

THE MAYER
KEY COMPETENCIES
AND
ARTS
EDUCATION

A DEETYA funded project undertaken by



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The opinions expressed in this report are those of the authors and are not necessarily those of ACER, DEETYA or NAAE.

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This document is an extract of a fuller report which also contains a Technical Report on methodological considerations of the research, and the study questionnaire.

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FOREWORD

This report is the major outcome of the project *Evaluating the Key Competencies in the Arts* conducted by the National Affiliation of Arts Educators (NAAE) and the Australian Council for Educational Research (ACER) on behalf of the Commonwealth Department of Employment and Education, Training and Youth Affairs (DEETYA). The report uses the voices of arts teachers to show how the key competencies may have a generic function across the five arts areas and to explain how the construct of 'competency' makes sense in the arts field.

Information on the use of the Mayer key competencies was collected from teachers in each of five art forms (dance, drama, media music and visual art) and reflects the discrete nature of arts practice in these disciplines. Common threads that emerged from this information contributed to an overview of the competencies in the arts as a whole. Not surprisingly, the commonalities are similar to those characteristics that identify the arts as a key learning area. These features underpin the structure of contemporary arts curriculum in schools as exemplified in the *Arts Statement and Profile*.

This project began in the midst of vigorous debate among artists and arts educators surrounding the increasing focus on vocational education in schools and the effect this might have on arts education. The report of the Senate Inquiry into Arts Education (1995) documented concerns that the arts were being pushed into a restrictive mould determined by the needs of vocational training. We had the opportunity within this project to explore some of these issues and to observe how the key competencies are being used in arts education, training and employment in the arts industry. The issues are set out in Chapter 2 and a full discussion in the light of the project findings is to be found in Chapter 14.

It was fortunate that CREAT Australia undertook a similar project at the same time to explore the potential of design education in schools to develop the key competencies. The close links between design and the arts in the school curriculum formed a common starting point for our investigations. Consultations between the two management teams informed discussion on the key issues and

facilitated conduct of the projects. It is interesting that in both cases a congruence was found between the key competencies and the creative processes that underpin the arts and design areas.

The findings of this project fall into two main categories. The first deals with the ways in which the key competencies are embedded in the existing arts curriculum, both at school and the tertiary level. This aspect was dominant throughout and the report shows that in arts education programs, the competencies are generally being used and assessed in this way. The second category addresses the generic application of competencies acquired through arts education to other curriculum contexts and their vocational application in training for employment. To date, these aspects have not been developed to their full potential in the settings visited during this project.

It is significant that we did not find evidence of the key competencies having a negative impact on the arts education programs we surveyed. The presence of all competencies in each of the arts areas was related to their function within the normal creative and production processes. Teachers experienced no difficulty in identifying and assessing them in this context. In fact we were able to document rich and varied arts based interpretations of the competency definitions which tend to go beyond those found in other areas of the curriculum. These examples have been drawn together in chapter 13 where we have endeavoured to assist arts educators with examples that could be incorporated into their teaching programs.

It is important that in the current education climate, arts educators recognise and promote those outcomes of arts learning which have relevance in general education and which provide useful skills that will enhance employment opportunities for their students. Such an approach further strengthens the position of the arts in the curriculum. This project has shown that the arts could be central to students' development of the full range of generic competencies because they encompass practical, personal and interpersonal skills in a wide range of activities that are characterised by complex decision making and problem solving. The strong influence of sensory learning coupled with the need for sensitivity to aesthetic and cultural values adds another dimension to students' acquisition of the key competencies through their engagement with the arts. We do not maintain that these areas are

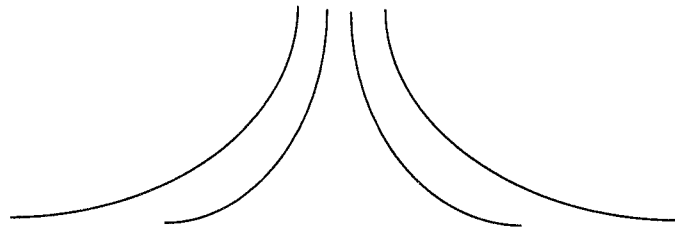
exclusive to the arts but we do suggest that arts education can provide a comprehensive experience and extensive practice of those skills that will equip students to meet the challenges of education, training and employment.

The project provided a valuable opportunity for arts educators to expand their understanding of the role of the key competencies in arts education and to become more aware of ways in which the arts contribute to the general education of students and their preparation for employment.

Joan Livermore

Chair, National Affiliation of Arts Educators

November 1996



CHAPTER

1

OUTLINE OF THE PROJECT

PROJECT BRIEF

In July 1995 the National Affiliation of Arts Educators, in conjunction with the Australian Council for Educational Research, was funded by DEETYA to undertake a project with the aims of:

- addressing major issues relating the Mayer Key Competencies to the arts; and
- facilitating an understanding of the role of the Mayer Key Competencies in arts education and practice.

These aims were to be achieved by developing links between schools, vocational education and training and industry, identifying the relationship between the key competencies and existing curriculum, collecting 'rich and varied' examples of the key competencies being used in the arts and identifying and documenting methods of assessing the key competencies in the arts. This report is the result of these activities.

The project was confined to Years 11 and 12 of secondary schools, TAFE colleges, universities and the training sectors of industry. It did not aim to make comparisons across the five art forms: Dance, Drama, Media, Music and the Visual arts.

THE MAYER KEY COMPETENCIES

In the late 1980s and early 1990s a number of initiatives took place aiming to address the needs of the increased number of young people staying on to complete secondary school. In 1990 the Australian Education Council commissioned a review of post-compulsory education and training. This was undertaken by the Finn Committee and resulted in a report which concluded that there are certain 'competencies' that young people need as a preparation for employment.

FINN KEY AREAS

- Language and communication
- Using Mathematics
- Scientific and technological understanding
- Cultural Understanding
- Problem Solving
- Personal and interpersonal¹

These key areas were seen as a basis for further development which was taken up by the Mayer Committee. The Key Competencies which emerged in 1992 were seen as a means of 'putting general education to work'.² They were seen as essential in enabling young people to participate effectively in work and adult life, including unpaid work and further education. The Key Competencies are:

¹ *Young People's Participation in Post-Compulsory Education and Training - Report of the Australian Education Council Review Committee (Finn Report), July 1991*

² *Mayer, E (chair), 1992, Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training, Australian Government Publishing Service, Canberra*

MAYER KEY COMPETENCIES

- Collecting, analysing and organising information
- Communicating ideas and information
- Planning and organising activities
- Working with others and in teams
- Using mathematical ideas and techniques
- Solving problems
- Using technology

An eighth Key Competency ‘using cultural understandings’ was not included in the 1992 report. Its inclusion and definition have been the subject of ongoing debate, which is outlined in chapter 12 and discussed more fully in chapters 13 and 14. Because this area is likely to be of special interest to arts educators, the inclusion of a discussion of ‘using cultural understandings’ was seen as essential for this project.

CONTEXT OF THE RESEARCH

This research took place soon after the adoption in most states of the National Curriculum Statements and Profiles.³ The arts is a key learning area in the National Profile and the five arts areas investigated in this project are those of the key learning area.

Soon after the research commenced, a report of the results of a senate inquiry into arts education was published⁴ in which reservations about the adoption of the Mayer Key Competencies were expressed. The report expresses concern that teachers will be encouraged to value ‘communicating information’ rather than solitary thought; ‘working in teams’ more than individual creativity; ‘solving problems’ more than identifying them and efficiency more than morality. As a result, areas central to the arts, such as solitary thought and creativity, may be undervalued.

The report of the senate inquiry also raises an issue crucial to arts education - the need for a key competency that addresses aesthetic awareness. The senate inquiry report suggests that a notion of aesthetic awareness can be seen as generic and applicable to people working in a wide variety of areas and recommends that it be included as one of the key competencies.⁵ Overall the report expresses concern that schools may come to undervalue the arts generally because creativity and aesthetic awareness are not included in the list of competencies.⁶

Another significant report published at the time when this project commenced was commissioned by the National Industry Education Forum, funded by the (then) Department of Employment Education and Training: Business, Industry and Key Competencies.⁷ This report examined the use of the Mayer Key Competencies in a range of industry settings and found them to be generally workable and useable (assuming that there would be provision of

³ *The arts: a curriculum profile for Australian schools, Carlton Victoria, Curriculum Corporation, 1994*

⁴ *Report by the Senate Environment, Recreation, Communications and the Arts References Committee, Arts Education, Commonwealth of Australia, October 1995*

⁵ *Op. cit.* page 140

⁶ *Op. cit.* page 140

⁷ *National Industry Education Forum, 1995, Business, Industry and Key Competencies*

professional development). Some of the recommendations encourage closer links between schools and industry which is the kind of linking fostered by the Mayer Key Competencies explored in this project.

While this project was in progress, CREAT Australia published an updated plan for vocational education and training in the cultural and recreation industries.⁸ This plan supports close partnerships between education and industry, promoting industry driven education and training, flexible delivery and a focus on skills development on a national basis which respects local diversities. The CREAT report thus endorses, within an arts context, a framework which relies upon the co-operation and collaboration of education and industry.

The above discussion aims to provide an outline of the milieu in which our investigations took place. The national arts key learning area was in the process of implementation, receiving varied reactions from state education systems. Concerns were expressed in some areas - such as through the Senate Inquiry - that vital aspects of the arts were being undervalued. Alongside these issues, developments initiated by the National Industry Education Forum and the development of CREAT show an emerging awareness of the importance of forming partnerships between education and industry.

THE CONDUCT OF THE STUDY

The study was designed to collect information in three ways. These were;

- by surveying the literature;**
- by surveying schools using a mailed questionnaire; and**
- by interviewing arts educators and trainers at a small number of sites across Australia.**

The report is written in such a way that these three sources are integrated together.

Details of how the mailed questionnaires and the interviews were conducted, and the methods used in developing and implementing them are provided in Appendix A of this report (the Technical Report). What follows is a brief summary of parts of the technical report. It is designed to facilitate understanding and critique of the study without requiring the reader to tackle all of the Technical Report before they can begin.

Number of schools in the survey

One hundred and three schools agreed to participate in the mailed questionnaire part of the study. It had been planned to survey about 100 schools, but it was also anticipated that there would be a high refusal rate so schools were over-sampled. Altogether, 183 schools were approached for this part of the study. The schools were selected randomly. The sample was stratified by sector - Catholic, Government and Independent.

Selection of teachers

Once schools had agreed to participate in the study, principals provided a list of arts teachers in the school and it was these teachers to whom questionnaires were sent. A total of 360 teachers were sent questionnaires. (Of these 28 were not Year 11 or 12 arts teachers, they did not teach an arts area or they had left the school before a questionnaire arrived for them to answer.) Thus there was a total pool of 332 teachers who were surveyed. There were 192 questionnaires mailed back, giving a moderate response rate of 58% by teachers. However, more importantly, of the 103 schools surveyed, a response was received from 88, giving a response rate from schools of 85%. This is a good response rate.

⁸ CREAT Australia, 1996, *VET Plan Update February 1996*, Kings Cross

The unit of analysis

It is important to recognise that the unit of analysis in this study is the school and not the teacher. In other words, as schools were randomly selected and not teachers, it is the proportions of schools that are engaging (or not engaging) in activities that need to be the focus of the analysis if valid generalisable inferences are to be drawn.

Confidence intervals

The sample for the study is small ($n=88$). This means that confidence intervals are wide and so reported differences in proportions need to be treated circumspectly. For example, if 50% of the cases are observed in one category (say, 50% of schools assess the key competencies informally) then with a sample size of 88, it is estimated that this value will range between about 61% and 39%, 95% of the time when a sample of this size is drawn. This should give a measure of how accurately a sample statistic is likely to represent the real value to be found in the population of Australian schools.

How the data are used

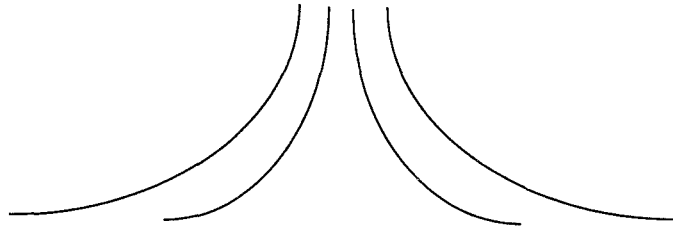
During analysis of the data collected from the survey it was found that what teachers said was often more interesting than counts of what schools were doing. Accordingly, teachers comments are often included in the body of the report. The other major source of data in this study comes from face-to-face interviews conducted at 14 educational and training sites around Australia (the key sites). These visits were designed to complement the questionnaires by providing a rich and detailed account of the key competencies in arts programs. The use of these data is intended to be illuminative. While no generalisable inferences can be legitimately made from them, the intention is to provide a rich description and interpretation of the milieux which will aim to 'provide a comprehensive understanding of the complex reality (or realities) surrounding the program (or site)'.⁹

The key sites

The key sites were not chosen randomly. Networks were used and after considerable consultation with arts educators through the NAAE, criteria for selection were developed - these are outlined in greater detail in Appendix A. Sites were selected to throw light upon issues being addressed in the study. To some extent, however, our choices were constrained by financial considerations. For example, when there was just one promising site in a particular state it was not possible to justify the travel.

Finally, it needs to be appreciated that although empirically based generalisable conclusions can be made only conservatively, the major part of the research followed a qualitative illuminative approach. For example, this study shows that the key competencies can play a significant role in arts programs and it illustrates various ways that this is being done. We cannot conclude that these approaches will be appropriate for all arts contexts.

⁹ Parlett, M. and Hamilton, D. 1977, *Evaluation as illumination: a new approach to the study of innovatory programs*, in *Beyond the numbers game*, ed. D. Hamilton et al, Macmillan Education, London, page 21



CHAPTER

2

SOME IMPORTANT ISSUES

This chapter outlines some issues which need to be considered as a background to the overall investigation.

ARE THE KEY COMPETENCIES TRANSFERABLE FROM ONE CONTEXT TO ANOTHER?

The key competencies as described in the Mayer Report are based on an assumption that skills or 'understandings' learnt in one context can be transferred to another. Will ability to work as a team member of a musical ensemble, for example, transfer to a work situation in a different context, say, working in an office?

As Marginson points out, generic skills are usually considered to be work-related skills and they are seen to be context free, 'abstracted from the circumstances of their formation and use, and freely transferable between sites'.¹⁰ Marginson is sceptical about whether skills are universal and transferable. He takes the example of problem solving and questions whether problem solving, say, in history is commensurate with solving an industrial dispute or mending a lathe. To argue that such a skill is transferable requires that it is divested of its knowledge context, which in most cases is, he feels, unrealistic. When skills are site specific and knowledge specific, transfer becomes a case-by-case matter, it cannot be taken for granted.¹¹ Marginson suggests that transferability can be enhanced in three ways: (1) by placing emphasis on educational experiences which can facilitate work behaviours such as oral skills and teamwork, (2) by providing experience of the work context as well as the education context (thus the student will experience moving between contexts) and (3) to work directly on the acquisition of attributes which are strategic to the process of transfer - such as confidence and the capacity to be proactive. He sees such attributes as tools to deal with the relationship between the particular and the general.¹² Marginson does not examine the key competencies in relation to these attributes - indeed his argument is mainly concerned with university graduates transferring to a work environment. But it seems possible that, according to his argument, some key competencies may be more readily transferable than others - for example 'working with others and in teams' more than 'solving problems' or 'communicating ideas'.

On the other hand Lohrey¹³ claims that transferability always occurs between contexts when learning takes place, the important issue is to consider the form in which it occurs. Lohrey distinguishes between 'low road transfer' when the mode of gaining knowledge is acquisitive, with an emphasis on recall, and 'high road transfer' which involves creatively transforming prior learning to fit new situations and contexts. Thus, Lohrey contends in relation to the key competencies, if learning is of the 'high road transfer' type, students will be able to transfer these competencies from one context to another. Following this argument it seems that learning generic competencies is most likely to be beneficial in programs which are not based on a linear philosophy of learning, but those which promote a more holistic and reflective approach where students regulate their own learning and draw on their own experiences.

It was outside the scope of this project to investigate these issues of transferability. It is an area where considerable further research is needed. For example, are some key competencies more readily transferable than others? Or are key competencies more readily transferable if they have been acquired in an environment similar to Lohrey's 'high-road-transfer'?

DOES AN OUTCOMES BASED APPROACH TO LEARNING INHIBIT ARTS PROGRAMS?

The key competencies evolved in a climate of outcomes based curriculum development where National Curriculum Statements and Profiles are being used in

¹⁰Marginson, S. 1994, *The transfer of skills and knowledge from education to work*, CSHE Research Working Papers, 94.4, Centre for the Study of Higher Education, University of Melbourne, page 4

¹¹ *Ibid*, page 12

¹² *Ibid*, page 22

¹³Lohrey, A. 1995, *Transferability in Relation to the Key Competencies*, Occasional Paper No. 16, The NLLIA Centre for Workplace Communication and Culture, prepared for the Commonwealth Department of Employment, Education and Training, Canberra, page 5

most states of Australia. Indeed, the definition of competence offered by the Mayer committee places emphasis on what a person can do, underpinned by knowledge and understanding. Writers, such as Collins¹⁴ see this approach as dangerously narrow and behaviourist, with the potential to 'harness and control' post compulsory education. And arts educators have expressed concern that outcomes based curricula may promote those aspects of the arts which are easy to define and measure at the expense of the risk-taking creative aspects.

The real danger is that those competencies that can easily be described will be described, at the expense of more important learning outcomes which are complex, subtle and much more difficult to describe in atomistic terms.¹⁵

Is it necessary to define outcomes so narrowly that they preclude risk-taking and unpredictable 'creative' responses? This may be the case with the tight specification of competency based training, but perhaps not with the Mayer key competencies because it does seem possible to express outcomes in a way that will maintain or establish a central role for creative aspects of artistic development. This will be considered further when we discuss the 'solving problems' key competency.

Also, some educators seem to have assumed that the key competencies will 'take over' the curriculum rather than seeing them as having the potential to enhance what already exists. For example, one music educator we interviewed commented:

The danger that lies in the Mayer Committee's notion of 'putting general education to work' is that those aspects of general education that cannot be put to work are seen to be worthless. I teach music theory not in order to enable my students to 'participate effectively in work and adult life' but because the understanding of music is valuable in itself; the possession of such understanding is part of what it means to be a civilised human being.

Recommending, as does the Mayer Report, that all young people should achieve the key competencies, does not imply that these are the only, or indeed the most important curriculum outcomes. Some other people interviewed seemed to believe that the key competencies had been imposed 'from the top'. For example another teacher said: 'I've heard of them, but I haven't heard of any being put into the curriculum' which seems to suggest a kind of passive acceptance rather than, perhaps seeing that the key competencies can offer a new dimension to what already exists. Such comments did seem to come from educators who were fairly unfamiliar with the key competencies and who seemed to think that they would inhibit or impinge upon the important aspects of arts programs, whereas educators who had been working within a key competencies framework spoke more positively of refocussing or rethinking their approaches to the curriculum.

ARE THE KEY COMPETENCIES COMPREHENSIVE?

Some arts educators believe that the key competencies have been developed as 'life skills' whereas their purpose, as mentioned in chapter 1, is to put education to work. They are not intended to equip young people for all aspects of adult life. Teachers with this mistaken interpretation who responded to the questionnaire understandably criticised the key

¹⁴Collins, C. 1993, *The Competencies Debate in Australian Education and Training*, Canberra, Australian College of Education, page 7

¹⁵Boughton, D. 1994 *Evaluation and Assessment in Visual Arts Education*, Deakin University, Geelong page 33

competencies as narrow. In particular, the key competencies were criticised for not addressing any moral issues.

ARE THE KEY COMPETENCIES INCLUSIVE?

This project did not set out to look at matters such as gender issues in relation to the key competencies. Such issues are vital but beyond the scope of this study. In the course of discussion, however, some educators did note that the key competencies have a verbal bias which may disadvantage some young people, particularly those from non-English speaking backgrounds and from Aboriginal and Torres Strait Islander and ethnic communities.

The key competency descriptions are very broad. Indeed some with whom we spoke accused them of being 'motherhood statements' which, through their breadth and generality have become impotent. The approach to employment is 'mainstream', which does not accommodate those whose post school goals are other than traditional wage-earning work. In relation to this, Aboriginal people were particularly concerned about the lack of a key competency to do with aesthetic awareness which they saw as integral to leading a worthwhile adult life. At one Aboriginal art gallery we visited, where there was a lot of discussion about the fact that the key competencies have been imposed on Aboriginal people, we were told:

'They need to be converted by Aboriginal people for Aboriginal people. Not converted by whitefellas for Aboriginal people...A lot of stuff is not people friendly. It's not in simple English. It's jargon orientated because most of you educationalists are jargon experts!'

IS THERE A ROLE FOR KEY COMPETENCIES IN UNIVERSITY PROGRAMS?

The key competencies were intended to be appropriate for all young people, whether they plan to proceed straight from school to the workforce or whether they propose to undertake further education.¹⁶ Some writers are concerned, however, that the key competencies are inappropriate for university courses. Some of this argument hinges on the definition of 'competence'. The achievement of competence seems to be more highly valued in vocational education than in general or academic education where it can be used negatively as 'just skills'. For example, Stevenson points out that:

in ordinary conversation in university and school practice competence is often seen as confined to a limited aspect of humanness, something possessed by others ... some people would be offended if they were regarded as "merely" competent¹⁷

It may be that competence is viewed in this rather negative way in academic circles because it is not seen to accommodate a pursuit of excellence - so important in academic achievement. Competence does imply an element of sufficiency - once a target has been achieved, there is no need to go further. Thus critics such as Meredyth claim that competencies are not the 'real goals' of university education.¹⁸ In spite of these concerns, one university which was a key site for this project had a policy whereby all undergraduate programs were underpinned by

¹⁶Mayer, E.(Chair) 1992 *Report of the Committee to Advise the Australian Education Council and Ministers for Vocational Education, Employment and Training, September 1992, Australian Education Council, Carlton South, page viii*

¹⁷Stevenson, J. 1995 *The Metamorphosis of the Construction of Competence, Inaugural Professorial Lecture, Griffith University, Brisbane, page 5*

¹⁸Marginson, S. 1993 *Generic Competencies, DEET Higher Education Division, Canberra*

generic skills aligned to the Mayer key competencies. This approach had been inspired by a consideration of the need to encourage graduates to become 'lifelong learners'.¹⁹

Another tertiary institution (concerned exclusively with music) was visited as a key site. Although this institution had a bridging program which, it claimed, incorporated the Mayer key competencies, when we came to talk to the teachers they were quite unfamiliar with them. But once we abandoned addressing the key competencies *per se*, and talked to the teachers about their contacts with the music industry and observed some of their classes, we found that most programs were directed towards preparing students for the workplace - albeit a workplace involving music of some kind. Thus although a lot of the literature seems to suggest that generic competencies are 'antithetical'²⁰ to a university education, in this project one university was overtly addressing competencies closely aligned to the Mayer key competencies, and in another, a high proportion of activities were addressing areas related to the key competencies.

TO WHAT EXTENT IS THE 'HUMAN CAPITAL' BASIS OF THE KEY COMPETENCIES OF CONCERN?

Some writers have reacted to the economic motives they see behind a set of competencies presented in the Mayer report where it makes such statements as:

Australia's economic success and hence our standard of living depends on a workforce and a work environment that is capable of matching, or improving on, world best practice. Work places must become more competitive.²¹

Strong criticism on these grounds has come from Crittenden, who suggests that schools are becoming 'servants of the economy'²² and Collins sees the formulation of the key competencies as:

a direct attempt to harness the post compulsory school curriculum to ensure that all students [improve] those instrumental skills thought necessary [to make them] competent human resources for the Australian economy²³

Indeed, some teachers who responded to the questionnaire for this project gave cynical comments when asked what students will gain from the key competencies for example, 'They [students] may be efficient processors who will be easily manipulated and self serving'. These concerns are valid. But to a large extent it seems that they depend on whether teachers view the key competencies as 'taking over' the curriculum and diminishing other important areas or whether they are a useful new dimension that may enhance essential subject-related skills. At the time of writing this report an assessment scheme for the key competencies has not been

¹⁹Candy, P., G. Crebert, J. O'Leary 1994 *Developing Lifelong Learners through Undergraduate Education*, National Board of Employment, Education and Training, Australian Government Publishing Service, Canberra

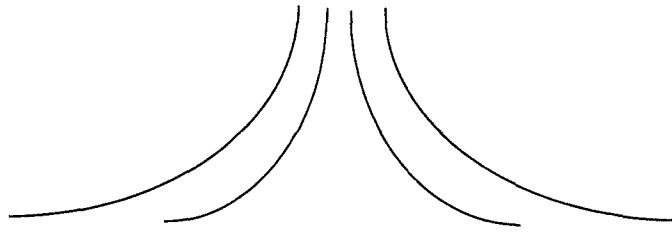
²⁰Bowden, J. and G. Masters 1993 *Implications for High Education of Competency-Based Approach to Education and Training*, DEET, Higher Education Division, Evaluations and Investigations Program, National Office of Overseas Skills Recognition, Canberra

²¹Mayer, *op cit*, page 3

²²Crittenden, B. 1995 *Liberal and Vocational Education: Convergence or Confusion?* in *Curriculum Stocktake*, ed. C. Collins, Australian College of Education, Canberra, page 30

²³Collins, C. 1995 *Curriculum Stocktake*, Australian College of Education, Canberra, page 10

finalised. We cannot be certain of whether there is cause for concern until we know whether the form of assessment advocated is constricting or liberalising. Further issues about assessment are discussed in the next chapter.



CHAPTER

3

ASSESSING THE KEY COMPETENCIES

The Mayer Report recommends that there should be 'nationally consistent assessment and reporting of individual achievement of key competencies'²⁴ and to facilitate this, three levels of performance are outlined.²⁵ Teachers surveyed for this project were asked whether they had assessed the Mayer key competencies in their Year 11 or 12 arts class. Eighty-nine percent of the total sample responded to the question, and of these, about 70 per cent said that they had assessed the key competencies. This did not necessarily mean that the three performance levels had been used, and the assessment may have been 'formal', defined on the questionnaire as 'setting a specific task to assess a generic skill', or informal, 'making an informed judgement without having set a special assessment task'.

Teachers were also invited to express any concerns about assessing the key competencies. The most frequently given concern was that it would involve more time and work for teachers who are already stressed by heavy workloads at Year 11 and 12 level: one teacher could foresee 'a clerical nightmare'. Other concerns were due to unfamiliarity with the key competencies themselves, or the performance levels, or with the notion of assessing generic competencies. The third most frequently given concern was about assessing the key competency 'using mathematical ideas and techniques', which are discussed more fully in chapter 9. Comments by teachers suggested that, on the whole, they favoured giving a global impression judgement and one noted that assessment would be difficult unless 'reliance was placed on the professional judgement of the teacher from observation'. These comments are in keeping with the recommendations of McCurry.²⁶

It seems likely that arts educators may feel more at home assessing the key competencies in this way than teachers in some other curriculum areas. This is because arts teachers are used to assessing performance and they may be more used to assessing in a holistic way. For example speaking of assessing music, Mills has commented:

As a holistic assessor I feel that I am considering the performance in its own terms ... Holistic assessment feels musical, to the extent that assigning a single mark or grade to a performance could ever feel musical. But as a segmented assessor, it seems that I must turn the performance into something less coherent than music before I may assess it.²⁷

At key sites, teachers described their preferred modes of assessment. They tended to involve global judgements and the key competencies were an implicit part of overall assessment rather than explicitly assessed by specially developed tasks. Thus most were examples of what was defined above as 'informal assessment', also many were examples of 'authentic assessment'²⁸, using real life situations. Teachers seemed to be very comfortable with this. For example, an independent school music teacher described how he would assess the 'planning and organising' of a musical soiree:

²⁴ Mayer, E. (chair), 1992 *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page xvi

²⁵ *Ibid*, page 16

²⁶ McCurry, D., 1996 *Approaches to Assessing the Key Competencies, A Paper reviewing possibilities for the assessment of the key competencies*, Commissioned by the Department of Employment, Education and Training, ACER, Camberwell

²⁷ Mills, J., 1991 *Assessing music Performance musically*, *Educational Studies*, 17, 2, page 173

²⁸ Ryser, G., 1994 *Developing Reliable and Valid Authentic Assessments for the Classroom*, *The Journal of Secondary Gifted Education*, 6, pages 62 - 66

I try to relate to the real world ... then we look at what would be required for it to be successful ... we would look at what the expectations are, then allocate tasks, and then at the end of it see how well you met the task. So students would be aware of the performance indicators before they even started the project.

And a tertiary level Dance teacher described how Communication is assessed globally as a part of a performance:

[I said to the student] “you’re not making us feel, you’re not making us feel fantastic. It’s boring.” I guess it’s communication - that the audience understands what you’re doing and they’re feeling it. ... It’s usually assessed during a performance when there is an audience there. If they cannot actually perform and communicate in front of an audience then, you know, that skill is something they don’t have as a dancer. Very often you need that feedback from an audience as well.

This example was a summative ‘high stakes’ kind of assessment. But most examples described by teachers at key sites were formative, ongoing - the kind of assessment that is an adjunct to learning, which is at odds with the ‘nationally consistent’ assessment of key competencies envisaged in the Mayer report.

Two other areas are important to arts educators in learning and assessment. Firstly recognition of individuality. For some years, arts educators have embraced the theories of researchers such as Howard Gardner and Robert Sternberg who recognise that rather than there being one concept of ‘intelligence’, people have multiple intelligences. Traditional academic subjects focus on what Gardner has described as linguistic and mathematical intelligences whereas the arts tend to be concerned with other intelligences; musical, kinaesthetic, spatial, and interpersonal and intrapersonal. Thus arts educators may be more amenable to assessing the more affective competencies such as ‘working with others and in teams’, and ‘planning and organising’ activities.

Secondly, arts educators often value ‘process’ as much or more than ‘product’. One teacher of Media was concerned that some students would be disadvantaged by an assessment requiring verbal facility and a focus on ‘product’:

The students often have the ability to do these competencies, but they don’t have the verbal processes to explain - you know - you can see them do it. But you are not able to assess the degree to which they understand what they’re doing, and how they’re doing it.

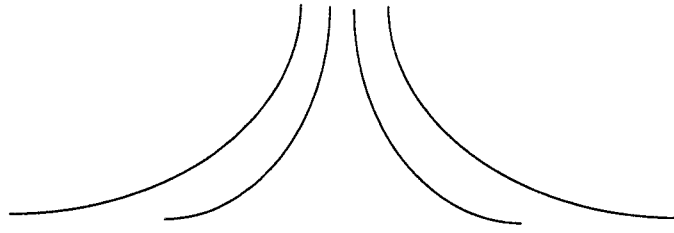
These factors suggest that assessment which is flexible and not tightly specified will be favoured. There is unease that the Mayer report stresses that competence is concerned with what a student can do, rather than what the student knows²⁹ and that the key competencies focus on the outcomes rather than the processes of learning³⁰. For example, a visual arts teacher commented:

You always worry about how things like this are going to be used. Just how they will impact on what you do in the classroom. Like, if we suddenly have to start formally responding to each one of these competencies in a way that’s so structured that we have no flexibility in how we respond and how we report and how we assess. I’d have a major concern if we go down that path.

²⁹ *Op cit*, page ix

³⁰ *Ibid*, page x

Again, the extent to which this unease is warranted will depend upon the kind of assessment that is ultimately undertaken. A holistic approach, reliant on teachers' judgements will allow for individual differences and a valuing of process, whereas a more rigid 'top down' product-oriented assessment may not. At this point we do not know what the outcome will be.



CHAPTER

4

LINKS WITH INDUSTRY

The Mayer Report claims that the key competencies will 'fuse general education with vocational training'³¹ as a part of preparing young people for a world of work where skills required are constantly changing, where it is unlikely that a person will stay in one particular field of work because jobs and career paths will change more rapidly than they do at present. To help prepare young people for this work environment vocational education needs to become more general and general education more vocational.

There has been some criticism of this approach. For example Crittenden³² suggests that such fusing, or 'convergence' will narrow the scope of 'liberal education' by making secondary education more vocational in emphasis - thus the end result, he contends, will be a weakening of both 'liberal' (or general) and vocational education.

In addition to being present in both general and vocational curricula, key competencies may be seen to fuse these two areas because they are underpinned by knowledge and understanding³³. The overall focus may be utilitarian in that key competencies aim to assist young people in the world of work, yet the underpinning suggests that achievement of the key competencies will involve activities such as reflection and questioning - skills usually associated more with general than with vocational education. Success in this regard will also depend on how the key competencies are assessed, with a fusion of general and vocational education being more likely if assessment allows recognition of reflection and rewards approaches that are 'individual'.

The presence of key competencies in the curricula of schools, TAFE's and other further education institutions and industry training may help to promote this fusion which will also be helped by present trends of school links with TAFE's and industry and practices such as Recognition of Prior Learning.

In this project a section of the questionnaire explored links between schools and industry. Only 35 percent of the schools who responded claimed to have such links. The most frequently mentioned organisations with which such links were made were theatres and performing groups, art galleries, commercial organisations (such as radio stations) and tertiary institutions or TAFE's. The overall impression was that at this stage the notion of making formal or regular links is new and perhaps only just being taken up by schools. At this stage only 13 percent of teachers stated that employers had expressed interest in students' level of achievement of key competencies. It is likely that this is due to school and employers' lack of knowledge of the key competencies rather than a lack of potential for key competencies in this field.³⁴

FUSION OF GENERAL AND VOCATIONAL EDUCATION: IMPRESSIONS FROM SECONDARY SCHOOLS

Three secondary schools we visited had interesting links with vocational education. In one, the Year 11 and 12 students can obtain a TAFE accredited (Level 2) Certificate in Music Industry Skills. Students take Year 11/12 English and Music Performance, Business Management and six classes a week of Music Industry Skills performance modules. By taking two Year 11/12 electives, students satisfy Year 12 certification. At the time of our visit, the teacher was negotiating for some of the course content to be delivered in the work place.

³¹ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 3

³² Crittenden, B., 1995 *Liberal and Vocational Education: Convergence or Confusion?* in *Curriculum Stocktake*, ed. C. Collins, Australian College of Education, Canberra, page 25

³³ Mayer, *op cit*

³⁴ National Industry Education Forum, 1995, *Business, Industry and Key Competencies*

Another secondary school had a Year 13 Media course which operates as a TAFE cross-over course. A lot of students taking this are aiming to work in the Media industry although the teacher said that some come back to boost their chances of tertiary entrance. The Media teacher described some of the work undertaken by these students in industrial settings:

Quite a few of our students have produced short clips and have been part of production teams. We've got a state-of-the-art AVID suite [used for computer editing of video images] and six students have gone through working with that over a period of time - they are now working at sites with AVID suites.

He then went on to show how the 'linking' is a two-way process between the school and industry:

Because we have an AVID, and it needs to be financed somehow, we take in work from outside - short film clips and so on. And in doing so, what we are doing is that it's usually students who are undergoing training who are doing the work on the AVID. So people kind of get to know these students anyway...So there's a cross-linking there that's going on. People from the industry come in and often train their students under supervision.

This Media teacher believed that the key competencies could be addressed better at the Year 13 level because of the training orientation rather than during the push to get into tertiary studies which occurs at Year 12.

Another girls' independent school had designed its own modules for a TAFE Advanced Certificate course which students could take concurrently with their Year 12. The school was registered with the State Training Board as a private provider. The Visual Art teacher described how it evolved:

We just invited seventeen Year 11 students as they were entering Year 12 to participate in the program. We asked them to do only four [Year 12 certificate] studies - English, at least one other Art subject and then to take on what we called General and Life Drawing as their fifth study. So they got their [Year 12 certificate] and they built up this huge folio. Fifteen of those students got into tertiary courses and two into TAFE courses as a [result] of undertaking that particular course ... We've been doing it for four years now and we find it increases the girls' confidence.

This teacher also believed that this course addressed the key competencies more readily than other more conventional senior school courses.

VOCATIONAL ORIENTATION AT TERTIARY INSTITUTIONS

As mentioned in chapter 2, the university key site visited addresses the key competencies by underpinning all undergraduate courses with specific generic skills. The lecturers with whom we spoke admitted that the university tends to have a stronger vocational orientation than some of the traditional long established Australian universities. In this case, the Media Department has strong links with industry particularly through a commercial television channel where students undertake extensive work experience, in return for which the university is paid a lump sum each year. One lecturer spoke very enthusiastically of these links:

We are the flagship school of the university and it's because of our industry links. There's no doubt about it. Industry is everything for us.

Asked about the role of the key competencies, or generic skills, he said:

At the beginning it seemed to be a disadvantage because a lot of the industry basically wanted people to arrive with the skills of how to use the technology and they would show them what they wanted them to use the technology for. That has changed...and in fact those generic skills...are, I believe, the reason why our students are employable...What we do in the school is we copy the industry.

Another tertiary level key site described in Chapter 2 is different from this university in that the key competencies are not addressed overtly. There are strong links with industry through teachers' connections rather than the more formal kinds of links described above.

Informal conversations with staff from other universities also suggest that the practice of underpinning courses with generic skills based on or similar to the Mayer key competencies is becoming widespread.

KEY COMPETENCIES AT INDUSTRIAL SITES

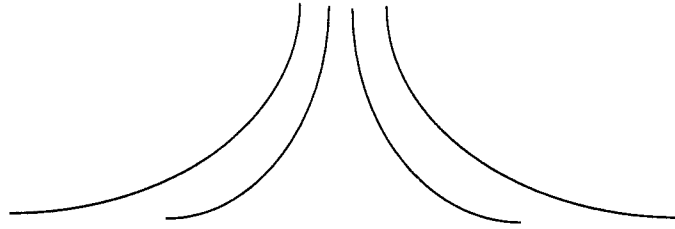
Two industrial sites were visited. The first was an art gallery which is concerned with the Art of Aboriginal people and aims to employ as many Aboriginal people as possible. At the time of our visit it was about to set up a training program - as the director explained 'the concept is that we will have trainees attached to every department and every program in the organisation'. Training programs were to be taken 'off the shelf', the key competencies are embedded in most of them and the programs will be made more culturally appropriate where necessary. The training falls into three components: on the job training with a mentor, out of house training which might take place at a TAFE and thirdly attachment, from time to time, with other industries - such as the Media Resource Centre for people training to work the internet. The organisation has links with many industries concerned with the arts and with other indigenous organisations.

The second industrial key site was a large radio organisation. In this case the key competencies are more implicit in training programs but trainers strongly endorsed their importance. In particular they are used in the selection of trainees, which was a very rigorous process. Also, the organisation is placing a strong focus on on-the-job training, and training for outside organisations. Although not explicit, there are clear indications that notions similar to the key competencies exist in these programs.

IMPRESSIONS OF THE ROLE KEY COMPETENCIES ARE PLAYING IN LINKING GENERAL AND VOCATIONAL EDUCATION

The idea of linking general and vocational education by developing links between schools and industries is new and responses to the questionnaire suggested that arts educators are not aware of a great deal of activity in this area at present. The links that we explored at key sites, however, seemed to provide an enriching experience for secondary students. We saw that generic skills can have a successful role underpinning university courses and the sites we visited had made strong connections with industry, albeit in different ways. At four of the key sites mentioned, key competencies were seen to play a significant role in making links with industry (and at one site within industry training). One university claimed that they were the reason why his students were readily employable. At the other sites the key competencies were less clearly defined but still acknowledged as an important part of the programs.

In the next eight chapter each of the key competencies are reported upon using data collected for the study.



CHAPTER

5

COLLECTING, ANALYSING AND ORGANISING INFORMATION

THE MAYER DEFINITION

In explaining the inclusion of this key competency, the Mayer Report refers to the 'information explosion'³⁵, the dominance that information has in the life of work, as the report states, 'the processes for gathering and managing information are now more important to effective participation in work and education than at any time in history'. 'Information' may range from a list of telephone numbers to the interests of colleagues or friends. The kinds of information described range from written to graphical/tabular and spoken. The Report summarises this key competency as including responsiveness to the purposes of information, application of access and retrieval techniques and principles, analysis of organisation of information and evaluation of quality and validity of information.³⁶

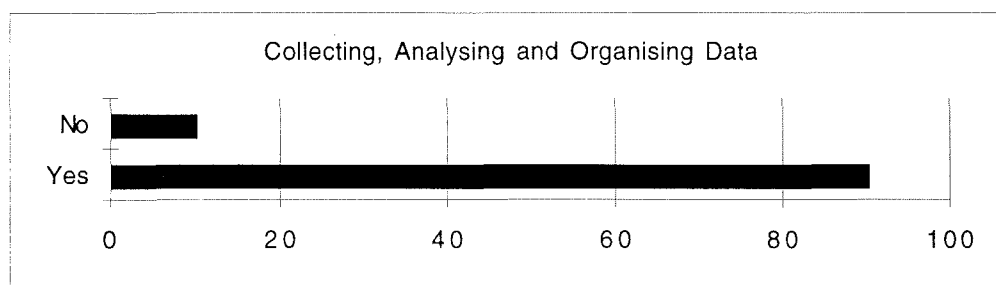
In discussions, some people considered the breadth of this key competency in a hierarchical way, considering the skills of collecting, sifting and sorting to be of a lower order than those involved in evaluating. Viewed in this way, there seems to be a need to separate these lower order attributes from the higher order evaluating. This has been the case especially when considering the assessment of this key competency outside of particular contexts³⁷. The report suggests, however, that 'evaluating' need not be a higher order skill, as it might involve, for example, checking that factual information is as complete as can be expected.

THE RESPONSE FROM SCHOOLS

Eighty-eight schools completed questionnaires and 82 of these responded to the question: Have you formally or informally integrated the key competency into the curriculum of your arts class?

Figure 1 shows that a very high proportion of schools reported that they had either formally or informally integrated the Collecting, Analysing and Organising key competency into their arts curriculum

Figure 1: School response to first key competency



WHAT ARTS EDUCATORS SAID

Schools were also asked about the assessment of the key competency. As mentioned below a surprisingly high proportion claimed to assess it using the Mayer Report levels of performance. We found this remarkable because none of the key sites visited carried out any formal kind of assessment of key competencies and in many cases arts educators were either unfamiliar with the Mayer performance levels, or found them confusing. Nearly 88 per cent of teachers who responded to the questionnaire claimed that they had formally or informally integrated this key competency into their arts curriculum and 95 per cent felt comfortable with

³⁵ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 21

³⁶ *Ibid*, page 22

³⁷ Discussions with Doug McCurry in relation to another project on assessing the key competencies

the idea of explicitly teaching it. Sixty per cent had formally assessed the key competency using the three performance levels outlined in the Mayer Report - we found this outcome a little surprising as in our key site visits and other contacts with teachers we found no cases where the performance levels were being used - and 59 per cent claimed to informally assess this key competency. These last two percentages may indicate a misunderstanding of what was meant by 'formal' and 'informal' assessment, which had been defined earlier in the questionnaire. But nevertheless it seems clear that teachers do see 'collecting analysing and organising information' as a generic competency that they teach.

The definition of this key competency was less problematic than some of the others. It was endorsed as an important competency for future working life. For example, a person from the media industry said:

You hear all this rhetoric about change speeding up - that people to keep on top of things need to be very proactive - the time of sitting back and waiting for it to be spoon-fed to you is long gone. I think that idea of being very proactive and trying to take as much control as you can is critical.

AN EXTENSION OF THE MAYER DEFINITION

The arts involve interpreting and processing information which may extend the Mayer interpretation of the competency. For example in Dance:

Dancers have to take in a lot of information which they then have to remember and repeat. Dancers develop, through their training process, a way of remembering vast bodies of choreography which they can reproduce on stage.

In terms of generalisability, this Dance teacher felt that the competency would be an 'additional bonus' in non Dance work settings. She believed that the aid to processing information would be beneficial. Interpreting has an important role in the arts, and it was seen by some educators as a part of the generic 'collecting, analysing and organising' process. For example in the visual arts:

[Students] are collecting information all the time. We talk about our students responding to their world in a non written, non verbal way. So they're actually dealing with a language that asks them to collect information and interpret information in new and different ways - and that's across all parameters...from graphic design which has a very immediate purpose...all the way through to the more ephemeral fine arts of painting and sculpture.

This kind of interpreting - tied in with the notion of collecting and analysing - occurs in other arts areas as well. For example a drama class we observed had been collecting information about the 1950s as background for a play they were to produce. They had been interviewing people who could remember those years, they had been reading old magazines and newspapers and collecting information from many other sources. From this they would convey an interpretation of the 1950s.

In music, however, one teacher was unsure that any 'collecting' took place, although analysing was a very important competency to develop:

I don't know about collecting. Certainly analysing. We're analysing style - musical style. We have kids who say, I want to be able to write a song like Pearl Jam - well - what is that? So they're actually using their analysing skills to articulate what they hear. There's a bag of tools you need to be able to say, it's this or it's that. I don't know about collecting.

Whereas other arts teachers, including music teachers set assignments where students did need to use 'collecting' skills in a way that would seem to be generalisable to other areas:

A lot of work is done in little research projects...about a particular symphony or a particular symphonic poem, like The Moldau. They work through that by collecting information on it and then putting that information into[a different] format. So that requires collecting information, analysing it and sorting it out and putting it into some kind of logical order.

A drama teacher described how 'collecting, analysing and organising information' was assessed through students keeping a journal:

As a part of keeping their Journal, which is an assessable item they are collecting information to put in that: reading articles, theatre reviews - and the organisation of that into some sort of folio. [In assessing this the teacher] would have a look at how 'in depth' the students had gone in their understanding of the information that they had actually collected. Their folios would be annotated. If they've collected articles on certain things, the students have to describe what is going on in them so that they get a clear understanding of them. In terms of assessing, [the teacher] would be checking the relevance of the material.

This teacher went on to say that students devise solo presentations by developing characters from material collected and analysed in their journals. A visual arts teacher described a similar procedure which involved students keeping journals:

The one we see most clearly is the gathering of information for research for assignments which filters through into journal work...Students are encouraged to go out to find, to collect, to research data at various libraries - [information that is] text, and from the internet as well. They are encouraged to use their own initiative to go out and collect information which is going to help them with their assignments - written, or on tape, or whatever - or their practical work and studio skills...It's not something just to be written it's also thinking, and that comes into their journals.

In the visual arts industry a different use of this key competency was described where it was used to set up a means of evaluating the art gallery:

One of the main programs that my assistant is working on at the moment is that we have had a survey done of who visits [the art gallery] and for what reasons. We were involved in setting up the whole questionnaire, and right at this very moment she's collating all the data and preparing a report.

WHAT SOME ARTS EDUCATORS ARE DOING

Below are examples of the key competency being interpreted in each of the five art forms.

Dance

[This group you've just observed] is doing a project looking at classical techniques - its beginnings, how it's developed and why it's developed; the changes in the technique as to lifts and the role of the male in dance. They've got to go back and see why the technique started in the French and Italian courts and the development of technique there. So we ask them to look at that purely to increase their knowledge of technique. Through that they may read enough to think, oh, I'm not doing it that way. It may cause them to go and read books and thus increase knowledge and think, oh, maybe that's why this happens.

Drama

Self motivation in terms of 'collecting analysing and organising information' is something that I don't think is adequately taught in schools. I think it's too directed and doesn't put the onus back on students. The kind of library research - or wider forms of research - [for developing a character, for example] could stand you in good stead for something else. It might even be a path into more academic studies, if you wanted that. If you need to know something, you have to think of the best way to find it out. It might not be from a library. It might be from visiting an old folks home and interviewing people.

Media

'Collecting, analysing and organising information' - when you make a radio program, that's the basis of it.

Music

I may set a task where [the students] have to perform a piece of music from the Baroque, for example. So they need to go and research, what's the Baroque, what are the stylistic differences between the twentieth century in which we live and Baroque music, for example. Idiomatic conventions from the music, interpretation of the music - then do some sort of presentation so they get themselves organised.

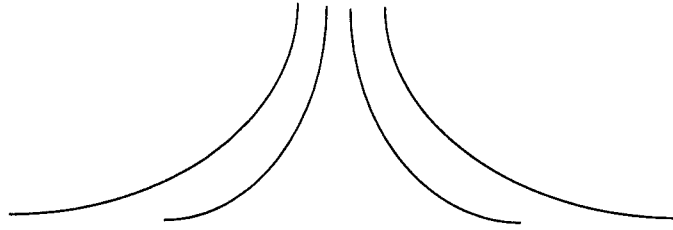
Visual arts

Students can't do the work unless they can collect examples of work, analyse the styles, how the symbols work in real life - then apply the different ideas and concepts to their own work.

MAIN IMPRESSIONS

From the above it can be seen that interpretations of this key competency ranged from a fairly basic 'sifting and sorting' definition in relation to undertaking assignments (such as The Moldau example) through to emphases on analysing and organising - such as developing journals - and a responsiveness to purpose clearly shown in the drama example of collecting and analysing material from the 1950s for the purpose of a setting of a play. In some cases the definition was extended to include interpreting information, and in some cases it seemed that 'collecting' was

of a different order to analysing and organising and that more emphasis should be placed on evaluating.



CHAPTER

6

COMMUNICATING IDEAS AND INFORMATION

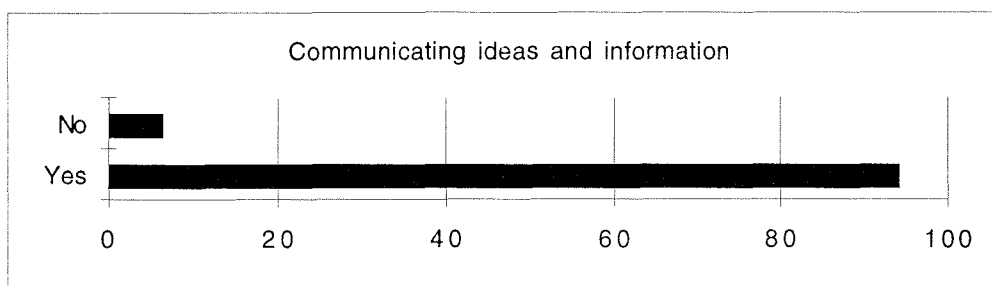
THE MAYER DEFINITION

This key competency covers a broad range of areas. According to the Mayer Report, 'communication' may involve spoken, written or visual language or sign or gesture.³⁸ The key competency is described by means of four major ideas: identifying the function of communication - being able to identify the most appropriate form of communication for a given purpose, responding to social or cultural contexts by selecting appropriate forms or styles, being effective - getting the intended message across clearly and responding to feedback by making appropriate revisions or corrections. In the context of the arts, it was sometimes difficult to distinguish whether a particular form of communication was 'generic', in terms of potentially preparing young people for work places in a general manner or whether it was specific to the arts context - such as communicating through the medium of painting.

THE RESPONSE FROM SCHOOLS

Figure 2 shows that a very high proportion of schools reported that they had either formally or informally integrated the Communicating ideas and information key competency into their arts curriculum.

Figure 2: Schools response to second key competency



WHAT ARTS EDUCATORS SAID

A very high proportion of arts educators who responded to the questionnaire - 93 per cent - claimed to have formally or informally integrated this key competency into their programs, and 96 per cent felt comfortable with the idea of explicitly teaching it. As mentioned in the previous chapter we are unsure about the way arts educators interpreted 'formal' and 'informal' assessment on the questionnaire. However, 55 per cent of teachers who responded claimed to formally assess 'communicating ideas and information', 56 per cent assessed it informally. These responses are not surprising given that communication has always been seen as an integral part of education, and arts educators would tend to see their subjects as being about communicating, albeit sometimes in a very specific way. The main difficulty, as mentioned, is to sort out instances where the 'communication' taught is potentially 'generic', and when it could be seen as learning the skills and techniques specific to an art form.

At key site visits, a number of educators stressed the importance of developing communication skills. A TAFE drama teacher saw it as 'one of the absolute fundamentals of what we do' and a secondary school dance teacher described it as the basis of dance. An interesting response from an industry that employs a lot of Aboriginal people was:

³⁸ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 24

It's extremely important for Aboriginal kids to be able to see Aboriginal people 'communicating ideas and information' about their own cultures, histories and issues today. That [key competency] stands out for me.

SUBJECT SPECIFIC OR GENERIC?

In some instances, the way that communication was taught was clearly subject specific. For example, a tertiary music teacher said:

[Communication] is probably the thing I find most difficult to develop in the student. The thing I'm always harping on is getting the self that is connected to the speaking voice as strongly involved with the sound of the singing voice ... As soon as a person goes from saying 'how are you today' to trying to sing 'how are you today', the contact, the personality power in the voice doesn't usually stay there ... I use a technique I developed called 'song talk', which is the combining of what happens in singing with just speaking. I would get [the student] to stay in this sort of lilting speech thing, hoping that then when she would sing it you would feel that there was some of her coming through. I don't know whether you could hear when she sang today, there's none of [student's name] comes through in her singing.... What we want to hear is the soul and spirit of the person coming out through the singing, and that's the hardest thing to get happening.

This comment describes a process of teaching communication. It certainly involves concepts outlined by the Mayer Report such as response, and getting the message across. The techniques do seem to be bound to the context of teaching singing, yet it is likely, though not certain, that the process would influence a student's communication in a generic way.

The approaches to 'communicating ideas and information' through drama seemed to be closely aligned with the interpretation in the Mayer Report. For example, one TAFE drama teacher said:

Communication obviously works on all sorts of levels, be it dissemination of information through the written form, gauging other people's moods, understanding, even to the point of rehearsal room etiquette - all those non verbal things that we do when we go into a rehearsal room, like being respectful and those sorts of things.

One music educator made specific reference to the difference between 'artistic' and generic communication skills in music:

'Communicating ideas' in music seems to fall very clearly into the creative area where musicians work with writing songs, writing instrumental pieces of music or arranging existing songs. 'Communicating ideas' is also required on a less artistic level and a more pragmatic level where [the students] have to tell some player what they want them to do.

To what extent is the ability to communicate with an audience in a theatre a generic competency? It certainly addresses the Mayer Report 'idea' of getting the message across, and possibly response to socio cultural conditions and response to feedback. Yet the techniques used are usually exclusive to a particular art form. In a dance class the teacher berated some students for 'not making us[the audience] feel fantastic - it's boring' and she said to us later:

I'm sure each of you would have picked out someone who went - oh, you know, - who gave that special kind of performance communicating to the audience rather than the others who were sort of bland and dancing for themselves.

A tertiary music teacher also spoke of the need for a singer to make eye contact with the audience. Is this generic, and can it be taught? Not all performance teachers were sure that such a skill could be taught, as the dance teacher said:

You can improve it, you can develop it, but you can't - it's that special something ..you can always pick the special ones...you can develop it but you know there's still that special talent that has to come from inside.

WHAT SOME ARTS EDUCATORS ARE DOING

Below are examples of 'communicating ideas and information' given by particular arts educators.

Dance

We take miming classes and we give them drama to help develop that performance side to an audience because many of them concentrate so much on what's happening down here [points to feet] and they forget what should be coming out from here, from the heart.

Drama

Technical Production students have to talk with theatre hirers, they have to talk with people they're purchasing stuff from, people they want favours from....You're bringing a lot of disciplines together to create a whole, and the key element is effective communication.. It can be taught and it is taught within a place like [this TAFE].

Media

[a tertiary level Photography student is given an internship in a manufacturing company that does not usually employ photographers]

If you've got people who can communicate well, if you've got people who can understand and react to a task, even though perhaps it's the first time they've been confronted by it, if they can ask intelligent questions, if they can be aware of their position...If [a student] can't function in an environment like that, then I have failed [as a media teacher]

Music

[students are to give an oral presentation to the class on oratorio or opera] They're marked not just on the content but on their presentation too. If we're gearing these people up to be performers, no matter what their instrument is, how they present to the group is important. [Things assessed are] eye contact with the group, clarity, an understanding of what they're saying...making it interesting to the group...If you're a performer and you can't make eye

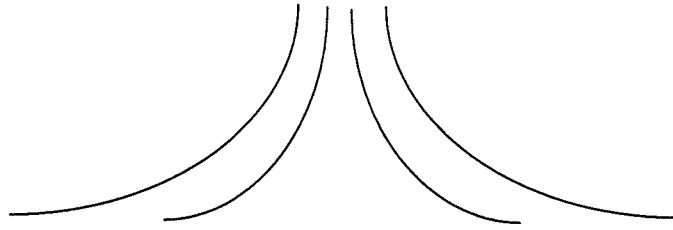
contact with your audience you've got a problem. You need to project your voice - draw them in and make them interested.

Visual arts

One assignment we give them - they've got a lot of words they have to demonstrate. It might be sink, it might be happy, it might be solid. Using graphic shapes only...they have to demonstrate those words...[To demonstrate 'sink'] you could use graduated size, you could use diagonal lines to demonstrate the way your eye travels, you could use graduated colour so that your eye can travel down.

MAIN IMPRESSIONS

It seems that because the Mayer definition of communicating covers so many different modes it is sometimes difficult to separate it from subjects associated with those modes - for example to separate visual communication from the visual arts. This becomes especially difficult when addressing the issue of assessment. To what extent is there a similarity between the ability to communicate visually, or orally, through gesture or in written form? In other words, is a person who is good at communicating visually necessarily good at communicating orally? These abilities seem to be discrete and would therefore need to be assessed separately, and it will be difficult not to align them with subjects usually associated with these modes of communication. This is not to deny the important role that the arts play in developing students' confidence so that they can communicate effectively in a range of settings.



CHAPTER

7

PLANNING AND ORGANISING ACTIVITIES

THE MAYER DEFINITION

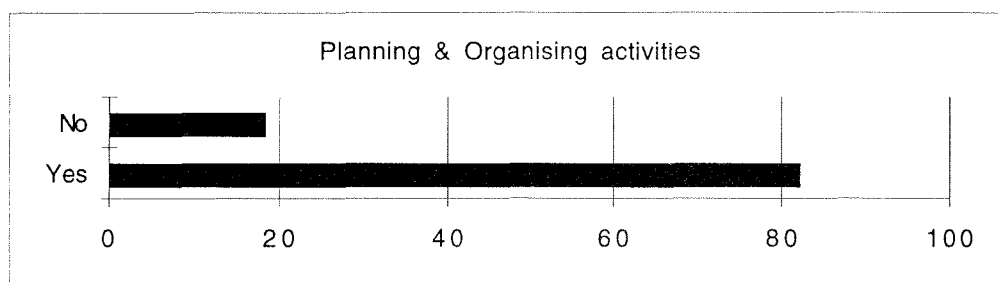
This key competency embraces a broad range of planning activities with an emphasis on planning one's own time and defining and setting appropriate goals. It can include evaluation of one's performance in relation to these goals and it can include planning and organising activities that involve others - an example of organising a rehearsal schedule for a band is given.³⁹ It may encompass social and ethical considerations and responsibilities such as adhering to occupational health and safety regulations.

Some teachers who answered the questionnaire may not have been sufficiently familiar with the scope of this key competency to realise that it covers a number of areas that relate to study skills. When asked about important generic skills they listed 'time management' and 'organisational skills with own work' separately from 'planning and organising activities'. It may be that 'activities' suggests planning that involves others.

THE RESPONSE FROM SCHOOLS

Figure 3 shows that a very high proportion of schools reported that they had either formally or informally integrated the Planning and organising activities key competency into their arts curriculum.

Figure 3: Schools response to third key competency



WHAT ARTS EDUCATORS SAID

Eighty-two per cent of teachers said that they had integrated this key competency into their arts class and 92 per cent felt comfortable with the idea of explicitly teaching it. We must remember that these figures may be based on a 'planning activities' emphasis rather than the notion of personal planning. With the concerns of interpretation mentioned in chapters 5 and 6, 46 per cent of teachers claimed to formally assess this competency and 56 per cent assessed it informally.

At key sites, 'planning and organising' was interpreted mainly in terms of planning events. A TAFE drama teacher described a large-scale production:

If you're paying \$10,000 per week to hire a theatre, you want to maximise your time in there. Any big event you organise in there, like the corporate event [a large-scale fundraiser at a prominent city hotel with dinner and performances happening concurrently]-something like that requires planning down to the last second.

³⁹Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 29

A secondary music teacher also spoke in fairly large-scale terms:

They would have a check list: did you do this? Did you organise the programs? Did you have performers ready two items before they were to go on? Were they tuned up and ready to go when the MC announced? Did the MC have his notes? Were they adequate? ... How do we know we've met all the criteria? We have performance indicators, the same as they do in the workplace, and I use that approach.

This is looking at large-scale planning, but there are elements in keeping with the Mayer Report suggestions, such as evaluating whether goals are being met.

Given the emphasis on large-scale productions, it is not surprising that drama, dance and music educators had more to say about this key competency than visual arts teachers. Visual arts teachers could have mentioned work for school productions - such as planning the making of scenery to fit in with production schedules, but they did not.

One secondary music teacher looked at the time management/personal organisation aspect of this key competency and explicitly taught his students how to organise their time:

I actually give them a little publication - a work diary. I would take them to that diary and show them what was happening with their planning.... Some kids just feel overloaded with work. Then I show them how to plan their time and dish it out commensurate with their other responsibilities...I try to get an overall look at the student's life and their use of time.

One media teacher was a little sceptical about skills being transferable. This was from experiences where he had wanted students to use knowledge from, say, Social Education and they had not seen it as appropriate to a media context. He did feel that planning skills were more likely to be transferable than knowledge such as when the Second World War started:

Sometimes kids don't make the transfer themselves. They see it as a very subject specific thing. Like, what are you doing in Social Ed? Did you do History? Now - tell me when the Second World War started! They don't carry it. But generic skills - I think once they get the sense of an organisational thing and you have a set project, and you set your time lines, your structure - I imagine that they can transfer that very quickly and effectively to other areas.

WHAT SOME ARTS EDUCATORS ARE DOING

Below are examples of 'planning and organising activities' from educators in each of the five arts.

Dance

They have to plan their own dances. I often give them a piece of music and they have to plan and organise, say, eight counts of dance to that music.

Drama

The design, presentation, production, pre-production, production week performance cycle runs to fairly set plans with a set of expectations associated with each of the stages of those plans.

Media

Production is obviously a part of a chain of events. You have to make sure that your part is done in time for the next person, and that they are briefed in the right way to be able to use the piece of information or program. It would be primary that [new recruits to the media industry] would have to have this planning and organising ability.

Music

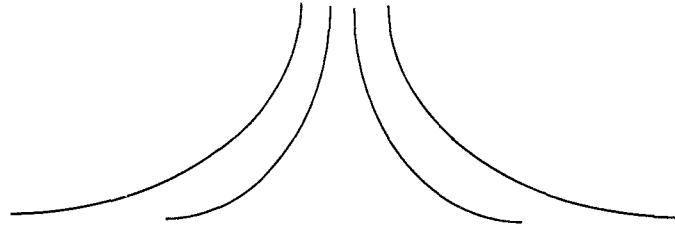
Well, obviously in music there's a lot of performances and the organisation of activities in the senior part of the school is especially important because the students do that mostly themselves. So Year 12 classes are aligned to producing a program of specific variety of musical style for the [examination authority] assessors and they have to cover those styles and they have to do that within a certain time and each player has to have done something of a certain complexity and shown their abilities in that area. So that requires quite an amount of organisation and planning skill.

Visual arts

I'd say that the education team here would hit a lot of those dot points [summary of the 'planning and organising' key competency]. [At this art gallery] we have four and five - year- old kids through to retired people. A lot of our time has been planning and organising activities for different audiences.

MAIN IMPRESSIONS

Drama and music teachers seem to interpret this key competency particularly in terms of planning large scale activities, for which there is a lot of scope in their subject areas. Educators need to be aware that this key competency is intended to include areas such as personal planning, goal setting and time management which were acknowledged in questionnaire responses as important generic skills for young people to acquire.



CHAPTER

8

WORKING WITH OTHERS AND IN TEAMS

THE MAYER REPORT DEFINITION

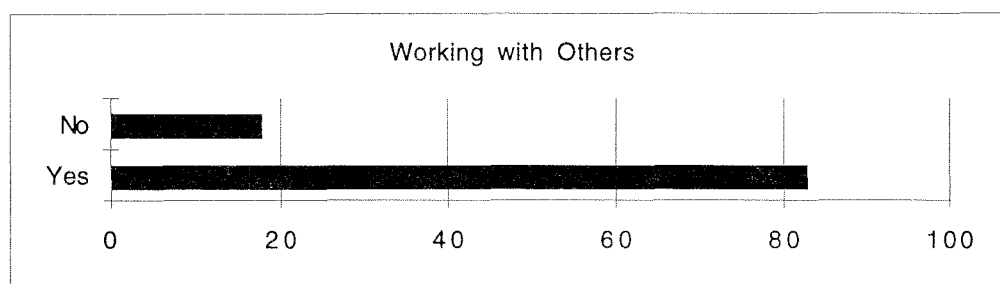
The definition of 'working with others and in teams' given in the Mayer Report has an economic orientation. The three main aspects include working with another individual, working in groups and working with clients or customers. Examples include selling a product to someone who specifies what they want or a complex collaborative process where there is awareness of different roles and perspectives derived, perhaps, from gender or cultural differences or working with others towards agreed time frames which could include monitoring tasks and negotiating objectives.⁴⁰

Understandably, given the nature of their specialisations, arts educators seem to be more interested in the detail of interpersonal and intrapersonal skills development. 'Working with others and in teams' seems to be a particularly important generic competency for arts educators. When asked in the questionnaire to give the most important generic skills in their classes, 'working with others' was the one most frequently given. This was an instance of spontaneous response, where teachers were not confined to the Mayer key competencies. In this 'working with others' category were included competencies such as teamwork, ability to work co-operatively, conflict resolution, sense of community, supporting others, learning from peers and working with a range of other students.

THE RESPONSE FROM SCHOOLS

Figure 4 shows that a very high proportion of schools reported that they had either formally or informally integrated the Working in teams and with others key competency into their arts curriculum.

Figure 4: Schools response to fourth key competency



WHAT ARTS EDUCATORS SAID

In the questionnaire, 83 per cent of teachers responding claimed to have integrated this key competency into their arts classes and 91 per cent felt comfortable with the idea of explicitly teaching the key competency. Mindful of the uncertain interpretation here previously mentioned, 45 per cent 'formally' assessed and 51 per cent 'informally' assessed this key competency - a pattern similar to the others already discussed. We had anticipated that teachers might have felt anxious about working in this more 'affective' area. But a general feeling conveyed was that arts teachers felt quite at home promoting this kind of learning although it was a little less apparent in the visual arts - as one tertiary visual arts teacher pointed out: 'we tend to be very much loners - I'm working for me'.

⁴⁰ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 30

There was still a range of ways that this competency was interpreted at key sites. It was interesting that while drama and music teachers tended to see it as involving collaborative work, a dance teacher responded with an example of 'taking direction' in an almost regimented way:

Most dancers if they work in any area are going to have to take direction. Usually they're going to have to work in a minimum of two people and most of the time for what we have as a corps de ballet with the [ballet company] they have to work as a team, meaning that their arms have to be the same, their eyes, the angles of their heads, the foot work. Everything has to be the same - almost regimented in some ways yet still displaying an individuality. So working in teams is probably one of the most important things for a dancer.

Although it was not mentioned, this same kind of regimentation may occur when people sing in a choir or play as a rank and file violinist in an orchestra. It is difficult to know, however, whether these similarities would suggest that this kind of skill is generic. It may well be bound closely to the techniques of the art form. It is certainly a different kind of team membership to the approach described by this media teacher where interpersonal/intrapersonal issues are central:

When they're working in groups, [I] ask the question: Is it working? What are the problems being faced in making it work as a group? Often what happens is that particular personal problems come out because they're the blocks in fact to the group being able to move forward...And to face the notion that there's a problem in the group, the first question you've got to ask is whether it's yourself. It's a difficult one because there are many, many times that they've had it reinforced that the problem always lies outside themselves.

A group situation sometimes involves a combination of arts specific and generic skills, as articulated by this music teacher:

Putting an ensemble together, learning each part individually and being responsible for learning their own parts, then seeing how it fits in the overall context of the performance group and taking the responsibility for taking it through to the performance stage...that takes a lot of co-operation and responsibility.. So they're specifically related to music within the context of, this is the target, this is the project we're working on, but the competencies are general.

Thus musical skills were needed to perform 'the target', but successful performance relied on generic skills of 'working with others' such as setting goals and working towards their achievement (learning parts and attending rehearsals as a group member). Of course some of these generic skills would be classified as 'planning and organising', because the responsibility implies setting deadlines and keeping within a framework - competencies discussed in the previous chapter.

A notion of working in a team was very prevalent at the media industry key site visited and 'working with others and in teams' was seen as a vital key competency for trainees in this area:

With trainees you would be monitoring their performance, and if they weren't very good at 'working with others and in teams', then you would think that they weren't a very satisfactory trainee. The manager would talk to them and it's possible they'd be sent on a course, but more likely [the advice] would just be one-to-one...colleagues would probably tell the person that their performance was not acceptable. It would be mainly peer group behaviour and counselling.

The Mayer Report mentions that an aspect of this key competency may be to relate to 'awareness of different roles and perspectives' which may derive from 'social, gender or cultural differences'.⁴¹ An example of this arose when we discussed this key competency at an industrial site which employed and trained Aboriginal people:

I could think of scenarios where there could be difficulties 'working with others and in teams', like making young women and older men work together. That could be a problem. I've heard of it happening in our retail shop when traditional people come in from the bush. It's usually the shop manager who would negotiate purchasing art works. We've decided that there has to be a male and female fully trained to negotiate things like that so that they can talk to a man from the bush or the woman can talk to a woman from the bush. We ran into trouble when the retail shop manager was male and he really couldn't talk to the women. They virtually wouldn't say anything and would turn their faces away. So they [the management] have had to approach that slightly differently.

On the whole, arts teachers seemed quite comfortable with teaching and assessing this key competency, for example, a drama teacher said:

We come up with comments on their end of term reports together...We talk, we have interviews - one-to-one. And the kids get the opportunity to talk to me about other students in the group as well and how they feel they're working with other students and I guess you get a fairly clear picture of who's putting in and who's being co-operative. It's interesting that the kids that are high fliers in this [subject area] aren't always the ones that are good team members, because they want to go off and do their own thing - work solo, fly a little bit higher than the rest of the group. That can create a few problems.

WHAT SOME ARTS EDUCATORS ARE DOING

The following are examples of 'working with others and in teams' from the five arts subject areas.

Dance

We spend a lot of time in getting students to work together either choreographing something themselves or creating a dance themselves and experiencing from the other side of the fence how do you get ten people to work as a team to support each other in those ways....I guess that's the basic side of it. It then goes further in when a ballet is created - then teamwork is particularly necessary because very often you're relying on the other person to be there at a time when you need them.

⁴¹ *Op cit* page 30

Drama

We say to theatre designers who say, I don't want to do it that way because I want my creative urges to be fulfilled - we say, you're in the wrong business because this is all about collaboration. Live performance is by its nature collaborative. If people have artistic ambitions that are about individual creativity, they are probably in the wrong business [working in the theatre]. You cannot do that in isolation without consultation with other people. It's part of the culture of [this] institution - and it extends right through to the cleaners and the receptionists and the store-people and all of the support staff who assist the process...We would perhaps ask more of a receptionist, more of a cleaner, more of a store-person because of the team approach. They will be expected to be aware of the rhythms of what we're doing...And they love it. It's amazing how people who have been used to working in fairly rigid working environments love being able to be a part of that creative process.

Media

'Working with others and in teams' is probably the most essential criterion in the newspaper and magazine course, because what we're doing, we're actually producing newspapers and magazines and you work on that sort of thing so you always have a product that you're working on. The team work is the essential part of the whole operation, so everybody is expected to be fairly multi-skilled and to fit in at any particular time with the needs of the task.... At the beginning you'll get kids who'll stay away on crucial days or forget to bring their article in...but as they see how the whole product depends on them contributing and meeting deadlines, then they pull their socks up a bit and by the end of the year, they're pretty good at all that. By the end of the year they will give over and above what's required in the course, so they get a sense of ownership and they'll give more than I ask them.

Music

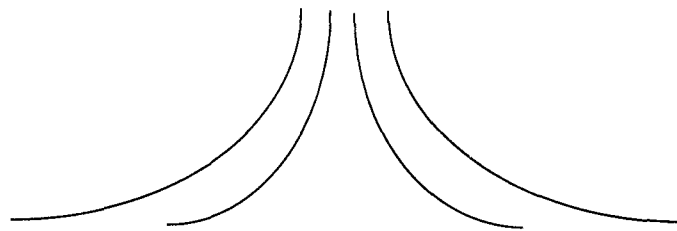
We have a situation where the kids rehearse for two periods a week. I facilitate that, but it's their rehearsal. They have to be able to work together, to communicate their ideas and resolve conflict.... I pull the strings, it's my job to make sure they don't hit each other over the head with their guitars. But it's not up to me to actually work out [any] conflict.

Visual arts

We don't do any formal team work, but at the same time, unless they get on with one another in the classroom - because we're in the same group all the time - [things will be pretty unworkable]...We have an exhibition at the end of the year where everyone has to join in and help put it on. They're not necessarily formal things, but a student who's able to co-operate or work in a group gets rewards from everybody for being able to do so.

MAIN IMPRESSIONS

This key competency seems to be one with which arts educators are particularly comfortable and which addresses skills that are prevalent in arts classes with the exception, perhaps, of visual arts. It is interesting to note, however, that no-one referred to the arts coming together in the multi-arts or multi-media context. Nonetheless, varying interpretations of this key competency were given which ranged from a focus on regimentation to one of collaboration. An overall impression was that arts educators feel very much at home with this key competency.



CHAPTER

9

USING MATHEMATICAL IDEAS AND TECHNIQUES

Many arts educators did not view this as a generic key competency because, for them, 'mathematical' suggests a subject basis, more so than the other key competencies. Communication might have been seen as having a bias towards English, but as we have seen, in the Mayer definition, the modes of communication are diverse. As one tertiary visual arts educator said:

Why is mathematical ideas and techniques highlighted in the way it is? Why not simply the ideas and techniques associated with literacy and other such areas? Why not scientific ideas and techniques? Why suddenly mathematics? I'm certainly not saying that up to Year 12 level 'using mathematical ideas and techniques' is not important, but I think there are other ideas and techniques associated with other disciplines that are equally important.

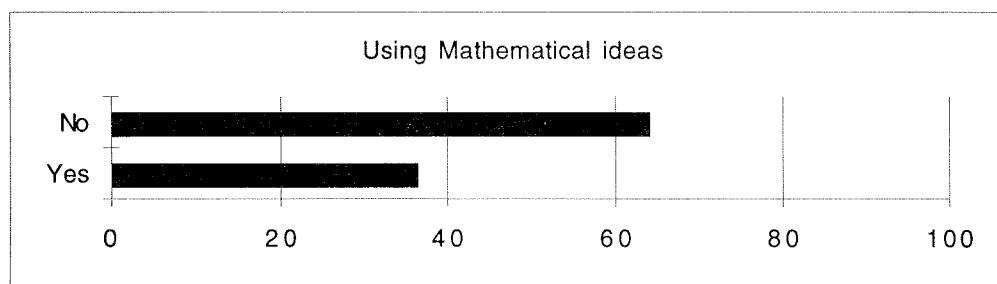
THE MAYER REPORT DEFINITION

The Mayer Report does not answer this challenge. It says that this key competency focuses on number and space and techniques such as estimation and approximation and selection of the most appropriate techniques. A wide range of applications is described from identifying factors to be taken into account in designing the shape, durability and cost of a container, to checking a restaurant bill⁴². The main ideas of this key competency are summed up as clarification of the purposes and objectives of an activity, selection of mathematical ideas and techniques, application of procedures and techniques, judgement of level of precision and accuracy needed and interpretation and evaluation of solutions.⁴³

THE RESPONSE FROM SCHOOLS

Figure 4 shows that, unlike all the other key competencies, only a small proportion of schools reported that they had either formally or informally integrated the Using mathematical ideas and techniques key competency into their arts curriculum.

Figure 4: Schools response to fifth key competency



WHAT ARTS TEACHERS SAID

Arts teachers were, on the whole, uncomfortable with this key competency. This was shown through questionnaire responses in several instances. When asked about the most important generic skills in their arts class, no one mentioned a mathematical competency. When asked what is over emphasised in the key competencies, 50 per cent of teachers responding spontaneously mentioned mathematics. This stood out

⁴² Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 33

⁴³ Ibid, page 34

clearly from the other areas mentioned which were each given by under 10 per cent of people responding. Comments suggested that the key competency was not really generic or that there may have been power politics behind its inclusion: 'It reinforces the myth that this is the most important subject in the curriculum'. Responses to the question concerning the integration of the key competency into the curriculum also reflected this unease. Only 35 per cent of teachers claimed to have integrated this competency into their arts classes, whereas the percentages for other key competencies were much higher, ranging from 93 per cent to 79 per cent. Only 49 per cent felt comfortable with the idea of teaching this key competency in their arts classes - responses to this question for other key competencies ranged from 97 per cent to 83 per cent. Only 17 per cent of teachers responding claimed to assess this key competency 'formally', and 26 per cent claimed to assess it 'informally'. Overall these responses display unease and uncertainty about working with this key competency and in some cases uncertainty as to whether it can be a generic competency.

On key site visits, a couple of teachers who had been unfamiliar with the key competencies actually laughed when they saw 'using mathematical ideas and techniques' on the list of competencies. One music teacher said she felt 'frightened off' by it. Some educators spoke as though they felt they should be using this key competency - possibly reflecting an attitude that the key competencies are imposed on the curriculum, discussed in an earlier chapter. For example:

The mathematical ideas - well - actually I haven't worked a lot in the art room with mathematical ideas... but we're getting there.

and

The only one that we usually have trouble with is 'using mathematical ideas and techniques'.... I can show you students for whom 'using mathematical ideas and techniques' is akin to putting them through torture!

Some teachers seemed to become more aware of their use of mathematics as they talked about the key competency:

I was looking at [student's name] painting the other day where to me, the way in which she has used the grid - she was showing me other drawing that deformed the grid in a systematic way. She's working with space and volume and there was a whole range of mathematical concepts embedded in it.

And

Not being very mathematical myself, I sort of don't think about it. In fact I'm surprised to hear myself say all those things. It's not one we actually talk about, it's very much a means to an end.

There were, however, some statements that strongly endorsed the idea of teaching some mathematical skills through an arts program. It is not always clear, however, that these approaches to mathematics are necessarily generic. They may be a use of mathematics closely aligned to the techniques of the Art form. For example, one secondary school visual arts teacher said:

You won't survive without it. We do some fairly complex geometry, because we do construction - designing paper sculptures. There's basic division and subdivision for mounting work and all those sorts of things.

WHAT SOME ARTS EDUCATORS ARE DOING

Below are some examples given by teachers of specified arts areas.

Dance

If you take mathematical techniques into its wider context of space and counting, there would be an expectation of dancers for example, that they could perform a work unaccompanied, all counting in their heads together, in unison.

Drama

The technical production and design students need maths to work to scale. Stage managers need it for mark-ups. Lighting and sound people need it for working out their patching systems and for the physics of doing the lighting and sound designs.

Media

It's probably one [of the key competencies] that we use least, but we do use it. We have to in layout, we have to be able to put things in columns, we have to work out what our margins are and how much and how effective it is to have two and three columns and what size font and what area of the page is going to be taken up with advertising.

Music

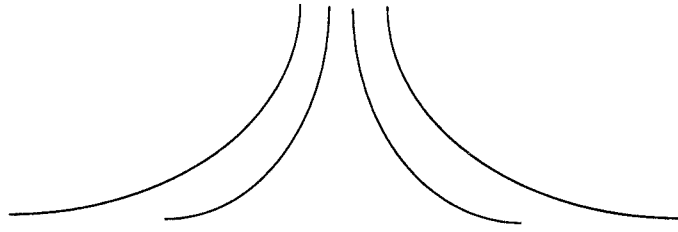
You do need those skills when you get into the more complex side of music technology. [Later in the course] we will be dealing with modules that cover live sound and studio sound recording techniques. We will be dealing with the principles of acoustics and that involves understanding how sound is made, how it travels and how it is heard.

Visual arts

When I teach perspective, I mean mathematical perspective worked out by Brunelleschi in the Renaissance - it was a way of indicating spatial relationships on a flat surface, and it's all to do with mathematics. If I introduce it as mathematical perspective, I lose half of [the students] straight away because mathematics has squashed these kids or they feel they can't get a handle on it and they've already given up. But if I say, we're going to talk about how to indicate distance and depth on a flat piece of paper and I hold the paper up and say, can you see the depth there? - Right, we're going to do a street scene here, that's going to disappear into the distance, the kids are immediately involved and engaged.

MAIN IMPRESSIONS

Of all the key competencies, this one is the most problematic in arts programs. Some educators feel that it is foreign to their area and some of those who use it seem to do so in a way that may be bound by the subject context. In most cases the uses described do not seem to be aligned to the Mayer definition. One exception is the media example quoted above.



CHAPTER

10

SOLVING PROBLEMS

This key competency seems to be closely aligned to the approaches of arts educators. In some respects it is attitudinal, although the Mayer Report does not use that term in its description. Some artists describe their approach to creativity in terms of problem solving. For example, a visual artist may ask: how will I convey this atmosphere through my medium?

THE MAYER REPORT DEFINITION

The kinds of problem solving tasks outlined in the Mayer Report relate to the work place - for example, being interested in getting a photocopier to function properly⁴⁴. This seems of a very different order to much problem solving in the arts. One tertiary music educator interviewed expressed scepticism in this regard:

Given that the solving of problems takes place in learning a musical instrument, in learning how to paint, it does not follow from this that there is a general skill called 'problem solving' which is independent of the contexts outlined above. Such a general skill as problem solving cannot be assumed to exist.

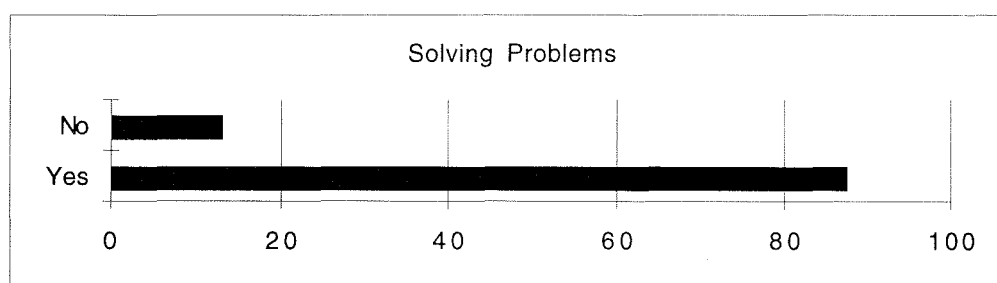
The Mayer Report stresses that this key competency is not just about the capacity to respond to problems, it addresses the nature of solving problems as a process. Emphasising the process may alleviate some of the objections expressed above but it does not resolve the issue of whether working through these processes in different contexts can help to form generic skills. Drama, in particular, seemed to be an area where the generic nature of problem solving skills was endorsed. On a key site visit, a TAFE drama teacher said:

These students are very good at maximising their opportunities. In life you can see things as something put in your way, or as something to tackle. And these students are very brave about tackling things, and that's part of problem solving. We teach something called Survival Skills. That's all about writing grant applications and lobbying people, working with other agencies so that you can generate your own work, creating your own small business. That sort of thing.

THE RESPONSE FROM SCHOOLS

Figure 6 shows that a very high proportion of schools reported that they had either formally or informally integrated the Solving problems key competency into their arts curriculum.

Figure 6: Schools response to sixth key competency



⁴⁴ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 36

WHAT ARTS EDUCATORS SAID

In questionnaire responses, teachers indicated that they were fairly at ease with the notion of teaching 'solving problems' in their arts classes. For example 88 per cent of those who responded claimed to have integrated 'solving problems' into their classes and 90 per cent felt comfortable with the idea of teaching it. Forty-five per cent of teachers responding claimed to assess 'solving problems' 'formally' and 54 per cent assessed it 'informally'. Compared with 'using mathematical ideas and techniques', discussed in the previous chapter, these data seem to show a concurrence that this is something that goes on in arts classes. Problem solving skills were an important consideration in selecting training recruits at a media industry site we visited:

We actually used the team question as a problem solving one [in the selection interview]. We said, we need from you an example of a team situation that went wrong and your role in that problem to bring about a satisfactory solution. If they say, oh no, everything was all right - we never had a problem, they get marked down.

Another media teacher interviewed at a key site expressed an approach to 'solving problems' which may address the need mentioned in an earlier chapter, for a key competency that focuses on flexibility and creativity - so important for the arts:

This is what I'm wanting to say and these are the materials I'm planning to use. How do I best get that image or that sound together? That's real conceptual problem solving. It's not just, I have this task, how do I organise it? It's, I have an idea - now - how do I realise it? There's a whole range of responses a student can have to that within the arts curriculum.

At key sites we saw clear instances where the process of 'solving problems' was taught, for example by this drama teacher who saw the skills she was teaching as generic, in that they applied to 'life skills':

There is problem solving in drama in terms of setting up situations, dramatic situations, where [students] would actually role play the situation and come to an end. Now this is done through a variety of ways, like you may problem solve a situation, stop the drama at a certain point, ask for suggestions as to how this could be resolved, play out some of these suggestions to see how they actually work. I suppose just in terms of human relationships you're working through a lot of relationship problems.... But I certainly think it gives them incredibly good life skills, to work through situations that they [might] find themselves in.

Another approach was able to be transferred from a music context to a history context:

I was going through a plan for [a piece of Year 12 work] the other day and I suggested that [the student] might look at the problem in a global sort of perspective and then move down into the period and then to the composer and then down to the piece of music and down to the particular phrase - coming in from a big thing to a little thing. And [the student] said, now that's a good idea I could try that with [an assignment for history].

There were instances, however, where it seemed less likely that problem solving skills would be generic, for example in this music classroom:

I could give them the first four bars of a melodic line that I'd created and get them to extend that. I'm working with some at the moment, using technology where they've taken a published song and using computer software they're keying in all the chord sequences.

WHAT ARTS EDUCATORS ARE DOING

Below are some examples of 'solving problems' given in the five arts areas.

Dance

The Year 12s have criteria in their dances that they have to meet. So a problem might be that they haven't addressed the use of space properly. So they have to work on trying to use space appropriately.

Drama

Say you've got a set that doesn't quite fit, or an actor finds that they can't actually do what they were planning to do on that set, then that involves a collaborative problem solving exercise, with compromise on both sides to make that workable.

Media

How, if you're a journalist, you approach people you're interviewing. How you get information you want without treading on people's feelings ... So various ethical problems come up with just the general practice of journalism.

Music

Working together in an ensemble, in a performance - it's not working. We're not together. What's wrong?

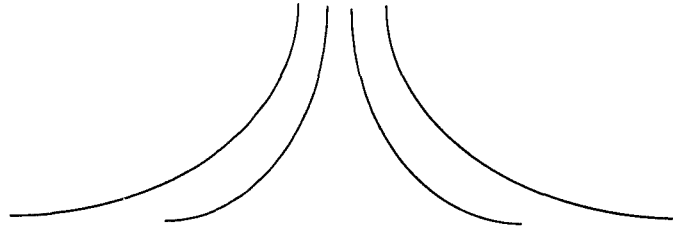
Visual arts

I'll often present students with a problem such as the one of binocular vision. If I have two eyes in two different places looking at the same object then the two will give an image that conflicts. How can the students solve that problem if they want to represent what they can see in their drawing?

MAIN IMPRESSIONS

Most of the 'solving problems' examples encountered on key site visits seemed to involve conceptualising processes which would seem to be generic. There was very little of what might be described as 'lower order' solving of problems, such as how to get a photocopier to work. Even so, in some cases these conceptual approaches

may be subject specific. In the music example quoted above, there may be some 'generic' aspects of asking 'What's wrong?', but the process would mainly involve issues that are technical and specific to music. An important consideration is whether this key competency can be seen as addressing validly the need for a generic competency in creative areas.



CHAPTER

11

USING TECHNOLOGY

THE MAYER REPORT DEFINITION

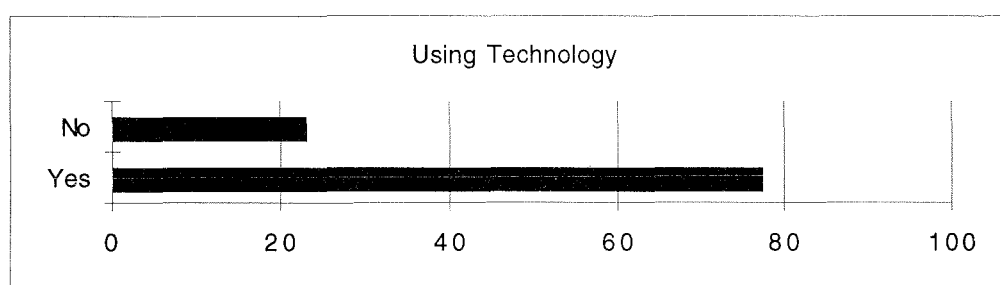
This key competency is based on the premise that 'successful participation in work and society depends, at least in part, on the capacities involved in managing technological systems, processes and equipment'⁴⁵.

The Mayer Report acknowledges that the definition of technology can be so broad as to become 'lost', and adopts a definition that embraces technology as being equipment and materials, and a pattern of operation forming a process, or a system of principles and ideas. The Report explains that 'using technology' extends 'from manipulative and sensory skills required to operate basic hand tools through to scientific and technological principles required to explore, to innovate and to adapt'⁴⁶. One of the difficulties of using this definition as we look at applications in the arts is that it leads arts educators to outline all of the different kinds of technology that their students use, thus focusing on skills that are not generic. We can express some doubt about whether applications in some of the other key competencies described are generic or subject bound. It is blatantly clear, however, that outlining the skills required to 'use technology' by playing a trombone compared to using a paint brush in the visual arts or 'D Cart' equipment in media is not useful in this discussion. It seems far more useful to do as McCurry has done and see 'using technology' as an attitudinal approach to technology, encouraging students to make use of whatever technology is available.⁴⁷ To some extent this approach is addressed in the Mayer Report when it refers to 'the capacity to have a feel for the application of technology'⁴⁸. Many teachers feel that they don't have time to read the detail of the Mayer Report, and they see the summary description as stressing application. This led to a situation where in many of our discussions it seemed that arts educators felt they should outline all of the different kinds of technology in their subject area and others saw technology mainly as computers. This key competency could be far more useful if refocussed in the way suggested.

THE RESPONSE FROM SCHOOLS

Figure 7 shows that a high proportion of schools reported that they had either formally or informally integrated the 'using technology' key competency into their arts curriculum.

Figure 7: Schools response to seventh key competency



⁴⁵ Mayer, E (chair), 1992, *Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training*, Australian Government Publishing Service, Canberra, page 39

⁴⁶ *Ibid*

⁴⁷ McCurry, D., 1996 *Approaches to Assessing the Key Competencies, A Paper reviewing possibilities for the assessment of the key competencies*, Commissioned by the Department of Employment, Education and Training, ACER, Camberwell

⁴⁸ Mayer, *op cit*, page 39

WHAT ARTS EDUCATORS SAID

Looking at the questionnaire responses we need to be guarded, because we are not certain of exactly what teachers mean in their responses to 'using technology'. Nevertheless, 79 percent of teachers who responded said that they had integrated 'using technology' into their arts classes and 83 per cent felt comfortable about teaching it. Forty-eight per cent claimed to 'formally' assess 'using technology' and 50 per cent assessed it 'informally'.

At key sites we saw some exciting and sophisticated use of technology, especially in the media area. At the industrial site visited there were no longer tapes used in the radio newsroom - everything was done by computer, thus enabling journalists to record and edit their own news items. People at this site believed that these kinds of computer skills are generic in that they are transferable. As one broadcast journalist said: 'The next time you learn a new program or something, it's that much easier.' At a university site specialising in media one lecturer drew attention to the fact that in Germany, the term 'VJ' has been coined - video journalist. This person is reporter, camera operator and sound operator: a reporting crew of one. The term 'multiskilling' was used a great deal in these circles.

Some people working in the media area seem to have become so familiar with new forms of technology that skills involving the manipulation of text, sound and image were seen as generic - it was thought that they needed to be a part of people's general education. We felt that this was overextending the interpretation of 'generic', but clearly these people are living in a media world. They are so accustomed to certain technology that these skills are assumed.

In relation to manipulation of images, there was some discussion at a visual arts industry site of ethical considerations in this area. Quite apart from the usual copyright considerations, we need to be sensitive to particular needs of Aboriginal people. The following is from a discussion about the use of the internet:

Certainly with traditional [Aboriginal] people, people within that community have certain rights as to who is allowed to use certain designs and who is allowed to paint what. There are certain problems if other people pick up designs that they are not allowed to use.

If 'using technology' works best generically as an attitudinal, rather than a more cognitive skill, it would seem appropriate to include ethical considerations about the use of technology to address issues such as this.

At one key site it was pointed out that technology is driving the development of the arts, as one university lecturer put it:

We're in the process of training people for jobs that don't even exist yet... So we're in the position of training people who are very highly skilled in terms of modern communication technology, but also, we're not training people to work in the theatre, we're training them to work, in what you might almost call a 'comedia' sort of sense - it's drama that works, it's even management work, it's site specific drama, it's festival work - but then highly technologically based. We see that as a new push in terms of where art is going.

This 'new push' was encouraging people to become involved in the arts who, a few years ago, may have been quite uninterested. A secondary school visual arts teacher commented:

We have students coming into the subject who would perhaps never have considered it, you know, thinking of it as a paint and free expression type of subject as it's been perceived in the past.

There was no mention of people falling away from the arts because of the intervention of technology. But at one school there was an interesting discussion about gender in terms of attitude to technology. It was a girls' school, and the teacher was keen to develop a positive attitude to technology in her students:

[The girls were] very, very skilled in using all the equipment. Very, very confident with it. I had a boy from one of the schools up the road who came down for the Year 12 year to join [this] class. The moment he stepped in the room they all went to pieces and all went silly, and all stood back. I pulled him aside and said, look, I know this is not your problem, you're obviously very skilled with all this stuff as well - but just be aware that they know it all as well and that they should be encouraged to do it. It was terrific. He took all that on board. He was pleased that I had mentioned it to him and it sorted itself out after a couple of weeks. But they're very inclined to do that.

This seems to be a good example of treating the key competency 'using technology' as more attitudinal than cognitive. The important element is not what technology can be used, or how well it is used, but having a positive attitude to using it. This teacher seemed to be encouraging her girls to have a positive attitude.

WHAT ARTS EDUCATORS ARE DOING

Below are examples of 'using technology' given in each of the five arts areas. They reflect an approach mentioned earlier, which was prevalent, where arts teachers saw an opportunity to outline the different kinds of technology they use rather than to see 'using technology' as a generic competency.

Dance

They have to be aware of light and sound, learn to use radio microphones, learn to work in front of a camera. We want to do more of that - for example 'video dance', where you would be recording as you dance. We want to explore that kind of thing more. They will be required in their lives to be able to embrace new technology in multimedia applications as performers.

Drama

Here [the students] are encouraged to do everything. For all our production work...When it comes to performance work, we actually prefer to sit outside and let the students run the whole thing, which I think is fantastic. Computing - all our lighting boards are computer lighting boards. Sound equipment - they're encouraged to do their sound mixing. We have a couple of studios set up for them to do that. That's for performance work.

Media

We've just compiled a list of sites on the internet that would be helpful for [the students] to get information: in the media area, editing, video, radio production, film - there's a huge amount of stuff there. But the use of multimedia too is increasing - we're teaching units in that in Year 11 media... Generally, we just try to introduce new stuff all the time.

Music

I'm working with ... 'using technology' at the moment, where they've taken a published song and using computer software they're keying in all the chord sequences, allowing the software to generate a stylistic arrangement on the chord sequence. Then they have to select or reject whatever tracks they like or dislike. They then import that into another piece of software, a sequence of software, then add their own filler - melody, whatever and then take that further through to a notation program where they publish the score.

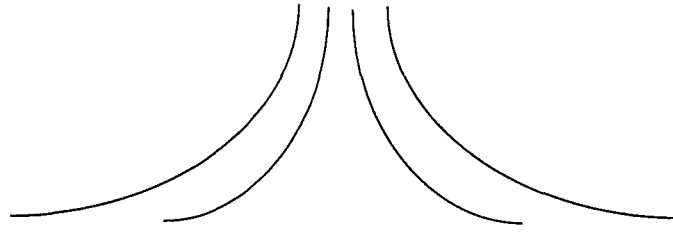
Visual arts

The use of technology within our department is now quite important. Students taking photos of their work with a digital camera, scanning it into a computer, is increasingly an important part of our subject...I think technology is playing an increasing role for many students.

MAIN IMPRESSIONS

This key competency seems to be most useful if it is seen to have an 'attitudinal' focus - encouraging a positive approach to technology. We found that some people, particularly in the media area, were so immersed in technology that they assumed that skills were generic when in fact they still had an exclusive media orientation. It is likely that some computer applications, such as using the internet, are generic. But if we look at students' approaches to technology - does the student seek out technology to help him/her solve problems? Is the student keen to learn new applications of technology?⁴⁹ - we will address the difficulty mentioned in the Mayer Report, of becoming 'lost' in a very broad area.

⁴⁹McCurry *op cit*



CHAPTER

12

CULTURAL UNDERSTANDINGS

This key competency is not included in the list of key competencies given in the Mayer Report published in 1992, although it is considered and discussed. Two main reasons for this are a belief that 'cultural understandings' is the basis of all key competencies and a concern that not all young people have access to resources that will enable them to become competent in this area.⁵⁰ There has been considerable debate about whether 'cultural understandings' should be recognised as a key competency and, if so, how it should be defined.

We included 'cultural understandings' in our investigation of key competencies because we believed it to be of special relevance to arts educators. A further discussion of the importance of this area for the arts and of the debate around the key competency appears in chapters 13 and 14.

Because there is not one accepted definition of 'cultural understandings' currently available, we presented, in the questionnaire to teachers, four different definitions and asked them to nominate whichever they preferred. We also gave these teachers the option of outlining their own preferred definition or of indicating that they thought it inappropriate to include 'cultural understandings' in the key competencies.

The four approaches to 'cultural understandings' that we presented in the questionnaire to teachers were:

- cross-cultural understandings: having a strong foundation of knowledge of society and culture;
- making informed judgements about and responding appropriately to the aesthetic quality of natural and man-made environments
- valuing cultural and linguistic diversity as an inherent feature of Australian society
- understanding people through the things they make, do and say.

As will be seen in the discussion later on, the debate has progressed since these definitions were devised, but at the time of developing the questionnaire they seemed to sum up the prevailing views.

THE RESPONSE FROM SCHOOLS

Responses were spread fairly evenly over the four definitions of 'cultural understandings', described above, with the most popular being 'having a strong foundation of knowledge of society and culture' and 'understanding people through the things they make, do and say'. The most interesting finding here is that fewer than 3 per cent of responses suggest that no definition is appropriate.

WHAT ARTS EDUCATORS SAID

Both questionnaire responses and interviews at key sites indicated that there is a clear desire for a key competency covering the sorts of elements outlined in working definitions of this key competency. Nearly all teachers responding to the questionnaire believed it feasible to integrate 'cultural understandings' into their arts curriculum - indeed most claimed to have already integrated it into the curriculum.

⁵⁰ Mayer, E. (chair) *Report of the Committee to Advise the Australian Education Council and Ministers for Vocational Education, Employment and Training, September 1992, Australian Education Council, Carlton South, page 11*

In terms of assessment, over half of the teachers responding felt ‘comfortable’ with assessing ‘cultural understandings’. This response is similar to responses asking about assessing the other key competencies.

There was some endorsement, borne out at key site interviews, of the idea that ‘cultural understandings’ actually transcends or is embedded in the other key competencies. This was on occasion expressed in terms of ethics and values - that the key competencies are valueless if students leave school without possession of a social conscience, or that the pursuit of ‘cultural understandings’ is in itself a rationale for pursuing the skills and processes of the key competencies. For example, one media educator argued: ‘everything has a cultural base to it - you can’t not have it - it’s embedded in our language, in the way we view things’. Others, whilst not expressing a view that ‘cultural understandings’ transcends all of the other key competencies, considered that it was embedded, in particular, in the competencies of ‘communicating ideas and information’ and ‘working with others and in teams’.

At key sites we found a diversity of definition and emphasis in interpretations of ‘cultural understandings’. We observed a tendency for music and dance educators to consider the cultural origins of their own practice - the effect of interventions on technique in particular. For example, references were made to Turkish drumming, Thai dance and Italian opera. In contrast, the drama, media and visual arts educators tended to consider first the more generic effects of the key competency - such as a socio-historical approach:

unless they’re aware of what’s happening now and in the past, they don’t know where to go

or an ethical approach:

We have to ... realise and accept that other people have different value positions and try to be fair to all sections of the community we’re dealing with.

Definitions of ‘cultural understandings’ mentioned at key sites sometimes indicated a linking with skills associated with the practice of the art form. For example, a drama educator, coming from the perspective of ‘cultural empathy’ suggested that it is an important quality for an actor to possess and that students are drawn to the profession partly because they already have well-developed ‘cultural understandings’.

A notion of the aesthetic component of ‘cultural understandings’ was significant in many responses. For example:

Aesthetic awareness is important, whether it’s... a sense of cultural expression, [or] a sense of being able to rise above the mundane ... the lowest common denominator.

We found that these approaches tended to be at odds with the definitions of ‘cultural understandings’ being developed currently. This is discussed further in Part II.

WHAT SOME ARTS EDUCATORS ARE DOING

The following are examples of approaches to ‘cultural understandings’ from educators working in the five art forms.

Dance

We have an enormous collection of videos which looks at the technical training of how dancers in Thailand or even Oceanic Fiji learn their dances... Once [the students] start to be able to perform and understand - when they’re learning they think, “Oh, I don’t understand this at all. Why do I have to do it?”, then they gain an appreciation for it.

Drama

Trying to put yourself inside somebody else's mindset [is] absolutely fundamental to being an actor. Anybody who performs on stage necessarily has to make themselves vulnerable, and so that aspect of being able to see things from somebody else's point of view is really, really important.

Media

Our students do some units out of Social Science and Liberal Studies - in particular 'Imaging Australia' - Australian culture and how Australian culture is represented. I firmly believe that people need to have that, especially in areas where we are giving people tremendous technological skills, and being able to communicate with the world they have to know what they're communicating! Because they have the power to persuade and influence they have to know where the key decisions in our society are coming from.

Music

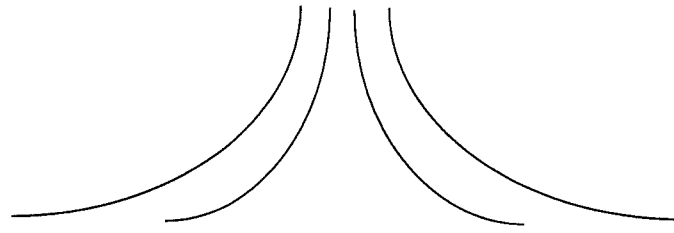
Now, as far as understanding other cultural areas, there have been times during ... the time that I've been here where somebody's come into the ... genre with a Turkish drumming background. Now, rock 'n roll is not the sort of thing they do. Turkish drummers are extremely busy drummers. They're doing millions of things at once which just doesn't serve Rock 'n Roll, it's quite difficult, and one of the problems we had was the students kept keeping to have to say to this drummer, don't play so busily, don't put so many, there's too many notes, ... it's basically in those sort of incidences where there's been a cultural clash where the ability to be able to see that, to understand it and then to nurture it through in the band...

Visual arts

I think one of the problems about the understanding of cultural heritage, for example, can be the tendency to look at culture meaning only different people as opposed to an understanding of our own culture. If you only see it as coming to terms with non indigenous people, the migrant, the rest of the world, then I think you have got a problem in what you mean by understanding. It seems that one of the equally important areas is our own cultural heritage and the way that we respect that, as well as seeing it in terms of the multi-cultural society. I guess that's one of the reasons why I'm quite surprised that ethics aren't there, because, if you're talking in terms of the multi-cultural issue, then it's an ethical issue rather than a cultural issue. I think that's the kind of issue that perhaps needs exploring at some point.

MAIN IMPRESSIONS

It is clear that arts educators are comfortable with using the terms culture/cultural and they feel few difficulties with adopting this key competency as a part of their programs. On the whole, the notion of 'cultural understandings' seemed to be embedded in the programs we observed - a natural pre-requisite or a corollary - rather than being taught as a discrete entity. A range of definitions of 'cultural understandings' seemed to be accepted but a prevalent view connected 'cultural understandings' with aesthetic awareness.



CHAPTER

13

ACQUIRING THE KEY COMPETENCIES THROUGH THE ARTS

The key competencies can be variously interpreted in a number of ways: the words of the Mayer descriptions can be interpreted literally and minimally. Alternatively, using the fleshed out explanations of each given in the full descriptors, more flexible and comprehensive interpretations can be made. Both ranges of interpretation will be examined for the relevance and effectiveness of arts education and training in their acquisition.

COLLECTING, ANALYSING AND ORGANISING IDEAS AND INFORMATION

Data in chapter 5 show all the arts offering a major contribution to the acquisition of this skill, minimally defined – through drama journals and rehearsal, making radio programs, researching background for musical performance or visual art work, learning and managing choreography.

The full descriptors of this competency include at least two implications of major importance for arts educators:

1. techniques required to analyse, interpret and organise the information

The word 'interpret' adds a major dimension – interpreting is a major skill demanded in all the arts – one of the major functions of an artist is interpreting either raw data to form art works, interpreting text to perform them (scores, scripts, choreography), and of course responding to art is entirely a process of interpreting ideas and information. Aesthetic judgement, by artist or audience, is a process of analysis, interpretation and synthesis which operates at a very high level of cognitive and effective complexity – the cognitive demands may be likened to the indicators of performance level three,⁵¹ but because of the affective component, the demands actually begin beyond there.

2. information can come in a variety of forms . . . can be rendered orally, graphically, pictorially

Where 'information' is thought of as propositional, the implications for drama, media and the functional applications of the visual arts are obvious. An even more important (implicit) consideration is that much information is non-propositional – sensory, emotional and kinaesthetic, perceived aurally, visually and through the body. These are the essential territory of music, dance, visual arts and drama.

Communicating ideas and information

At its most basic, this is what the arts do. They are all systems of expressing and communicating ideas. The very word 'media' is in fact short for 'media of communication'. Within the descriptor⁵² the words 'graphic' and 'oral' already also point to visual arts and drama as ways of communicating 'effectively'.

The full descriptors reiterate the notion of a variety of ways of getting messages across, which taken as above to include non-propositional information and ideas immediately incorporates music and dance. In any case, respondents in all art forms describe practices within their discipline that demand high levels of propositional expressive and communicative competence.

An element of crucial importance to 'getting ideas across' in any situation which is not made explicit within the descriptor is that of presentation. This is very strongly stressed by all art form educators in their responses. Professional training in the arts actually demands a level of presentational competence far above the performance levels described. Effective eye-contact,

⁵¹ n Mayer, E. (chair) *Report of the Committee to Advise the Australian Education Council and Ministers for Vocational Education, Employment and Training, September 1992, Australian Education Council, Carlton South, page 22*

⁵² *Ibid. page 24*

volume and articulacy, precision of gesture, self-confidence and audience rapport, well beyond what is needed in most workplace situations, are *sine qua non*s of all the performing arts. The even higher level demands made by the arts are exemplified and articulated in this report by the music teacher developing specific techniques for 'the self that is connected to the speaking voice . . . the soul and spirit of the person [to come] out through the singing', outlined in chapter 6.

Planning and organising activities

Taken literally, the multi-functional nature of any media, dance or dramatic production demands a very high level of organisational ability, time-management, prioritisation of tasks, negotiation of responsibilities, and self-management to complete the tasks. Drama training, for instance, demands not only rigorous training and attention to self-management, but very complex negotiation and compromise between often competing artistic demands that have to be attended to and prioritised. These and the organisational factors have to be taken into account in even the smallest and most modest dramatic production. Drama educators teach this. In fact, the need to acquire this competency is often at its most intense in the earlier years of performing arts training – in schools, for instance, where the limitations on budget, and the more general drama program, means that all students have to be closely involved in all these processes, learning to plan, prioritise and organise through necessity and experience. Copious examples like this can be found from respondents in music, dance and media. **Less obvious, and less explicitly addressed within this report, are the planning and organisational demands of the visual arts. There is in fact a presentational element here too – most visual arts students have to be involved in preparing and managing exhibitions, for instance, and particularly at school level, may be involved in other forms of artistic presentation, such as concerts, drama and dance productions, media design.**

In the full description, the factors taken into account in the levels of performance include:

the need to set priorities, sequence activities and budget time and effort the extent to which the task requires innovation ... differences in the number and complexity of developments which may arise requiring the exercise of judgement.⁵³

Equally applicable to all the arts are the needs expressed above, including innovation and exercise of complex judgements, in the making of any artwork. To make a ceramic pot, for instance, entails the planning and organising over quite an extended period that goes into design, acquisition of materials and tools, fashioning the work, glazing and firing. This may also demand complex and systematic experimentation, with design, with materials, with glazes.

Working with others and in teams

As other key competency projects, such as the Queensland Board of Secondary School Studies Project, have highlighted, this is already commonly perceived to be an area where the arts have a major contribution to make, in contrast to some areas where learning needs to be pursued individualistically. This is reinforced by the finding in this report that of all generic skills, 'working with others and in teams' is the one identified by arts educators themselves as the most important.

A drama production involves working with others where teams and groups work towards goals which are shared and understood. Lines of communication are open and healthy, and people can work together effectively and in harmony.

Embedded within this competency are two quite distinct manifestations of the concept of teamwork, that at first sight appear to have rather different application in different art forms, both with transferability to a range of other workplaces.

- collaboration, including the kind of negotiability and co-operative decision making which is needed in making a television program;

⁵³ *Ibid.* page 29

- disciplined synchronisation, as is necessary for effective membership of an orchestra.

Drama and media come easily to mind as demanding effective collaborative skills, with delicate management of interpersonal relationships, group dynamics, co-operative planning and decision-making. It may be said that these art forms have almost unrivalled capacity to assist students to acquire this manifestation of this key competency. However musicians, dancers and visual artists also all work with others in this capacity - in companies, in productions or on exhibitions. Conversely, music and dance both demand exceedingly high levels of disciplined acceptance of the artistic and ensemble needs, and this is a key part of the training in these art forms. As above, there are times when both drama and media demand equally rigid team discipline – on stage or in the studio, for instance, where individualism, selfishness or a lapse in the corporate concentration will let the whole company and event down as much as in an orchestra or dance troupe.

Multi-media and multi-arts form a growing area of arts practice which is making its presence felt throughout the arts, and even appearing in the training, in training units with titles like 'Centre for Innovation in the Arts'. Again by definition, this demands high levels of collaborative teamwork, which will need to be addressed in the present and future training and education programs in this area. Visual arts workers will be as involved as any others in this development.

Using mathematical Ideas and techniques

It is not surprising that of all the key competencies, this is demonstrated in this report to be the one which many arts teachers feel to be most alien, and with which they are least comfortable – and even hostile. The post-Industrial revolution dichotomy between 'the two cultures' of arts and sciences (including mathematics) is still embedded in all the structures of formal education at every level beyond Infant, and is also equally embedded in the conflicting epistemologies, pedagogies and systems of assumptions about the nature of knowledge that students receive. This means that many teachers and artists who have specialised in an arts discipline have neither devoted much of their schooling time nor developed confidence in the explicit understanding of mathematical fields and concepts. The teachers also chronicle their own students' insecurity with mathematics: 'mathematics has squashed these kids or they feel they can't handle it'

However, the research team found some cogent examples of mathematical principles being utilised in arts training. Some of these were fairly basic – simple calculations and grids, for instance – for counting in dance, or patching in theatre lights and blocking stages, or division in mounting visual art works. However, there were other responses that give a clue to another possible perspective: that the arts are potentially just as fertile for the development of this competency as they are of all the other competencies discussed so far. The visual arts teacher who is quoted above discusses the mathematics of perspective; a musician makes connections with acoustics; a media teacher relates it to the planning and design of newspaper layout, and other visual artists recognise that notions of space and volume are geometrical.

A member of the Advisory Group to this project has pointed out very forcibly that as the Greeks, Moors and Chinese all pointed out, there is a mathematical basis and numerical relationships that underpin virtually all music – besides the basic acoustical relationships mentioned above, metre and harmony, melody, texture, tension and timing can all be expressed in some measure mathematically. The mathematics of space is one of the most crucial factors in visual arts too, from balance and scale to perspective and beyond – the Golden Mean of ancient Greek art and architecture is a mathematical formula; Giotto, da Vinci, the Cubists, Barbara Hepworth all demonstrate explicit understanding of mathematics – but within educational systems it is often forgotten. The same mathematical relationships as may be seen in music, of course, apply to dance, with the additional mathematics of the human body and movement. In media and drama, mathematics flows through all areas, artistically from grouping, levels and blocking of actors on stage, to calculations of shot distance, tracking and timing in film-making, through to the production side, entailing budgets and ordering, scale models, electrical and mechanical loads, and grids and graphs of all kinds – as well as calculating of wages and superannuation!

Solving problems

The Mayer report notes that 'the results of problem solving have the potential to generate creative or innovative solutions that offer new approaches'⁵⁴ which indicates a potential natural connection with the arts.

The creation of any art work may be expressed as a continuous process of problem solving. It is particularly often described so in education and training, where students are learning about art-form and having their attention drawn to the constraints of structure, style, medium, convention and audience. In fact, to go further, one may extrapolate the earlier and more inclusive notion of identifying and framing the nature of problems as one of the purposes of art, and certainly one of its outcomes.

Taking the definition of problem solving further, to include the exercise of judgement in qualitative or equivocal situations, it may be appropriate – as has been done in the report – to incorporate here too the notion of aesthetic judgement and its training as an important transferable competency. What is often unacknowledged and neglected in workplace environments is that they invariably have an aesthetic dimension. By this is meant that elements of aesthetic form are present in every social environment and in what goes on – the people in a workplace respond cognitively, sensorily and affectively to where they are and what they are doing. At its simplest this includes the physical design elements; at its more complex it involves elements like proxemics, arrangement of space, sound, interpersonal signals and rituals, choice of verbal language, metaphor and register, physical movement and gesture and other interactive patterns. The ability to read, interpret and manage effectively the aesthetic components of a range of workplaces may be regarded as problem solving skills of a very high order.

A great deal of the teaching and training in certain arts areas, especially in visual arts, but also in media and drama, are problem-based, as the respondents to this report indicate. Choreography and musical composition similarly lend themselves to this approach, and to some extent problems in performance have to be addressed. The report makes the very relevant and significant point that the majority of problem solving seen and described is higher-order problem solving, at or beyond the three performance levels in the key competency.⁵⁵ This is of a piece with findings for other key competencies – above – and gives weight to the proposal that the arts have a major role in the acquisition of key competencies.

Using technology

In this competency, disparities may be seen among the art forms, and therefore the effectiveness of their training for the acquisition of this competency. This project suggests that unlike with mathematics, most arts teachers do not appear to hold negative, 'two cultures' assumptions about technology. Arts teachers, of course, all have their own traditional technologies: musical instruments, video camera, sound and lighting gear and the potter's wheels are all technology. However, many of the arts teachers responding to the project appear to assume an automatic transferability of technological understanding that is at best dubious.

However, students and trainees in arts have in recent years needed to develop high level skills particularly in electronic technology management. For media, photography and for many musicians, electronic technology is part of the essential equipment, and this has transferability in many other fields. For almost all other arts, regular contact means that familiarity is pedagogically necessary and transferability is inevitable: the technology is applied to a range of subject matter and purposes which themselves are drawn from or echo a range of real-life contacts. Graphic artists and drama designers have to understand sophisticated computer software. The recent developments in such areas as 'hybrid arts', 'multi-media arts', installations, and performance art makes much use of traditional and electronic technology, in the exploration of their subject matter.

⁵⁴ Ibid page 36

⁵⁵ Ibid. page 38

This competency is addressed in chapter 12, and the close identification with the arts of the word 'cultural', both by the arts industry and the general public, indicates that the arts may be said to play a particularly vital role in this key competency. Arts teachers in the project were articulate, positive and committed to teaching it, although they expressed a range of interpretations of the competency. This echoes the diffusion of understanding in the community at large, that has contributed to the difficulties in having the competency ratified.

CONCLUSION

It may be seen from the above, that by their very nature the arts contribute naturally and significantly to all of the key competencies. As was the case during the Mayer Committee's deliberations, it can be argued that a key competency specifically addressing the aesthetic aspects of life would have been appropriate. Nonetheless, training and education in any or all of the arts can be seen to provide important opportunities for the acquisition of the key competencies. Arts teachers strongly, and variously, espouse particular competencies. All the arts, as systems of expression and communication, find 'communicating ideas and information' right in their heartland. Similarly, all responded strongly to 'solving problems'. The performing arts and media stress the importance of high levels of competency in 'working with others and in teams' – which is a competency that other discipline areas frequently find less applicable. Although currently many arts teachers see little opportunity for the acquisition of 'using mathematical ideas and techniques', the more far-sighted have perceived that mathematics is germane to their theory and practice, especially in music and visual arts.

Table 1 below, outlines some activities that may contribute to the acquisition of the key competencies. Additional material on dance education has been provided in Appendix B.

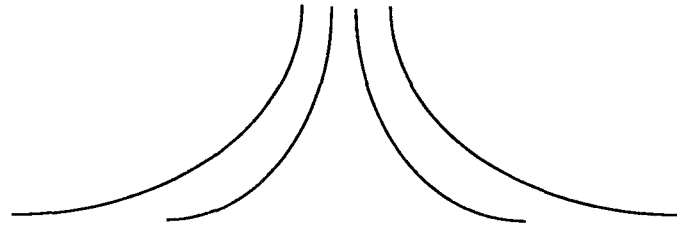
Table 1: The particular contribution of the arts to the acquisition of key competencies: some examples

Key competency	Art form	Sample training activities with significant contribution to acquisition of competency
1 Collecting, analysing and organising information	dance	making and learning choreography; rehearsal; managing kinaesthetic information
	visual arts	research; art history; managing artistic media; managing graphical information
	all arts	interpretation; creating artworks; exercising aesthetic judgement; managing sensory and emotional information

Table continues on the next page

2	Communicating ideas and information	drama	play writing; directing; acting; dramaturgy
		media	making TV, radio, video programs; newspapers and magazines
		all arts	making artworks; communicating ideas and information non-propositionally; interpreting artworks through talking and writing
3	Planning and organising activities	music	rehearsing and presenting a performance or concert
		visual arts	gathering materials; preparing an exhibition
		all arts	preparing and presenting public showings
4	Working with others and in teams	dance/ music	ensemble discipline for corps or orchestra etc.
		drama/ media	co-operation in production teams
		all arts	group skills in rehearsal, production and exhibition; negotiation in multi-arts contexts
5	Using mathematics	music	basic musical structure, rhythm, balance; acoustic science
		visual arts	perspective, balance, geometry of design, scale
		all arts	understanding rhythm, proportion, balance; designing spreadsheets and models

6	Solving problems	drama	improvisation, directing, acting interpretation, design
		media	preparing shooting scripts; negotiating with clients; exploring media ethics
		all arts	research; creating artworks; preparing presentations
7	Using technology	media	using cameras, microphones, graphics software
		music	using samplers, synthesisers; managing sound systems
		all arts	using multi-media in presentations, concerts, performances; sound and lighting principles and technology



CHAPTER

14

REFLECTIONS AND DISCUSSION

In reflecting on some of the impressions gained during the conduct of this study, various aspects of special importance to arts educators should be noted. The project has shown that the arts provide opportunities for students to demonstrate the competencies in many varied ways that are not always available in other subjects. This variety can be related to the nature of arts practice which incorporates creative processes, practical skills, knowledge and understandings. The creative or problem solving processes in the arts are moderated by aesthetic decisions based on perceptual judgement within a social and cultural context. The interpretation of the key competencies within the arts has been addressed in the previous chapter. This chapter deals with more general issues that have implications for the future implementation of the key competencies, particularly in the arts area. Many of these issues were the subject of investigation during the Senate Inquiry into Arts Education (1995).⁵⁶

THE RELATIONSHIP BETWEEN THE KEY COMPETENCIES AND GENERAL EDUCATION

The term 'competency' has been the basis of considerable negative reactions from educators who have associated the key competencies with competency based training, and thus viewed them as narrowly behaviourist and vocationally oriented. Many people are uncomfortable with a philosophical approach to education policy that focuses on its employment related purposes. The Mayer report suggests that the key competencies may act as a bridge between general and vocational education. While some see this as making general education more narrow, it is possible that the bridge can be two-way, allowing vocational approaches to enrich general education.⁵⁷ This has been shown in many cases where teachers have used examples from professional practice to assist students in their learning. This was apparent in the activities that were oriented towards helping students plan or communicate effectively with an audience during a performance.

HOW ARE THE KEY COMPETENCIES GENERIC?

There is considerable misunderstanding regarding the 'generic' nature of the competencies and the ways in which they are viewed in relation to the rest of the curriculum. Their generic character refers to their general application to the world of work, not necessarily to all areas of the curriculum. This has important implications if teachers lose sight of their vocational purpose and only view them in relation to curriculum outcomes.

Being generic does not imply that they stand alone and have some innate meaning of their own. They only acquire relevance when used in a particular context, and in this case we have endeavoured to portray the competencies within the arts setting. It follows that teachers do not set out to 'teach a competency' *per se*, but they are expected to provide opportunities for students to acquire these attributes in the course of their arts learning and to be able to identify students' achievement of them. Teachers use of the key competencies in this study was consistent with this approach.

The proposition that the broad range of competencies acquired through the arts have potential in other areas should be tested. At present, the transferability of such skills is only assumed and we have no evidence that students were encouraged to value these skills and learn to use them effectively in other situations. The degree to which skills such as artistic communication and presentation transfer readily to other educational contexts and to general workplace situations is an important area to explore.

⁵⁶ Report by the Senate Environment, Recreation, Communications and the Arts References Committee, Arts Education, Commonwealth of Australia, October 1995

⁵⁷ Mayer, E (chair), 1992, Key Competencies. Report of the committee to advise the AEC and MOVEET on employment-related key competencies for post-compulsory education and training, Australian Government Publishing Service, Canberra page 9

PLACE OF KEY COMPETENCIES IN THE ARTS CURRICULUM

It is apparent that although the key competencies are defined as employment related, their vocational purpose was generally not the driving force behind their inclusion in the arts programs in this study. Arts teachers were able to identify their presence within the normal curriculum and within the usual arts activities carried out in the classroom. There was no suggestion that teachers had introduced them deliberately to promote their vocational use, although some of the arts programs in this study had an overall vocational focus. Whether the competencies were in the general arts curriculum or vocationally directed courses, they were seen as an integral part of the arts processes and appeared to be accepted as useful attributes for students involved in those processes. The common approach was one where the organisational framework was based on arts content and processes as outlined in state curricula, with key competencies embedded.

The role of the key competencies in the arts curriculum is related to those processes which have been identified as common to the arts disciplines and which formed the basis on which they were grouped into one key learning area. Although we have collected examples of individual competencies in discrete art forms, those examples all reflect the components of the *Arts Statement and Profile*. There were no instances where the competencies were at odds with other curriculum priorities. Any concerns were more to do with perceived gaps in the Mayer list of competencies, a matter that will be addressed later in this chapter.

If arts teachers are to be made more conscious of the vocational relevance of the key competencies, this awareness should be carried through to students. While it is desirable that the competencies fit seamlessly into the curriculum and form a natural part of the classroom activities, their vocational purpose should be addressed when they are being assessed. Appropriate assessment and reporting will depend upon teachers incorporating them into their planning with recognition of their vocational orientation rather than relying on ad hoc identification of their role in achieving other curriculum outcomes.

The language of 'competence' and the identification of the Mayer competencies with the vocational thrust has given rise to concern among arts educators that these competencies would distort arts education; that the creative, unpredictable element of arts learning could not be accommodated in a framework of measurable behavioural outcomes. This study would appear to allay those fears. Arts teachers seem to have simply become more aware of the presence of the competencies in their normal activities without making changes to the artistic aims of their teaching and learning programs. In the light of this approach, it could not be said that the key competencies are 'taking over' the arts curriculum. However, if in the future, teachers shift the focus to more explicitly address the vocational orientation of the competencies in their planning and assessment, the balance should be reviewed.

ARE THE KEY COMPETENCIES GENERIC ACROSS THE ARTS AREAS?

It has been found that opportunities for students to develop the key competencies are readily available in each of the arts areas. All the competencies are present in each arts area of the curriculum. The world of the artist presents varied and complex situations which develop the competencies as an integral part of the artistic process. Although the language and media of arts expression are different in each art form, the competencies have a generic function across the arts which is related to the creative process. In this study they appeared in three roles:

1. Sometimes performance of the competencies contributes to the form of artistic expression, eg using technology to create visual or media art works, or expressing ideas through an artistic medium such as a painting or a performance. These competencies are directly linked to vocational training in arts production. There is no doubt that such skills are a valuable preparation for vocational training in the arts industry, but their generic use in other areas could relate more to confidence with using technology and flexibility in communicating ideas.
2. In other cases, skills acquired in the arts have more obvious generic application. They fall into Marginson's general category mentioned in Chapter 2 which can facilitate work

behaviours. There are many opportunities in the arts for students to gain confidence in organisational, interpersonal skills and teamwork. Although they sometimes have a specific arts connotation, there are often instances involving verbal communication, research methods, organisational and personal interactions of a more general nature that could be directly applied in other contexts.

3. Some of the competencies identified by Mayer are actually arts based. Graphic communication, multi media presentation, body language, gesture, vocal articulation and inflection are all generic competencies which are in common use but would benefit from the specific training available in the arts area.

The diverse roles of the key competencies in arts education indicate that the arts have the capacity to assist students in developing a varied range of skills that would be useful in both educational and vocational situations.

ASSESSMENT OF THE COMPETENCIES AT EACH LEVEL

Throughout this project, it was obvious that because the competencies were so closely integrated into the arts curriculum, any assessment of them was only relevant in the extent to which they enabled the arts activity. Although teachers readily identified the competencies demonstrated by students, assessment of them was one aspect of achieving the artistic outcomes and they were viewed in that context. Arts teachers have not adopted the simplistic 'tick the box', atomistic approach to their assessment.

Virtually no attention was paid by teachers to the levels of achievement as set out in the Mayer document. No doubt this could be linked to the kind of reporting currently required by the school or education system. It could also be symptomatic of the lack of awareness regarding their vocational potential.

Any moves by education systems towards more formal assessment and reporting of the competencies may require detailed study of their transferability across curriculum areas. This would be of particular concern to arts educators. A model which depends upon their assessment within purely academic subjects would disadvantage those students who are more able to demonstrate their achievement through the arts. It is therefore undesirable to have a system of reporting that requires some aggregation of scores across curriculum areas as it is possible that there is great disparity between them. The holistic approach advocated by McCurry⁵⁸ may obviate this concern.

Effective development of the vocational potential of the key competencies in education will require a program to raise students' awareness of their generic use and encouragement for them to apply skills acquired in one area of study in different contexts.

LINKS BETWEEN THE COMPETENCIES

For the purposes of clarity in this report, we have addressed each competency individually in order to focus on its special features in the arts context. However, this is not to suggest that they appear in isolation in arts practice. The multi-faceted nature of arts practice requires a range of skills and attributes, each contributing in various ways and interacting with the others.

It has been shown that arts teachers have incorporated the competencies as a component of the arts activity. Their presence (or absence) in the activity depends upon the nature of the artistic outcomes and varies accordingly. Any links between the competencies occur according to their relevance to the particular artistic project being undertaken, and it is an artistic logic which underpins those links.

⁵⁸ McCurry, D., 1996 *Approaches to Assessing the Key Competencies, A Paper reviewing possibilities for the assessment of the key competencies, Commissioned by the Department of Employment, Education and Training, ACER, Camberwell*

LINKS BETWEEN SCHOOLS, VOCATIONAL EDUCATION AND TRAINING AND INDUSTRY.

Vocational pathways through schooling and training to employment in the arts industry are gradually gaining strength with the development of vocational courses in the senior years of high school. Work experience placement of students in the arts industry is proving valuable in identifying employment opportunities for young artists and provides a 'real-life' context for their arts studies. In the tertiary sector, the relationships between courses at institutes of the arts, institutes of TAFE and universities are complex but there is evidence of increasing efforts to collaborate across institutions in course offerings. While there is some variation in the focus of studies between education institutions at each level, the key competencies have the potential to provide a common perspective on both the educational and vocational aspects of student learning in the arts. This would require far greater awareness of the competencies and their interpretation in the arts area so that they could be seen as relevant to arts education and training. Similarly, this awareness would need to flow through to the arts industry, so that reporting of the competencies acquired in education and training programs could be used effectively by students when seeking employment. In this study, use of the key competencies in links between schools, vocational and training and industry appeared to be minimal.

ARE THERE GAPS IN THE KEY COMPETENCIES?

It has been shown that the Mayer competencies are generally accepted by arts educators as being relevant to the arts. However, other important features intrinsic to decision making or problem solving in the arts are noticeably absent from the Mayer list. The evaluation of arts practice and products is inseparable from social, cultural and aesthetic values. At all stages of the creative process, issues of design, function and style must be resolved with reference to social and cultural purpose and aesthetic quality. These factors are not peculiar to the arts, although they have particular relevance in that area. It is difficult to understand a logic that accepts 'using mathematical ideas and techniques' but rejects the use of ideas and practices related to culture and aesthetics.

Arts educators are explicitly involved in an industry which uses the words 'culture/cultural' as part of its defining terminology. At the time of the study, the future of a possible eighth competency addressing cultural understanding was uncertain. Despite extensive consultation on two drafts of this competency, the uncertainty has yet to be finally resolved. Although the proposed eighth key competency had been anticipated sympathetically by many arts educators, the response of arts educators to the consultation documents was extremely negative. The approaches in these documents were totally foreign to the way artists view the world, as the issues were discussed in a very mechanistic way. There was grave concern that in an effort to include such a competency, its description had been distorted to fit the competency mould and maintain consistency with the employment related language of the Mayer document. Given the broader perceptions of the role of the key competencies that have emerged since they were originally formulated, it is unfortunate that the eighth competency could not be interpreted more flexibly.

In this study there was universal agreement that cultural and aesthetic issues were integral to arts practice and arts education, and teachers were able to explain how they addressed them in terms of the arts of other cultures and of our own cultural heritage. There was a sophisticated understanding shown by respondents regarding the racial/cultural dimension of this as a competency. Most of them are actively and explicitly working towards a climate of multi-cultural understanding within their teaching, and aware of the complexities, paradoxes and potential hazards of this. What comes through overwhelmingly is the responsibility which arts educators feel in helping their students toward cultural understandings characterised by inclusiveness, tolerance, but also perceptiveness and critical awareness of the context. However, the interpretations of the teachers in this study were related more to their own

This appendix shows how opportunities for the expression of the key competencies can be found within the senior dance syllabus for Queensland. The information here was provided by Sue Fox, a member of the Advisory Committee to the study.

Collecting, analysing and organising Information

When choreographing certain pieces students collect stimulus material (photographs, music, text, props, etc) based around a theme, analyse its relevance and link to the central theme, and then generate and organise their ideas for the piece.

In analysing dance works, students often research and collect material about the piece (its context, choreographer's notes, etc). They are required to discern or analyse the patterns and form of the piece, including a description of relevant dance components. All material is then organised into a critical, reflective essay about the work.

When completing a unit entitled 'Dance Companies of Australia', students research company influences, collecting material about influences on the company, their background, direction and philosophy, especially of the Artistic Director. Interviews may occur in the context of this research. The student then works to analyse the information and organise it into a comprehensive discussion regarding the company.

While choreographing some works, students are required to complete a personal journal detailing the choreographic journey and process. This is a collection of stimulus/resource material including its analysis and organisation into a coherent document outlining their work to be developed.

Communicating Ideas and Information

'Communication of intent' is a major criteria of assessment for choreography in the Queensland Senior Dance syllabus. Students are assessed on their ability to communicate clearly what their choreography was about or the images or ideas they wished to convey to the audience.

'Communication in performance' is a major criteria for assessment of dance's technical performance in the Queensland Senior Dance syllabus. The teacher looks for the involvement of the student in the piece with suitable energy and focus in communication when performing to various audiences.

Written tasks in the Queensland Senior Dance syllabus require student to use appropriate language conventions related to grammar, spelling, punctuation and layout.

Planning and organising activities

All choreographic activities in dance require planning and organising considerations. Students must focus on issues like the following:

- How many dancers to use?
- What movements will suit my task or goal?
- What musical accompaniment will suit my theme?
- What setting will be appropriate?

Developing a rehearsal schedule for a dance production requires - organising practices, time schedules, dress rehearsals, planning around other class members who are accessing similar material and rooms.

Students when developing dance works need to consider the audience to whom they will be presenting. They must plan and organise material suitable for the age group eg pre-school children, primary, retirement homes, peers, etc.

Planning and organising for safe practices that look at activities that help prevent injury and work to a safer learning environment.

Working with others and in teams

In developing dance pieces for a final production, students must often work with lighting designer, costume designer and even stage manager in putting their piece onto the stage.

Where large productions occur in performing arts, dance students may need to work with students from other disciplines like music and drama to develop a particular theme. This requires detailed and sensitive negotiation as they often enter with different expectations, ideas and skills regarding the task at hand.

Dance workshops focus on communication in different settings with professionals. This requires an understanding of workplace communication skills and abilities to contribute to and adapt to group decisions.

Written tasks and choreographic tasks in dance can require interviewing dance professionals and community members. This needs a special form of communication and preparation to equip students to work with others and to develop material about their art form.

Using mathematical ideas and techniques

When choreographing students need to consider the use of space and the patterning when developing their pieces. Mapping out the dance in the floor space with sometimes precise arrangement of their dancers can be a consideration.

Developing a lighting plot for a final dance performance.

Queensland Senior Dance Syllabus identifies 'experimentation with floor patterns and configurations for the corps de ballet in the ballet core unit.

Queensland Senior Dance Syllabus asks teachers to include in their classroom experience 'manipulation of time signatures and complex rhythmic structures'.

Queensland Senior Dance Syllabus asks teachers to include in their classroom experience, the examination and interpretation of data; statistical information in graphic and tabular form' eg statistics on the number of people involved in ballroom dancing and what styles, reasons why people join dance classes' (students often called upon to research and collect this material and present it in this mathematical form)

Solving problems

When responding to a quote or task in the area of dance appreciation, students are often asked to resolve a problem and develop a written response. Students may be asked, for example, why a particular piece of repertoire should be maintained or added to a particular company. In completing their response they would need to consider the problem of whether the work is suitable for the company's direction, philosophy, style etc. They might even be asked the problem of solving whether Merce Cunningham should slot into a modern or post-modern genre. They would need to consider characteristics of both genres, then look at his work to determine the best solution for this particular problem.

Students in dance (especially in the Queensland Senior Dance Syllabus) are required to evaluate dances and judge works using specific, identified criteria (eg form, style, music, setting, movement content etc). They are asked to judge the piece's worth in its own right as compared to others from the same choreographer, or against other pieces from a similar genre. These judgements must be supported with reasoned examples and ideas drawn from the work itself.

Dance students are often called upon to informally evaluate their own and their peers work as part of the normal class process. This type of problem solving asks students to consider whether the objectives or intent of the choreographer have been met or not. How well did they communicate their theme? Why, or why not?

Using technology

Students involved in dance are using computer technology to research and investigate issues related directly to their art form but also looking at broader social and environmental influences on contemporary society.

CD Rom technology can be used to choreograph a dance sequence using video images (feasible).

Students can use graphics programs to design sets, costumes, and make-up or to block moves.

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