The Victorian Electrotectechnology, Printing, Information Technology and Communications (EPIC) Industry Training Board

Submission to

The House of Representatives Education and Training Committee

Inquiry into

Vocational Education and Training in Schools

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INTRODUCTION

The Victorian Electrotectechnology, Printing, Information Technology and Communications (EPIC) Industry Training Board welcomes the opportunity to make a submission to the House of Representatives Education and Training Committee Inquiry into Vocational Education and Training in Schools

The Victorian Electrotechnology, Printing, Information Technology and Communications Industry Training Board Inc. (EPIC ITB) is an incorporated association under the incorporation Act 1991 and established as an industry training board under 38(1) (b) of Victorian Vocational Education and Training Act 1990.

Since 1995 the EPIC Industry Training Board has represented the Electrotechnology, Printing, Information Technology and Communications Industries through the participation of employer bodies, employee bodies and Victorian government in each of the industries.

The EPIC industries to which this Industry Training Board relates are consequently widespread and diverse and include within the current terminology most of those industries referred to in other literature and government policies as the ICT industries. As such the EPIC ITB sees that the success, growth and development of the EPIC industries are of critical importance to the Victorian and indeed Australian economy. The EPIC ITB maintains that for the Australian government to achieve its aim of building Australia as a knowledge economy requires a more highly skilled and technologically literate industry and that this starts within our secondary school system and particularly with an empathetic and valued approach to vocational education and training.

FOCUS OF SUBMISSION

Specifically this submission whilst addressing the terms of reference of the review will come from the point of view of the EPIC industry stakeholders who are interested in the development of:

- ***Electrotechnology skills*** for electrical/electronics trades assistants, tradespeople, technicians and associates.

  The electotechnology industry includes the installation, servicing, repair and maintenance of electrical and electronic equipment for industrial, commercial and domestic purposes. It comprises communications and computer data and communications cabling systems, electricity generation transmission and distribution. People employed in the electrotechnology industry can be found working in most sectors. Principal areas include: Construction, Communication services, Electrical Generation, Transmission and Distribution, Manufacturing,

Housing, Resources, Transport, Health and community services, Wholesale and Retail.

- ***Printing skills*** for pre-press, printing, packaging, paper and mailhouse machine operators, screen printers, etc.

  The Printing and Graphic Arts industry can be divided into three main sectors:
  - Pre-press sector - graphic design, digital imaging for all printing production processes, including multimedia.
  - Press sector - images are printed onto sheets or reels of paper and other substrated such as Screen Printing, Metal Decorating, etc.
  - Post-press sector - printed material is converted into its final form. Includes binding and finishing processes that convert printed material into their finished product.

  It must however be acknowledged that all sectors of the printing industry are increasingly involved with the use of high technology digital or IT based equipment and processes.

- ***Information technology skills*** for people working in computer consultancy services and the occupations of Information Technology Managers, Computing Professionals and Computing Support Technicians, as well IT workers in other industry sectors.

- ***Telecommunications skills*** for telecommunications trades assistants, trades, technicians, and associates; mail deliverers and sorters etc.

  The telecommunication services industry is made up of businesses mainly providing telecommunication services to the public by wire, cable or radio. The primary activities of the industry include cable and communication channel services, network communication services, operation of radio relay stations, satellite communication services, telecommunications, telephone services, teleprinter and telex services, and operation of television relay stations.

  The EPIC industry coverage excludes businesses, which manufacture telecommunications equipment, businesses engaged in cable laying and transmission line construction, and those providing secretarial services (e.g. personalised telephone answering services or message delivery services).

EPIC INDUSTRY DEFINITIONS

Electricity Supply	ANZSIC Code 3610
Electricity Services	ANZSIC Code 4232
Air Conditioning & Heating Services	ANZSIC Code 4233
Fire and Security System Services	ANZSIC Code 4234
Professional Equipment Wholesaling	ANZSIC Code 4612
Computer Wholesaling	ANZSIC Code 4613
Business Machine Wholesaling	ANZSIC Code 4614
Electrical & Electronic Equipment Wholesaling nec	ANZSIC Code 4615
Household Equipment Repair Services (Electrical)	ANZSIC Code 5261
Computer Maintenance Services	ANZSIC Code 7833
Solid Paperboard Container Manufacturing	ANZSIC Code 2332
Corrugated Paperboard Container Manufacturing	ANZSIC Code 2333
Paper Bag and Sack Manufacturing	ANZSIC Code 2334
Paper Product Manufacturing n.e.c	ANZSIC Code 2339
Paper Stationery Manufacturing	ANZSIC Code 2411
Printing	ANZSIC Code 2412
Services to Printing	ANZSIC Code 2413
Newspapers Printing and Publishing	ANZSIC Code 2421
Other Periodical Publishing	ANZSIC Code 2422
Book and other Publishing	ANZSIC Code 2423
Printing Ink Manufacturing	ANZSIC Code 2547
Computer Consultancy Services	ANZSIC Code 7834
Telecommunications	ANZSIC Code 7120
Postal Service	ANZSIC Code 7111

STATISTICAL SNAPSHOT OF THE EPIC INDUSTRIES

Table 1 indicates the extent of employment across the EPIC industries and gives further evidence of the diversity of the operations and the influence and contribution of the EPIC Industries on the Victorian economy.

TABLE 1: EPIC INDUSTRIES: NUMBERS IN EMPLOYMENT ABS 2001

ASCO Occupation	Total in Employment 000's
1224 Information Technology Managers	6.755
2222 Technical Sales Representatives	11.244
2231 Computing Professionals	47.104
3123 Electrical Engineering Associate Professionals	0.923
3124 Electronic Engineering Associate Professionals	5.607
3294 Computing Support Technicians	7.350
3999 Other Miscellaneous Associate Professionals	2.266
4311 Electricians	21.697
4312 Refrigeration and Air Conditioning Mechanics	4.249
4313 Electrical Distribution Tradespersons	1.802
4314 Electronic Instrument Tradespersons	0.286

4315 Electronic and Office Equipment Tradespersons	5.905
4316 Communications Tradespersons	6.426
4911 Graphic PrePress Tradespersons	0.853
4912 Printing Machinists and Small Offset Printers	4.622
4913 Binders and Finishers	0.891
4914 Screen Printers	0.928
4988 Power Generation Plant Operators	1.055
6199 Other Intermediate Clerical Workers	5.092
7124 Pulp and Paper Mill Operators	1.473
7295 Paper Products Machine Operators	2.310
7996 Printing Hands	1.463
8112 Mail Sorting Clerks	4.338
8114 Messengers (	2.883
8211 Sales Assistants (shared coverage between EPIC and WRAPs)	148.018
8319 Other Elementary Service Workers	9.203

Table 2 indicates the extent of enrolment in VET in schools programs across the EPIC industries. Table 2 particularly shows the high level of interest in IT programs.

TABLE 2: EPIC INDUSTRIES VICTORIAN VET IN SCHOOLS ENROLMENTS MAY 2002

Qualification	Number of students enrolled
IT Industry	
Certificate II In Information Technology	914
Certificate III In Information Technology	3759
CISCO Networking Academy Program	1111
Electrotechnology Industry	
Certificate II in Electronics	349
Printing Industry	
Certificate II in Desktop Publishing	42
Telecommunications Industry	0

ROLE OF EPIC ITB

As an Industry Training Board, the EPIC ITB is the single most authoritative forum in Victoria for the discussion of matters relating to industry training by the relevant industrial parties and other industry stakeholders and as such the EPIC ITB is the strongest advocate of industry training for the EPIC industries.

The membership of the Board of the EPIC ITB includes representatives of Aspect Computing, Woodbine Associates, IBM Learning Services, CEPU - Communications Division, Eastern Studios, AMWU - Printing Division, Visy Industries, Victec, NECA, CEPU - Electrical Division, Victorian Government

RECOMMENDATIONS

RECOMMENDATION 1

That a plain English term be developed to describe the gaining of vocational education and training skills and competencies in schools.

RECOMMENDATION 2

That VET in schools programs that involve the delivery and assessment of nationally accredited vocational education and training qualifications be funded at the same rate as that published for public or private RTOs.

RECOMMENDATION 3

That all VET in school students undertaking nationally recognized vocational education and training qualifications have ongoing access to a workplace and/or to work directly related to the qualification.

RECOMMENDATION 4

That programs be developed to encourage or support more vocationally oriented and industry empathetic teachers to be involved in career counseling/advising in schools to ensure that young people gain appropriate information and advice about careers and career paths in the more technological industries.

RECOMMENDATION 5

That an evaluation study be undertaken across VET in schools students to identify career or educational destinations as well as the extent the programs meet student needs and interests.

RECOMMENDATION 6

That vocational education and training qualifications completed by students whilst still at school not be a factor in determining eligibility for future New Apprenticeship employment incentives.

TERMS OF REFERENCE

The content of this submission is based on the understanding that the House Committee on Education and Training is to inquire into the place of vocational education in schools, its growth and development and its effectiveness in preparing students for post-school options, with particular reference to:

- the range, structure, resourcing and delivery of vocational education programs in schools, including teacher training and the impact of vocational education on other programs;
- the differences between school-based and other vocational education programs and the resulting qualifications, and the pattern of industry acceptance of school-based programs;
- vocational education in new and emerging industries; and
- the accessibility and effectiveness of vocational education for indigenous students.

It is the intention of this submission to respond to the first two terms of reference with a particular focus on the issues of resourcing and delivery of VET in schools programs and on the industry acceptance of such programs.

THE RANGE, STRUCTURE, RESOURCING AND DELIVERY OF VOCATIONAL EDUCATION PROGRAMS IN SCHOOLS, INCLUDING TEACHER TRAINING AND THE IMPACT OF VOCATIONAL EDUCATION ON OTHER PROGRAMS

The EPIC ITB in recent advice to the Victorian Government indicated that the industries under its coverage are committed to ensuring that young people have access to a range of programs in schools, particularly vocational education programs.

It was noted however that the EPIC industries are committed to training for young people that provides skill and competency to work in the EPIC industries. In this way, Training Packages and formal accredited VET courses have the highest priority. Whilst the EPIC ITB indicated support for the thrust of the Victorian Government to develop alternative pathways into employment and Vocational Education and Training for young people, the EPIC ITB also expressed concern that funding issues were preventing VET in schools programs from reaching their full potential.

The EPIC ITB in its advice concluded that although there is a need to provide new and innovative educational opportunities for young people, it would appear that the most useful and productive ways forward would be for the Victorian Government to provide funding for VET in schools programs that matches normal TAFE funding.

NOMENCLATURE

To the industry stakeholders the term VET in schools is somewhat confusing as it is never quite clear as to what meaning is being ascribed to the term by the various parties, in fact the term seems to have taken on many meanings. To the majority of industry stakeholders VET in schools programs is a generic term that applies to the delivery of accredited vocational education and training qualifications in schools. This generic interpretation is however often put aside by the specific interpretations of state education authorities.

In Victoria the term VET in Schools seems to apply only to those qualifications that have been approved to form part of the Victorian Certificate of Education (VCE), although it is difficult to find the term VET in schools on any Victorian government website. More lately the term VET in VCE is being used.

Schools however do provide vocational education and training qualifications outside of the VCE construct either in their own right as RTOs or in partnership with other public and private RTOs. These programs are not promoted as VET in Schools programs. Victorian schools and RTOs are piloting a new qualification called the Victorian Certificate of Applied Learning (VCAL), which is accredited as a secondary education program. Although the VCAL is comprised primarily of a vocational education and training modules and units of competency this is also not promoted as a VET in schools program. Within the narrow definition of a VET in VCE program there is further delineation with some qualifications such as the Certificate III in Information Technology contributing equally to the determination of an ENTER score with VCE units and others contributing only at the 10 per cent level.

Many trade based industry stakeholders further interpret VET in Schools programs as apprenticeships in schools. It also appears that industry stakeholders in other states similarly face variations in nomenclature.

RECOMMENDATION 1

That a plain English term be developed to describe the gaining of vocational education and training skills and competencies in schools.

FUNDING

It is of concern to the EPIC ITB that the funding levels for the provision of accredited vocational education and training qualifications in Victorian schools are based on the normal school funding formulae rather than the published TAFE Student Contact Hour rates.

In Victoria unlike some other States and Territories accredited vocational education and training qualifications can only be provided, in a school, if the school is an RTO or if the school has entered into an agreement with an RTO under the arrangements specified in the Australian Quality Training Framework (AQTF). No school is deemed to be an RTO, all have to apply for registration in the same way as any other organization and the State Training Authority audits all under the AQTF arrangements.

The EPIC industries are concerned that, with funding levels for the delivery of vocational education and training qualifications by schools sometimes less than half that for TAFE Institutes, the qualifications are not able to be conducted by the school in a way that is able to support student achievement at the industry expected level of competence.

The EPIC ITB is aware that many public TAFE institutes are careful to manage their support for VET in School programs because of the cost implications and that at least one TAFE institute has told the EPIC ITB that they are reluctant to become involved in VET in Schools programs because of the low funding levels.

RECOMMENDATION 2

That VET in schools programs that involve the delivery and assessment of nationally accredited vocational education and training qualifications be funded at the same rate as that published for public or private RTOs.

DELIVERY AND ASSESSMENT

The issue of assessment of units of competency, when the individual school student does not have access to a workplace or is unable to gain appropriate work experience, has been the centre of much discussion by the EPIC industry stakeholders.

The industry stakeholders want to be assured that all assessments whether in schools, TAFE Institutes or actual workplaces are fair, valid, reliable and current, and that the standards and integrity of the nationally accredited vocational education and training qualifications are maintained.

Equally, the industry stakeholders know that most RTOs including schools involved in the delivery and assessment of the units of competency have been eager to ensure that students meet industry standards even if they do not have access to a workplace or if the workplace cannot offer the full range of workplace experience to successfully

achieve all the requirements of the units of competency for the award of the qualification.

A number of schools and RTOs have particularly requested assistance and formed partnerships with industry stakeholders for the conduct of assessment for students/learners undertaking institutional/school based qualifications.

The EPIC ITB on behalf of its industry stakeholders has developed guidelines to aid RTOs and schools in establishing simulation environments for the purpose of assessment in an institutional setting that are authentic and as far as possible reproduce and replicate the workplace.

The guidelines include 5 principles to govern the conduct of assessment in simulated/school environments with the underpinning principle being that actual tasks, activities and conditions are as close as possible to real life situations, namely.

Principle 1: Reflect workplace conditions
Principle 2: Reflect the intent of the qualification
Principle 3: Involve realistic and authentic activities
Principle 4: Support holistic judgments
Principle 5: Undergo quality assurance processes

However notwithstanding the willingness and eagerness of schools and other providers of nationally accredited vocational education and training qualifications to meet industry expectations in delivery and assessment there is a real issue with the level of experience, skill and knowledge gained by school students who do not have ongoing access to a workplace and/or to work directly related to the qualification.

RECOMMENDATION 3

That all VET in school students undertaking nationally recognized vocational education and training qualifications have ongoing access to a workplace and/or to work directly related to the qualification.

CAREER INFORMATION AND CAREER PATHWAYS

That over 5000 Victorian school students are currently undertaking vocational education and training programs in schools related to the EPIC industries could be interpreted as being quite a success for the EPIC industry stakeholders, but further examination of participation indicated earlier in Table 2 shows that over 90 per cent of enrolments are in IT programs. For the remaining EPIC industries the uptake of VET in schools programs is seen as being disappointing and as such does not auger well for the long-term future of the industries.

In recent advice to the Victorian Government the EPIC ITB indicated that there is a perceived lack of interest for young people to become apprentices/trainees in the EPIC industries and that the industry, government and schools should collaborate to ensure that young people are more readily able to access information relating to the opportunities for employment in the EPIC industries. Of particular note was that industry stakeholders now perceive that there is a decided lack of career counsellors/advisors or other staff in schools with relevant technical or vocational experience, understanding or empathy.

The EPIC ITB advised the Victorian government that programs need to be developed to encourage or support more vocationally oriented and EPIC industry empathetic teachers to be involved in career counseling/advising in schools.

RECOMMENDATION 4

That programs be developed to encourage or support more vocationally oriented and industry empathetic teachers to be involved in career counseling/advising in schools to ensure that young people gain appropriate information and advice about careers and career paths in the more technological industries.

At this stage despite the significant numbers of students enrolled in Information Technology programs and a lesser number in electronics and printing programs in schools little is known about their progress to related VET or higher education or employment nor is anything known about the extent to which the VET in schools programs match the students aspirations and potential taking into account their prior attainment and experience.

It is important to the industry stakeholders that the career or educational destinations of students undertaking VET in schools programs as well as how well the programs met their needs and interests, is known.

RECOMMENDATION

That an evaluation study be undertaken across VET in schools students to identify career or educational destinations as well as the extent the programs met student needs and interests.

THE DIFFERENCES BETWEEN SCHOOL-BASED AND OTHER VOCATIONAL EDUCATION PROGRAMS AND THE RESULTING QUALIFICATIONS, AND THE PATTERN OF INDUSTRY ACCEPTANCE OF SCHOOL-BASED PROGRAMS

In 2001 the EPIC ITB responded to the secretary of the then Victorian department of employment, education and training that the EPIC industries were totally committed to ensuring that young people have access to a range of programs in schools particularly vocational education programs that provide insight into the education and employment opportunities of the Electrotechnology, Printing, Information Technology and Communications industries.

EPIC indicated that it was happy to support the Victorian Government in developing appropriate education programs for young people that had well founded vocational outcomes that consequently gave such programs parity of esteem.

The EPIC ITB similarly indicated that it was willing to provide advice and be involved in consultations and discussions related to the development of new post compulsory qualifications that complemented and expanded the existing programs offered in schools provided any vocational education programs were clearly complementary to and different from existing endorsed Training Package qualifications.

In making this response to the secretary of Victorian DEET the industries represented by EPIC were expressing the idea that in their opinion many young people could be better served and more motivated by being able to undertake programs in schools with a vocational education and training orientation and an employment focus rather than an academically oriented VCE singularly focused on university entrance.

However the industry stakeholders were also expressing a clear desire and need to be involved in the development of alternative education pathways. In the view of these stake holders such programs could only be successful with full industry involvement and participation, second guessing the needs of industries by education providers and bureaucrats has previously proved to be not only ineffective and expensive but a selling short of our young people.

INDUSTRY SUPPORT FOR VET IN SCHOOLS PROGRAMS

The EPIC industry stakeholders are increasingly interested in participating or supporting VET in schools programs for many reasons some being proactive others being reactive.

In a proactive sense the industry stakeholders see that if students undertake industry supported vocational education and training in schools they are more likely to

- be better prepared for participation in the workplace.
- apply effort to succeed with their work, work productively and make more effective use of their time.
- gain entry level skills and indeed possibly some credit for future qualifications in the industry.
- understand the expectations and requirements of employers and the industry in general.
- gain a broader range of employability skills.
- gain a qualification that has credibility with the industry and the community.

In a reactive sense the industry stakeholders are becoming increasingly concerned that the direction of education in schools is becoming much more oriented to meeting university entry requirements. Moreover it appears to the industry stakeholders that this orientation is a reflection of the cultural values of a number of schools and school teachers, where vocational education and training or employment as an apprentice or trainee is seen as being for those who can't, because those who can, go to university. Anecdotally many industry stakeholders are concerned that the lack of a vocational education capacity of equal parity or esteem to the VCE in schools will seriously undermine their industry's and Australia's future capacity to compete in a highly competitive global environment. Consequently industry support for VET in schools programs, that have parity of esteem, is one way of ensuring that young people have some alternative options and also that industry has a pathway for gaining skilled and talented employees.

EMPLOYER INCENTIVES

As table 2 shows there are currently 3759 school students enrolled in Information Technology programs at certificate III level. Under current arrangements it appears that none of these students will be able to gain an apprenticeship/traineeship in any trade, in any industry any where in Australia unless the employer is prepared to forgo the Commonwealth employment incentive. Their success at school is a decided non-success and contradiction for industry. The reason for this is that under the current employment incentive arrangements distributed and administered by New Apprenticeship Centres no incentive can be paid to the employer if the student has completed a Certificate III through either a new apprenticeship or any other pathway. (VET in schools is any other pathway)

RECOMMENDATION

That vocational education and training qualifications completed by students whilst still at school not be a factor in determining eligibility for future New Apprenticeship employment incentives.

TEACHING AND RESOURCES

The view of the industry stakeholders of the teaching and resources for VET in schools programs is to a great degree informed by the view of the teaching and resources available to public TAFE institutes. Early in 2002 the EPIC ITB indicated that although its industry stakeholders were generally satisfied with the quality of teaching in TAFE institutes there were still some reservations about teaching and resources in public TAE institutions.

RESOURCES

In relation to resources the advice from the EPIC ITB to the Victorian Government in early 2002 included the following points

- There is a widespread perception by industry, supported by Audit Victoria and RTOs that equipment in publicly funded TAFE colleges is not keeping up with demands of industry and that the Government should take appropriate steps to improve the quality and appropriateness of equipment in public RTOs.
- A comprehensive survey should be conducted of employer satisfaction with equipment related to the delivery of EPIC industry qualifications in public RTOs.
- Funding arrangements are required to enable equipment and software to be maintained at the required standards for competency achievement as designated in the IT Training Package.
- It also appears that many RTOs are using equipment and software that is limited in its application and currency

TEACHING

In relation to teaching the advice from the EPIC ITB to the Victorian Government in early 2002 included the following points

- There is increasing awareness amongst industry stakeholders of the age structure of the TAFE workforce related to the electrotechnology and printing industries, with little recruitment of new teachers and trainers and limited succession planning in RTOs.
- Publicly funded RTOs should be required to develop strategic plans for the management of specific areas of their teaching workforces that have a significant number of members close to retirement.
- There should be a collaborative effort to provide mechanisms for trainers and assessors to maintain/attain current industry skills.

- Developing and/or attracting new trainers and teachers in ICT, particularly for the electrical trades and information technology, is a continuing industry concern.
- Strategies should be put in place for identifying and promoting industry expectations of qualifications and/or experience for IT trainers and assessors in public and private RTOs.
- It appears that many training staff have limited industrial experience and consequently lack an appreciation of the work requirements of VET graduates.

In short, notwithstanding the registration processes of the AQTF, if the industry stakeholders are expressing some reservation with the teaching and resources available to public TAFE colleges then their level of concern about similar issues in schools is somewhat magnified.

CONCLUSION

In conclusion the EPIC ITB is strongly supportive of the concept of vocational education in schools consistent with Ministerial Council for Education Employment Training and Youth Affairs *New Framework for Vocational Education in Schools Policy Directions and Implementation 2000.*

However at this stage the EPIC industry stakeholders have some reservations about the delivery and assessment of accredited vocational education and training qualifications in schools and particularly about the level of funding; the empathy, experience and qualifications of teachers; the exposure of students to a structured work environment; and the quality of resources available to schools.

The fact that so little is known about the employment or education destination of students who have undertaken vocational education and training in schools or the extent that the programs met student needs and interests is worrying.

The industry stakeholders would like to think that students who have undertaken vocational education and training in schools

- are better prepared for participation in the workplace
- apply effort to succeed with their work, work productively and make more effective use of their time
- have gained some entry level skills vocational skills
- have a better understanding of the expectations and requirements of employers and the industry in general
- have gained a broader range of employability skills, and
- have gained a qualification that has credibility with the industry and the community.

However the EPIC industry stakeholders find it difficult to accept that overall the technical competency outcomes from vocational education and training in schools have parity with the outcomes achieved for the same qualifications undertaken within a work/TAFE college setting.