training Pathways in Victoria*, commonly known as the Kirby Report (Victoria. Dept. of Education Employment and Training. Communications Division., Kirby, & Victoria. Office of Post Compulsory Education Training and Employment, 2000). The VCAL was an initiative designed to increase the number of young people who complete Year 12 or its equivalent. It is an alternative senior secondary certificate to the Victorian Certificate of Education (VCE)[2] and is designed to improve the pathways for young people from secondary school to work and/or further education and training. It has a flexible framework that enables schools and other education providers such as technical institutes to construct coherent programs that reflect local industry and community needs.

In 2004, our Centre was commissioned to evaluate 15 VCAL Pathway Development Pilot Program (PDPP) projects that were conducted by the VQA – ten focused on pathways for students into apprenticeships in a range of industries, two focused on pathways for adults returning to study and three focused on pathways to higher education. The VQA funded a fulltime coordinator for the project in each pilot setting and additional resources for curriculum development.

For this evaluation, we interviewed 24 industry partners, 36 students and 34 program coordinators and teachers at 13 sites where the VCAL PDPP was being implemented.

The evaluation findings from this study identified key factors required in VCAL project planning, partnership development, and program design and delivery that would extend pathways for VCAL students, particularly into employment, apprenticeships and further training.

The VQA accepted these recommendations and refined its policy in relation to providing resources to assist in the development of seven VCAL Vocational Pathway Projects (VPPs) in 2006. These were directed at developing best practice models for specific VCAL Pathways Programs industries in which there were shortages of skilled workers, that is, electrotechnology, engineering and air conditioning. In addition, the VQA funded other projects that represented different models of VCAL delivery. These included:

• a program designed specifically for girls who were disengaged from school to encourage them to pursue meaningful career options in a broad range of vocational areas; and
• a program that engaged local business people to mentor students.

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1 "The VQA is the statutory body in Victoria responsible for developing and monitoring standards for education and training after Year 10 (excluding higher education)" (See (Victorian Qualifications Authority, 2007)http://www.vqa.vic.gov.au/vqa/about/default.htm).
2 The Victorian Certificate of Education (VCE) is the graduating qualification from secondary school.

This initiative was intended to develop models of effective practice to guide future VCAL providers in facilitating direct pathways to apprenticeships, further vocational training or employment for their students. As a consequence, our evaluation design was exploratory, using qualitative data collection methods to provide in-depth descriptions of practice in relation to impacts and outcomes at each of the seven sites. Sources of data were:

- proposals for funding, mid-cycle reports and program documentation from providers of VCAL Vocational Pathway Projects; and
- interviews with providers, industry partners, students and parents.

The evidence from the evaluation showed that the VCAL Vocational Pathway Program model is a highly effective vocational pathway to apprenticeships and further training. The evaluation showed that the flexibility of the VCAL framework enabled schools and other providers to engage students in the later years of school education. This applied to both students who wanted a more vocationally-orientated school experience as well as those who were deemed to be "at risk" of disengaging from education. In all projects, only a few students dropped out of courses and those that did either enrolled in the conventional senior school certificate (the VCE), or found employment.

Evaluation in Educational Programs – Case Study 2

The paper now examines a particular evaluation approach that we are using. Much of the recent evaluation work in which our center has been engaged is with clients who are implementing new programs that are reliant on funding from external sources. A condition of accepting this funding is that recipients build evaluation into their programs. However, funding grants are often for one year and it is generally unlikely that new programs would be able to show impacts after such a short time, given that they may have to recruit participants and put structures into place. This leaves little time for program developers to implement activities and then for those activities to show effects. In such situations, we recommend to our clients that they

consider a program logic approach to evaluation. This means that, rather than documenting outcomes and impacts, we work with them to make explicit the interrelationships between available resources, activities and support structures that they hope will logically lead to desired outcomes and impacts.
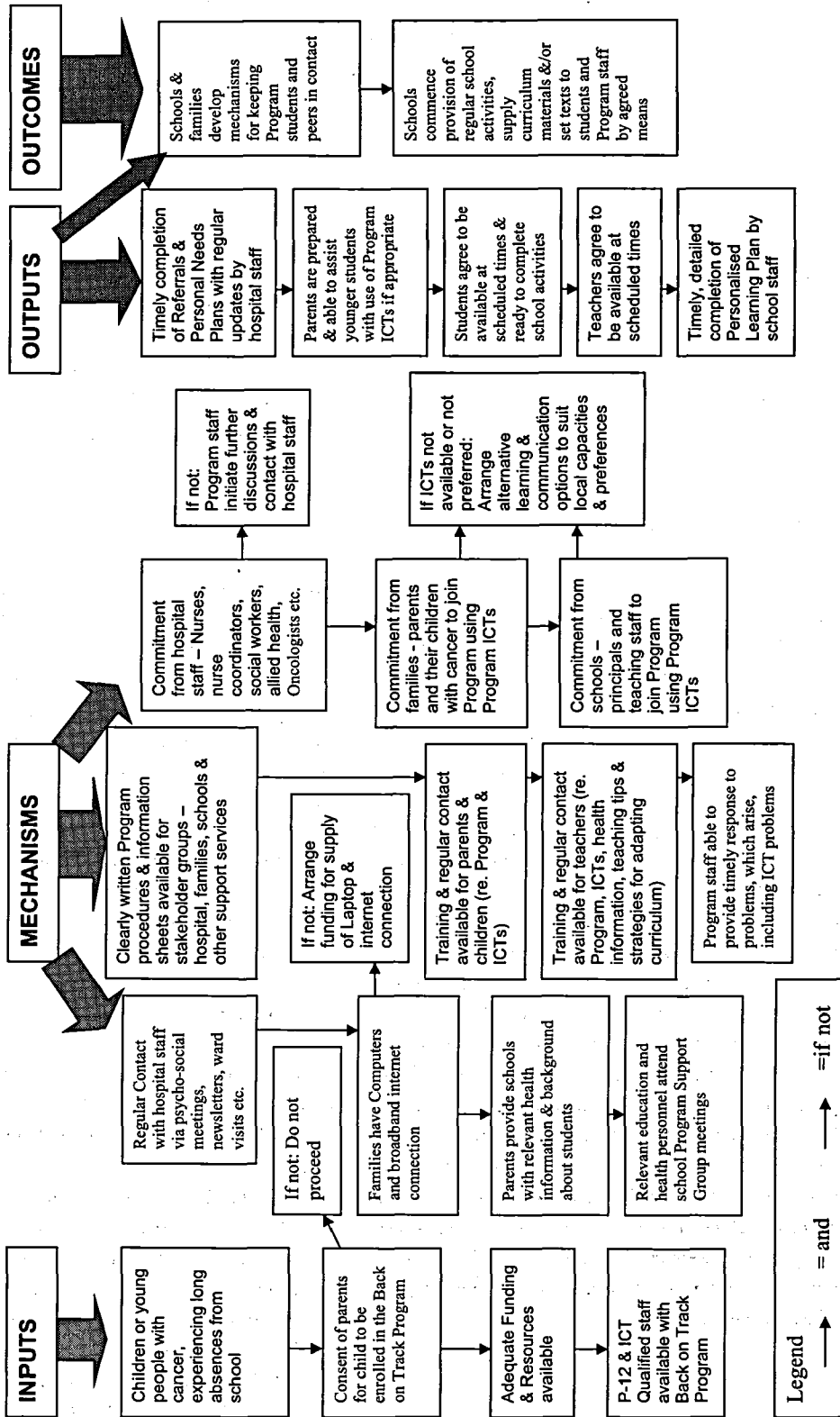
As Patton (1996) has argued, program managers and staff do not always document the reasoning that underpins the activities that they design. Also, until a new program gets underway, they may not be aware of the necessary support structures or external conditions that might affect the achievement of desired outcomes. This approach is explained in the following example.

Early in 2005, the Education Institute of the Royal Children's Hospital in Melbourne received funding from the Bone Marrow Donor Institute to develop a new education program that would enable young people who are receiving hospital treatment for cancer, to remain connected to their school teachers and classmates during this period. The program is called "Back on Track". In general, these young people do not spend many days in hospital. They come in for treatment and then spend long periods of recovery time at home. This means that they are isolated from their friendship networks at school and fall behind in classroom work. The program designed by the Education Institute comprised an internet based platform that allows teachers to send electronically students the tasks that their classmates are undertaking. Students can also post their work back to their teachers electronically. This technology based learning environment is supported with visits from Education Institute staff who, not only support the students, but liaise with medical and social work staff, and also support the students' teachers in adapting the curriculum.

Using an action research methodology, we met with program staff every three or four weeks over a period of approximately six months. The initial meeting was to clarify the goals of the program and to establish the main features and processes from their perspectives. This enabled us to construct a basic cause and effect diagram of inputs, activities, and intended outputs and outcomes that represented the "logic" of the program. We then interviewed a sample of young people who were recruited into the

Figure Two

EDUCATION INSTITUTE BACK ON TRACK PROGRAM - PROGRAM LOGIC - MATRIX ONE – RECRUITMENT
(The stage at which all stakeholder groups commit to supporting Program goals and procedures)

INPUTS

- Children or young people with cancer, experiencing long absences from school
- Consent of parents for child to be enrolled in the Back on Track Program
- Adequate Funding & Resources available
- P-12 & ICT Qualified staff available with Back on Track Program

MECHANISMS

- Clearly written Program procedures & information sheets available for stakeholder groups – hospital, families, schools & other support services
- Regular Contact with hospital staff via psycho-social meetings, newsletters, ward visits etc.
- If not: Do not proceed
- If not: Arrange funding for supply of Laptop & internet connection
- Families have Computers and broadband internet connection
- Parents provide schools with relevant health information & background about students
- Relevant education and health personnel attend school Program Support Group meetings
- Commitment from hospital staff – Nurses, nurse coordinators, social workers, allied health, Oncologists etc.
- Commitment from families - parents and their children with cancer to join Program using Program ICTs
- Commitment from schools – principals and teaching staff to join Program using Program ICTs
- Training & regular contact available for parents & children (re. Program & ICTs)
- Training & regular contact available for teachers (re. Program, ICTs, health information, teaching tips & strategies for adapting curriculum)
- Program staff able to provide timely response to problems, which arise, including ICT problems
- If not: Program staff initiate further discussions & contact with hospital staff
- If ICTs not available or not preferred: Arrange alternative learning & communication options to suit local capacities & preferences

OUTPUTS

- Timely completion of Referrals & Personal Needs Plans with regular updates by hospital staff
- Parents are prepared & able to assist younger students with use of Program ICTs if appropriate
- Students agree to be available at scheduled times & ready to complete school activities
- Teachers agree to be available at scheduled times
- Timely, detailed completion of Personalised Learning Plan by school staff

OUTCOMES

- Schools & families develop mechanisms for keeping Program students and peers in contact
- Schools commence provision of regular school activities, supply curriculum materials &/or set texts to students and Program staff by agreed means

Legend

→ = and

→ = if not

program, along with their parents, teachers and medical and social work staff in the hospital. The findings gained from these data were then returned to the program staff and discussed in relation to the initial diagram so that processes could be added and assumptions underpinning them could be made explicit. For example, in setting up the technology platform program staff had factored in sponsorship to provide students with laptop computers. What they had not factored in was that many families did not have broadband internet access, and until a cost effective way was found to give them access, they could not use the platform. As the Back on Track program is extended to other students and negotiations with other hospitals are occurring to implement the program more widely, this crucial step is now explicit in the program's logic map (See Figure Two: Education Institute Back On Track Program - Program Logic).

I recently asked one of the program staff about how the program was progressing and whether they had modified the logic map. This person replied that: (a) the visual map had been very useful in explaining how the program worked to staff in other hospitals; and (b) they anticipated that they would need to modify the logic map to take into account different contextual factors when implementing the program at other hospitals.

This is just one evaluation approach that fits within the clarificative or developmental form of evaluation (Owen, 2006). Increasingly, I am finding that many of my postgraduate students are finding this form of evaluation useful to inform decision making about programs in schools. For example, two international students from Singapore who are teachers developed evaluation plans using the program logic approach for part of their assessment in the Master of Educational Management. One developed a plan to improve a music education program and the other developed a plan to improve a chemistry practical program. Another student is just completing a thesis in which he has used the program logic approach to develop a model of practice that addresses bullying in schools.

Conclusion

These examples show that evaluation has a useful part to play to inform decision making in program design in educational settings. Developmental or clarificative evaluation may be more useful, and less threatening at the practitioner level when teachers can see that it can actually help them to achieve program goals through thinking through the interrelationships of program elements and the assumptions that underpin them.

Bloom's Taxonomy reminds us that education is about building competencies in all of the six dimensions that Bloom identified whether students are in schools, tertiary institutions, or participants in short courses. My professional learning in my diverse career has followed these six dimensions very closely.

Evaluation is one of the most fundamental elements of the six dimensions. It is a necessary competency for all practising educators to possess and is integral to the work of schools as they closely reflect on the evidence of what they do to enhance the learning outcomes of their students. As such, it is a necessary course component of teacher education courses across the world. Undergraduate and post graduate students see its value, but only if two factors occur, that is, the logic of evaluation frameworks and interrelationships with learning are made explicit to them, and they see how useful and practical evaluation is for them in their day to day practice as teachers.

References

Coe, R. (1999). A Manifesto for Evidence Based Education. Retrieved 12.03.2007, 2007, from http://www.cemcentre.org/renderpage.asp?linkID= 30317000

Fuller, F. F. (1979). *Relevance for Teacher Education: A Teacher Concerns Model.*[Texas: Research & Development Center for Teacher Education at the University of Texas.

Hall, G. E., & Hord, S. M. (1987). *Change in Schools: Facilitating the Process.* Albany, N.Y.: State University of New York Press.

Knowles, M. S. (1984). *The Adult Learner: A*

Neglected Species (3rd ed.). Houston: Gulf Pub. Co., Book Division.

Krathwohl, D. R., Anderson, L. W., & Bloom, B. S. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (Complete ed.). New York: Longman.

Owen, J. M. (2006). *Program Evaluation: Forms and Approaches* (3rd ed.). St Leonards, N.S.W.: Allen & Unwin.

Patton, M. Q. (1996). *Utilization-Focused Evaluation: The New Century Text* (3rd ed.). Thousand Oaks, Calif.: Sage Publications.

Victoria. Dept. of Education Employment and Training. Communications Division., Kirby, P., & Victoria. Office of Post Compulsory Education Training and Employment. (2000). *Ministerial Review of Post Compulsory Education and Training Pathways in Victoria; Interim Report, April 2000*. Melbourne: Dept. of Education, Employment and Training.

Victorian Qualifications Authority. (2007). Director's Message. Retrieved 18.03.2007, from http://www.vqa.vic.gov.au/vqa/about/default.htm