New Zealand

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Defining and Selecting Key Competencies
A New Zealand Perspective

1   Introduction

1.1   Methodology

This country report tests the interim main findings of the OECD project in a New Zealand context. It is based on the outcomes of twenty four semi-structured interviews with key national stakeholders. Those interviewed may be seen to reflect the views of a broad base of functional and activities areas covering business and civil society. They included chief executives of leading businesses, and industry training organisations. The views also incorporate some Mäori and Pacific Island perspectives.

Interviewees were chosen for their ability to place New Zealand in an international context, and to articulate views, gained from their experience across a number of fields, on issues relevant to the *DeSeCo* programme.

The five sets of guiding questions provided in the CCP background note were used as a basis for the interviews. These were:

Set 1:   Which Key Competencies?

Set 2:   Assessment, Indicators and Benchmarking

Set 3:   Public Debate: Negotiating and Legitimating

Set 4:   Key competencies and Education

Set 5:   Assessing and Developing DeSeCo

The interviews probed the relevance of the generic key competencies identified by the *DeSeCo* programme to date and the underlying more specific competencies required by people – especially school leavers - living in New Zealand to cope with the changing nature of, and challenges provided by, family and social relationships, the labour market, and democratic society.

The major findings resulting from these interviews is in section 3.

1.2   Country context

The definition and selection of key competencies for New Zealand is driven by its unique set of demographic, cultural, economic and geographic circumstances.

Demographically New Zealand is a multi-cultural country. But underpinning multi-culturalism is the special relationship between the Crown and the Mäori population, through the Treaty of

Waitangi signed in 1840. As a result of the Treaty provisions, the Mäori language is an official language of New Zealand. The Treaty provisions provide the bi-cultural (Mäori/non-Mäori) platform onto which is welcomed all the multi-cultural diversity within the country. From this base a special and unique New Zealand identity is being created, within which individual cultural identities will be recognised and maintained.

As a small South Pacific trading nation of some 3.8 million people, with few mineral resources, New Zealand is, arguably, more prone to the flux of globalisation of markets than most other countries. It has adopted and adapted new communication and information technologies early and rapidly. With the ability to transfer information in text and images instantaneously to any part of the globe, there is now the opportunity to overcome barriers of geographical distance.

In Mäori tradition, the Pacific ocean is seen as the placenta that joins nations and gives life to all of us. The European view of it as a barrier to be overcome, is reflected in the way one thinks about trade, immigration, and much else.

Future economic viability rests on a mindset which is open to opportunities. New Zealand is seen as being, or becoming, an enterprising culture, in which the competitive advantage lies in using technological innovation to add value to existing natural advantages such as fertile soils that are rich in organic carbon; a beautiful landscape accentuated by an atmosphere with high luminosity; and low population density.

New Zealanders also bear in mind that competition in the global market means that standards of quality and service are being set internationally. All organisations and all economies are exposed to the innovations established by the most successful. The concept and role of the State, and especially the nation state, is changing. Small companies, for example, behave like big companies - a 'multi-national' can now be a home-based individual working globally through the Internet or over the phone. One's most vital interests are simultaneously at both a local and a global level.

In the school sector, the New Zealand Curriculum Framework, published in 1993 and now almost fully implemented in schools, recognises the need for the education system to adapt to meet the challenges of the competitive world economy. It provides for a balance between the interests of individual students and the requirements of society and the economy, partly by adopting an approach which is non-prescriptive. (See section 2 below.)

The dysfunctional elements of modern society are evidenced in statistics which show that New Zealand leads the developed world in youth suicide rates (15 – 24 year olds) [1] and has the second highest unplanned teenage pregnancy rate [2].

Of the 2.8 million people of working age, about 1.75 million are in paid employment. Demographically, under 3% of working age people are young people entering the labour force. 80% of those who will be in the work force in ten years' time are already in the workforce, and in the twenty years up to 2011 those over 45 years of age in the work force will grow by 73%.

Perhaps most significantly, demographic forecasts anticipate that by 2050 over half of the New Zealand population will be Mäori, or will have come from communities who have migrated from Samoa, Tonga, Cook Islands, Nuie, Tokelau and other Pacific nations, Asian, Indian, African, and many others.

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1 Source: NZ Ministry of Youth Affairs
2 Source: NZ Family Planning Association

These shifting paradigms are provoking a continuous re-examination of the social *mores* and future direction of the country. It is appropriate and timely in this context to examine the nature of the competencies required by all members of society, and particularly young people, to succeed as citizens of a country seeking to identify itself within the global environment.

2 Summary of New Zealand's work to date in defining and selecting key competencies

2.1 Background to policy development - place of (essential) skills in the NZ Curriculum

The concept of competencies was first referenced in curriculum discussions in New Zealand in the Review of the Core Curriculum for Schools in 1984. This was followed further in the Curriculum Review report (1985-87), based on analysis of community submissions

Responses indicated the priorities for the school curriculum should make sure that students:
- acquire the basic skills and knowledge that enable them to go on learning;
- develop the skills knowledge and attitudes needed to function effectively in everyday life, now and in the future
- develop respect for themselves and for others, and the skills needed to live and work with other people

A second order priority was for schools to promote a sense of cultural identity and tradition for all New Zealanders.

A further report *Learning and Achieving* (June 1986) focussed mainly on post compulsory schooling looking to a better alignment of assessment for school qualifications with the curriculum. Work in realising this intention continues today with the development of the National Certificate of Educational Achievement, a new qualification system designed particularly for the senior secondary school..

The committee recommended structural changes in senior secondary schooling to reflect changes in society, higher retention rates, and provide for a fairer and more equitable assessment system (particularly to be more responsive and encouraging to Mäori).

In 1988 the Department of Education published a draft National Curriculum Statement - a discussion document for primary and secondary schools. The foreword to the Statement describes it as *a draft curriculum framework which translates the general intentions of the Curriculum Review report into more detailed proposals.*

The foreword notes that previously schools developed their programmes from individual subject syllabuses (of different vintages), whereas this framework would enable them to *see the curriculum as a whole and plan accordingly.*

The purpose of the curriculum was stated that *all learners should*

- gain the knowledge, skills and attitudes that enable them to go on learning in a changing world
- develop the knowledge, skills and attitudes they need to participate fully in everyday life
- develop an awareness of their cultural identity and traditions
- develop and understanding of and respect for themselves and others, and the knowledge, skills and attitudes they need to live and work well with other people.

The draft document was not developed into a final version. Priority at the time was given to the reform of administration of education ('Tomorrow's Schools'), and the restructuring of central education agencies.

Following a change of government in 1990, a new document was released, described in the Introduction as "a framework for the total school programme which links all the learning experiences of students in a coherent, systematic and balanced way."

The reviews of the 1980s were acknowledged, and recognition given to the issues identified in terms of:

- a curriculum framework
- a broader and more integrated base for the national curriculum
- greater flexibility for schools, in consultation with their communities, to design programmes appropriate for the needs of their students

In addition, it stated that recent developments in NZ (Assessment for Better Learning Report: *Tomorrow's Standards*, NZ Planning Council's *Tomorrow's Skills* report) and overseas (National Curriculum in England) had highlighted other needs:

- to define a range of knowledge and skills for success in society and in a modern competitive economy
- greater emphasis on competence in basics / core subjects (defined as English, Maths, Science and Technology)
- a continuum of clear learning objectives
- the importance of new technologies and skills
- improved classroom and national assessment practices
- raising post-compulsory participation rates

2.2 The New Zealand Curriculum Framework (1993), National Curriculum Statements (1992-2001) and National Qualifications Framework (1992)

The New Zealand Curriculum Framework (NZCF), published in 1993, sets out the overall policy direction for the school curriculum. It was developed in both English and Mäori following analysis of the submissions on the Draft and consultation with key groups.

The NZCF includes:
- the principles which underpin the curriculum
- seven essential learning areas
- eight sets of essential skills

- the commonly held attitudes and values which should be developed and reinforced through the school curriculum.

It also sets out in broad terms, the assessment policies associated with the curriculum.

The eight sets of skills are:
- communication skills
- numeracy skills
- information skills
- problem-solving skills
- self-management and competitive skills
- social and co-operative skills
- physical skills
- work and study skills

In each learning area a national curriculum statement specifies 'achievement objectives' throughout eight progressive levels of achievement. Teachers plan, assess and report on student progress in relation to the achievement objectives. The achievement objectives express both knowledge and skill outcomes. In addition there is a section in each national curriculum statement which describes how learning in the area helps develop the essential skills.

The *National Qualifications Framework* provides a framework for national qualifications in secondary schools and in post-school education and training in which all qualifications have a purpose and a relationship to each other that students and the public can understand. Its design provides a flexible system for the gaining of qualifications, with recognition of competency already achieved.

2.3   Curriculum Stocktake (2000-2002)

The Ministry of Education is currently engaged in a stocktake of the curriculum reforms of the 1990s.

Key outcomes
- A review of schools' experiences of the sequential implementation of the curriculum 1993-2001;
- Assurance of and increased confidence in the quality of the New Zealand Curriculum as policy;
- More effective implementation of the New Zealand Curriculum and improved outcomes for students;
- An agreed direction and process for the ongoing development of the New Zealand Curriculum;

in each case applying to the curriculum in English and in te reo Māori.

Questions raised in the Stocktake include the extent to which the essential skills have been successfully embedded into the strands and achievement objectives of the national curriculum

statements and the extent to which they are being developed by students, and assessed and reported on by teachers.

3 Responses by New Zealand interviewees to guiding questions

3.1 Three generic key competencies identified by the DeSeCo project:

- acting autonomously and reflectively (KC1)
- using tools interactively (KC2)
- joining and functioning in socially heterogeneous groups (KC3)

The three generic key competencies identified by the DeSeCo project to date are, as general and artificial constructs, a well crafted set of statements useful as an initial reference point for identifying and selecting key competencies at a more disaggregated level where they can be contextualised. Jointly they cover the self and self worth (KC1), constructive participation in the community (KC3), and a suite of tools (KC2) to allow one to do and achieve things individually and in groups. To put it another way, KC1 relates to independence and the self, KC3 to interdependence and participation, and KC2 to the range of tools and abilities to enable one to succeed in one's world. The generic key competencies are, in a sense, seamless and timeless.

In the New Zealand context, however, the traditional Western paradigm which informs these generic key competencies - especially KC1 and KC3 - becomes apparent. In the course of the interviews which form the basis for this section of the report, the extent to which they are truly core competencies in this part of the world was called into question.

3.2 The individual (KC1) and the group (KC3)

For many interviewees in the study there was confusion between the notions of autonomous action and individual action. This resulted in some communities in New Zealand finding an emphasis on individualism of KC1 as inappropriate. It was seen to reflect the notion of individuals aggregating to society whereas in Mäori culture and philosophy, for example, individual behaviours spring from, reflect upon, and are supported by the collective community. Such individualism also sat uncomfortably with the social mores and culture of Pacific communities in New Zealand. While autonomous and reflective behaviour is seen by these groups as a desirable attribute in individuals, the confusion of this with the assertion of individual rights and behaviour of individuals within the context of the individual's collective responsibility was reported as problematic.

Responses from some interviewees suggested that in terms of KC3 modern democracy (fundamentally one person, one vote) is an intrinsic value whereas models of consensus decision making in the traditional Mäori and Pacific peoples' cultures may be far harder to achieve than the democratic majority. The issue is not democracy *per se* but how the decision making process is undertaken and how decisions are arrived at.

Furthermore for these interviewees, while the concept of joining and functioning in socially heterogeneous groups is important, they see it as containing an internal contradiction, if the thrust of such groups under the guise of democratic institutions is towards homogeneous behaviour. It is equally important, therefore, that heterogeneity is not to be understood as leading to assimilation within the dominant culture.

For example, in the New Zealand context it is more a matter of acknowledging and valuing cultural differences and their inherent diversity, than 'overcoming' them. In this regard there are challenging issues to investigate about culturally appropriate competencies in a country which aims to be both bi-cultural and multi-cultural while still maintaining social cohesion.

The Western tradition is to choose to relate to groups, and to use groups for individual benefit – some would call it enlightened self-interest - but in some cultures in New Zealand one inherits a position in a group and therefore accepts an obligation to contribute to the group in spite of fact that the net benefit (to the individual) may appear, from a Western perspective, to be less than if the time and energy were applied to some other avenue.

If one looks beyond cultural differences and specific cultural requirements, there is an evident tension between the concepts of autonomy (KC1) and social interaction (KC3). Real autonomy which allows the individual to become a truly independent thinking person living within a community potentially produces conflict because of community and societal pressures on the individual to conform. If KC1 and KC3 are inherently contradictory and paradoxical, it becomes important for individuals to balance the norms and pressures of a community which demands conformity, with their own legitimate aspirations.

3.3   Using tools interactively (KC2)

This generic key competency is, on the face of it, somewhat more straightforward. 'Tools' has usefully been defined in the DeSeCo project in the widest possible sense. While its elements will change over time, KC2 promotes the ability to use tools productively, and in this respect the generic key competency is concrete and specific. It constitutes the link between the self and the social world. In that it enables one to conceive of doing and achieving things individually and in groups, it is potentially instrumental in bridging the gap between individual and group behaviours, and conceptually sits well between the autonomy of KC1 and the social groupings of KC3.

With an ageing population KC2 may, for example, contain within it the means of promoting good interaction and better understanding between the generations and between schools and the community. Some schools promote themselves as the learning hub of the community. They give effect to this promotion in a variety of ways, for example by making facilities available to the community both during and outside of school hours, by encouraging students to coach adults in computer, email and internet use, by inviting business people, parents, volunteers, retired people to act as mentors and coaches for students.

Mäori interviewees wished to add a caution about the nature of the content and validity of knowledge entities. Knowledge includes not only empirical facts, but also belief, experience, values and attitudes which inform the nature and applicability of a 'tool'. Within the NZ context which gives shape, form and meaning to physical and knowledge entities, there is acknowledgement and recognition that Mäori have particular ways of thinking and viewing the

world that are different from, but no less valuable than, the Pakeha (non-Māori) perspective. This is especially so when talking about encouraging a culture of innovation and enterprise – a natural flow-on from KC2.

The challenge for New Zealand, then, in defining and selecting key competencies, is, essentially:

- to find an appropriate balance between competencies that support individual development and those that foster group outcomes
- to ensure that people are enabled to acquire competencies contributing to both areas and to learn to utilise them in a balanced way
- to value, engage with and interweave into any competencies framework which may be developed Māori and Pacific communities' views of the world.

3.4   Introduction to general findings

The question: Which key competencies? may usefully be expressed as follows:

What are the key competencies most likely to enable one to become independent – the autonomous reflective individual, interdependent – the participant and joiner, and an effective user of all the tools available, in three broad social fields: family and other social relationships, as citizens in a democratic society, and the labour market.

The DeSeCo approach to the concept of competencies positions them as conceptual and pragmatic. This raises the question as to whether such competencies are to be considered purely as learned acquisitions or also as innate or inborn characteristics. The boundary between the two is blurred. No competencies exist in a vacuum. Their acquisition is impacted on by both certain dispositions and learning opportunities.

Further, from the point of view that competencies are acquired throughout life, and may be acquired through experience and maturity, the education system is only partly responsible for enabling their acquisition – in fact all social institutions, including, and especially, the family, are responsible for the development of competencies.

3.5   General findings

The key competencies required across all social fields are essentially those which first and foremost give one a sense of self and connection to others. They are the competencies which provide school leavers with the essential foundation for managing their life and further learning and earning. It is artificial and misleading to treat the labour market, for example, as a discrete entity with its own unique set of competency requirements.

In addition to the identified competencies, other competency areas which have a measure of transfer value across all fields of activity include, but are not limited to:

- ability to reason, analyse, think critically and reflectively, identify and solve problems using a range of strategies, understand ambiguity and paradox
- innovation and prediction, anticipation and speculation, judgement and discernment
- flexibility, and adaptability to change, including respect for the views and cultures of others

- a range of communication, team work, collaboration, negotiation, and related interpersonal competencies
- a range of literacies covering traditional technologies (such as print) and new technologies (based on the micro-chip)

These demanding sets of competencies are acquired throughout life in many ways and settings. They are supported by the eight essential skill areas of the New Zealand curriculum, and have the ability to lend themselves to incorporation into contexts for learning and assessment programmes. They may, therefore, provide an enabling framework or set of tools for the further development of key competencies for use across the curriculum, and as potentially useful for the development of national indicators.

3.6   Family and other social relationships

Successful family and social relationships ultimately support and depend on the development of self knowledge and self esteem, as well as the core human values of honesty, fairness and understanding and acceptance of the diversity of human nature. It is within the family environment - the basic community structure - that the great majority of these values and competencies are first learned and practised. A sense of self identity is crucial, as traditional rules are discarded or less clearly defined than in the past, as the family and social environment and its boundaries become more blurred. Resilience and perseverance are important components of the mental fitness required to deal with increasingly complex, confusing and conflicting social circumstances.

More specifically, successful relationships depend on competencies in communication: the ability to listen, to reason, to convey one's feelings, to negotiate and compromise, to be assertive.

3.7   Citizens in a democratic society

Competencies to help to operate successfully in a democratic society stem from knowledge of self and one's heritage and place in the community, and a willingness to learn continuously (democracies work most effectively when the population is well-informed, educated and articulate). On this basis one can move out into the community with a sense of confidence, and an ability to use the range of communication, negotiation and related interpersonal competencies earlier identified.

In addition to the generic competencies, the individual citizen needs to develop a range of understandings about the society in which he or she lives, including the nature of government and its institutions, the nature of accountability and control, and the extent to which control over decisions and policies can be exercised, and where the power bases lie.   All three key competencies are required for such understandings to be developed.

3.8   Labour market: productive work

The phrase "labour market" appears restrictive and backward looking. "Productive work" is more encompassing of the many worlds of creativity and ideas, knowledge, and value-added, which depend on an ability to sell, to convince a buyer, and to close a deal.

This view of the labour market indicates the need for a wider understanding not only of how the international economy and markets work but also the fact that knowledge *per se* has no value – it is not in itself a tradable entity. Graduates may be employed partly because of a specific knowledge bank, but chiefly because of the skills and competencies which will enable potential employees to apply the knowledge in the practical context of producing goods or services that someone else will buy.

Some production line and process industry jobs do not require a great capacity to think for oneself or to be self-reflective. Specific tasks may have predetermined right answers, require conformity and convergence to strict standards of a production line nature. New technologies can also produce models of such constrained environments.

Generally speaking, however, productive work in New Zealand is more varied and changeable than ever before. Increasing numbers of productive jobs in New Zealand are demanding, challenging and interesting - requiring a new order of mental fitness and learning agility previously unknown: the capacity to learn on the run, formulate questions, describe what it is they do not know, seek, sift, sort and transpose useful information into a knowledge base, transform the knowledge into a tradable entity, deal with different organisational hierarchies of customers and suppliers.

Success in productive work is based on the underpinning competencies. These requirements are reinforced by recent surveys of employer expectations of entry level job applicants which show that over 80% of competencies required are interpersonal, that 'attitude' almost always tops the list, while 'qualifications' (except where required for a specific purpose) come some way down the list. (3)

These generalised competencies may be summarised as follows:
- **communication** in all its major forms - listening, writing (e.g. report writing skills), speaking (one to one, small and larger groups), reading (e.g. the ability to read and understands text received in a variety of formats), relationship management, alliance building, negotiation
- **co-operation** including teamwork, working with peers, managers, subordinates, clients …
- **computation** including basic arithmetical computation, ability to interpret data, make estimates, understand and apply concepts related to quality assurance processes …
- **computer literacy** using screen and keyboard and including basic information and communication technology skills and applications
- **creativity** including the ability to identify and define a problem, and apply existing knowledge and understanding to its solution; the ability to think laterally, to take risks, to make new connections between old ideas …
- **critical thinking** including self-reflection, discrimination, judgement based on higher order thinking skills of analysis, interpretation, evaluation, synthesis…

Basic literacy and numeracy should be taken as a given in that they are still and always will be critical components of all key and specific competencies, forming the springboard for learning, earning and living in the modern world.

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3 Sources include but are not confined to: New Zealand Employment Service, 1997; Auckland Institute of Technology, 1998; Unitec Institute of Technology, Auckland, 1999; Victoria University of Wellington, 2000.

Yet based on results of the International Adult Literacy Survey (IALS) released in 1997 (4), it is reported that significant numbers of shop floor people were having difficulty coping with the increasing literacy demands put on them in the workplace, especially in manufacturing, construction and agriculture. Twenty percent of managers across the board were also below the minimum level of competence for such positions. These results could be seen as having potentially serious implications for productivity, and at least possibly indicative of a wider set of problems.

3.9 Competencies specifically important for New Zealand

3.9.1 Economic

In terms of the future economy, the possibilities for New Zealand will call for people who do not have the well-rehearsed answers but can ask the important questions, and be willing and empowered to take risks - that is how to get breakthrough ideas, innovation, entrepreneurial vision and drive.

More specifically, New Zealand's economy is a small economy, resting essentially on biological foundations, enhanced by technological applications.

As identified in the early sections of this paper, ongoing successful management of geography and diversity are key to maximising the benefits of this. In terms of geography, the size and configuration of the country, its distance from major markets, and the paucity of its mineral reserves generate particular foci for future development.

New Zealand must continue to be an early adopter of technologies, particularly when they have assisted in overcoming barriers of physical distance. Benefits of such adoption have shown to date in ways as diverse as frozen food export from the 19th century to current Internet technologies.

Biggest gains will come from turning the full power of knowledge, creativity and innovation to adding value and applying new technologies to those areas in which we have traditionally excelled. Examples have included
- producing food and textiles
- developing niche products and markets that build on natural advantages
- biological developments to enhance animal, plant and human health

To take advantage of this, and to overcome current barriers, people will need to be innovative, entrepreneurial, risk takers and problem solvers, and at a more disaggregated level, with competencies for:
- new venture and product development
- integrated technologies (communications, information, electronics) and their applications in existing industry and business (including media), in developing fields such as

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4 The survey included a random sample of 4,223 New Zealand adults who completed tasks in prose, document and quantitative literacy (numeracy).

advanced materials, intelligent devices, genetics and bio-technology, as well as in areas previously mentioned

- marketing and selling, strategic marketing and branding (to control value and production chains and distribution channels)
- international languages
- environmental management
- leadership and general management

3.9.2 Social

At the level of community and social development, New Zealand's unique history and cultural mix calls for:

- competencies based on self-knowledge, tolerance and respect, to enable New Zealanders to accommodate the diverse range of views, philosophies, traditions, backgrounds and cultures and through this build a socially cohesive nation
- competencies, determined by Mäori, related to Mäori language, culture, values, protocols and practices
- competencies, determined by Pacific peoples in New Zealand, related to Pacific languages, cultures, values, protocols and practices.

New Zealand needs to continue to operate as a national entity, not seeking finality in any sense but journeying towards better understanding, common goals, and continuous improvement of the individual and collective lot.

3.10 Universal nature of key competencies

The more aggregated and generalised the level, the more key competencies are universally applicable. For example, KC1 (acting autonomously) and KC3 (joining and functioning in socially heterogeneous groups), and those identified within this paper, apply to all people over time, according to their changing circumstances and needs.

At a disaggregated level, the second generic key competency (using tools interactively), basic literacies (language, mathematical, technological, information) may be seen as needing to be acquired early in life, and built upon thereafter. The tools themselves, whether technical or knowledge entities and their potential applications, change over time, and some very rapidly. Their universality is therefore of a different order.

3.11 Inclusion of competencies within learning programmes and qualifications

At the level of defining and selecting key competencies for inclusion in learning programmes and qualifications some degree of convergence among educators and employers has been arrived at in New Zealand over the last decade or so, evidenced in the eight essential skills of the New Zealand Curriculum, and standards developed for and registered on the National Qualifications Framework by industry and other standards setters.

Where feasible New Zealand has incorporated, in principle, key competencies into its achievement- or outcomes-based system of education, as essential elements of learning, earning and living. This can be seen through:

- *The eight essential cross curricular skills of the curriculum.* As discussed in Section 2, these represent in a disaggregated form the national view of key competencies within compulsory schooling
- *A register of standards forming the National Qualifications Framework.* Within formal industry and workplace training in New Zealand, industry organisations have developed statements of the standards required for qualifications in the particular areas.

Some industries have subsumed key competencies (language, maths and computer literacy, problem solving, contingency planning, communication) within specific technical standards registered and the competencies are therefore inferred as having been acquired within the context of wider evidence of technical competence. This approach however does not lend itself to specific competencies being separately reported (for example as elements of a profile or a qualification).

Other industries have preferred to devote separate standards to single specific key competencies. While this does not ensure the competencies are assessed in a standard setting, it does enable their assessment and reporting as separate items. However if a key competency is assessed as being achieved in one context, situation or environment, that does not necessarily mean the competency will be able to be applied in a new context. Theories have been posited, but there is no empirical New Zealand-based research on transfer issues nor on what conditions have to be created to promote transfer. There is suspicion about the value of focusing on or developing new generic or key competencies which are context free and potentially assessed in a 'void'.

The Standard dealing with cross cultural communication in the work place has the highest uptake of any of the over 15,000 registered Standards. This level of uptake reflects the Standard's immediate practical application and relevance to the learner's needs. Standards such as this allow people to demonstrate competence in a range of personal and technical skills identified by a wide range of employers as being important in the workplace. The competencies are mainly those related to work preparation and work readiness, self-management, occupational health and safety, reading, writing, interpersonal competencies, measurement and number.

- *Reporting competencies:* The most common method of reporting competencies has been through the development of student profiles. These exist at both school and tertiary level, although their use is determined by individual institutions.

At the very least such a reporting device, to accompany the gaining of a qualification, enables meaningful recognition of the competencies, and some description of the context in which knowledge has been acquired and, where appropriate, practised or applied, and assessed - useful and desirable both for the learner and a potential employer. Many profiles of achievement are negotiated with the learners.

In short, competencies can be assessed in both learning institutions and in the workplace. In whatever site, learners, parents, teachers, administrators and decision makers need to understand the nature, purpose, role and value of competencies. Assessors need to make professional judgements based on evidence of performance in a variety of contexts over time, using adequate assessment tools and adequate information about people's achievements.

3.12 Barriers

Issues raised as barriers to the inclusion of competency definitions, assessment and reporting include the need to change for both the community and employer expectations of reporting, and the attitudes of assessors and users of such data. In addition intensive resource demands will be incurred.

Inhibiting factors identified by some of those questioned included:
- The traditional mark-driven, norm-referenced, pen and paper style of assessment system is much easier, cheaper and less time consuming.
- Difficulty in changing from a quantitative system of measurement to one that makes judgements about and describes qualitative outcomes.
- Parents, employers and the rest of society expect and value 'hard' data results.
- Measurement of the student's 'softer' competencies is prone to perception, bias, and false negatives (or positives).
- Assessing competencies is not cost effective or practical. The assessor needs sustained exposure to contextualised performance and behaviour of students/employees to be able to make valid judgements.
- It is easier to assess specific elements of competence which narrows the concept and promotes the use of proxies of competence as measurement tools.

Much learning takes place outside of the classroom. People learn when they need to know something, and they learn by doing. Making learning 'real' internalises information and converts it into knowledge which then enables meaningful knowledge to be converted into personal wisdom. This wisdom builds up the core set of human values which are then more likely to be passed down to the next generation.

There are ways to overcome the lack or insufficiency of application and experiential learning. Connecting the classroom with the community enlivens learning programmes and enables classroom learning to be applied in specific contexts, making connections between school learning and the world outside.

3.13 Competencies as national indicators and international benchmarks

There are three parts to the general question about using competencies as part of national education indicators: the first relates to outcomes for the individual student - the process of education and what value it adds to the student; the second relates to accountability for the effectiveness of the system in respect to the whole population and groups within it, and the third is a political and public sector management view of the issue of accountability for the prudent use of tax payer money. Answers to both parts of the question need to be within the context of fulfilling national education expectations.

Interviewees expressed their concerns in recognising the size of the task, and both the practical and technical issues. In particular they recognised the need for indicators to be kept under review to ensure they remain both valid and useful.

General views on indicators vary, but may be summarised in the following way. Indicators:

- should be based on what it is we expect education services to deliver and should incorporate indications of the degree to which they succeed in doing so, in as direct a way as possible
- are desirable for reasons of accountability; or for a variety of reasons associated with a desire to measure what happens within education
- may be useful to enable Mäori and Pacific communities to judge for themselves the extent to which the key competencies considered important for their young people are being achieved
- are useful tools against which New Zeland can benchmark itself internationally
- risk becoming in themselves the targets of education, and will therefore distort the real objectives of learning and teaching
- must not hinder the process of learning, and fostering a love of learning - they must not replace the desire to learn with a fear of failure
- cannot capture individual behaviour and can therefore at best be but approximate measures of what really happens in education.

Views differed on whether indicators should stay the same over long periods of time to enable the change to be monitored, or not stay the same for very long, on the basis that their definition as indicators means they may not be good measures over time, as they cannot capture or keep up with the changing world and changing learning needs, and, as with any product or service, need to be constantly under review

There is more significant experience in evaluating KC2, but a lack of familiarity with KC1 and KC3, and therefore what proxies may be used as indicators, especially given that they are both learnt and demonstrated in contexts broader than the education sector.

In addition as indicators must be recognised in culturally appropriate contexts, they require both international and cross sectoral consensus. However the process of developing such consensus, difficult as it may be, may provide benefits or other information which may be useful to member countries in the process.

3.14 Legitimising the base for the definition and selection of key competencies: consensus and controversy

Although there may well be consensus about the key nature of the competencies, there is ongoing debate around both fundamental and technical matters relating to the assessment and reporting of key competencies. Controversy arises about the extent to which they should or can be included in education programmes, be assessed and included in qualifications.

It is less likely at this stage that there would be national consensus around key competencies for Mäori, in which case they may need to be developed uniquely by and for the Mäori community.

3.15 Priorities of essential key competencies

While it is recognised that the role of government and policy makers is to set priorities at a general national level, there appears to be little sound basis for establishing priorities *per* se of

key competencies, if all chosen competencies are, in fact, 'key'. Attempts to rank key competencies in any order of priority would inevitably cause controversy. It is rather a matter of focusing on what the education system is trying to achieve.

If there is consensus about the importance of the three generic key competencies which informs the DeSeCo project and the basis of this report, and about the importance of the more specific competencies identified in sections 3.5 - 3.10 (if not those required in the New Zealand context in section 3.11), a next step should be to identify the extent to which they are already covered within the curriculum and qualifications areas. Divergence among the sets of competencies would inform the need, if any, to prioritise, and indeed would inform the next stages of development of key competencies. It may in fact prove feasible to choose a small core set of key competencies to be integrated into learning programmes in a flexible way that caters for individual, local, and community needs.

At a specific level, priorities may have to be set by decision makers when there are limited resources to ensure that key competencies are able to be delivered and trade-offs have to be made between, for example, putting resources into more reading programmes or into more computers in the classroom.

In all of this, particular attention must be paid to the needs of Mäori whose preferred key competencies risk being undervalued or sidelined by those of the dominant culture. Recognition must be paid to the diverse cultures, learning needs and operational modes in identifying competencies for all a bi-cultural and multi-cultural society,.

4 Conclusions

The findings based on the interviews conducted point to the following conclusions.

1. The three generic key competencies identified by the DeSeCo project to date are, as general and artificial constructs based on a Western paradigm, relevant across all social fields, and a well crafted set of statements useful as an initial reference point for identifying and selecting key competencies in a New Zealand context.

2. Given its unique demographic, cultural, economic and geographic circumstances, the challenge for New Zealand in defining and selecting key competencies, is:

   - to find an appropriate balance between competencies that support individual development and those that foster group behaviour
   - to ensure that people are enabled to acquire competencies contributing to both areas and to learn to utilise them in a balanced way
   - to value, engage with and interweave into any competencies framework which may be developed Mäori and Pacific communities' views of the world.

3. Competency areas which have a measure of transfer value across all fields of activity include, but are not limited to:

   - ability to reason, analyse, think critically and reflectively, identify and solve problems using a range of strategies, understand ambiguity and paradox
   - innovation and prediction, anticipation and speculation, judgement and discernment
   - flexibility, and adaptability to change, including respect for the views and cultures of others

- a range of communication, team work, collaboration, negotiation, and related interpersonal competencies
- a range of literacies covering traditional technologies (such as print) and new technologies (based on the micro-chip)

4. For its social development, New Zealand needs:
   - competencies based on self-knowledge, tolerance and respect, to enable New Zealanders to accommodate the diverse range of views, philosophies, traditions, backgrounds and cultures
   - competencies, determined by Mäori, related to Mäori language, culture, values, protocols and practices
   - competencies, determined by Pacific peoples in New Zealand, related to Pacific languages, cultures, values, protocols and practices.

5. It is feasible and desirable to incorporate key competencies into an achievement- or outcomes-based system of education, already happening to an extent in New Zealand through:
   - the eight essential cross curricular skills of the curriculum
   - many of the standards registered on the National Qualifications Framework
   - records and profiles of student achievement.

6. Competencies can be assessed in learning programmes, but learners, parents, teachers, administrators and decision makers need to understand the nature, purpose, role and value of competencies.

7. Unless key competencies are integrated into learning and assessment programmes in schools and are encompassed within national expectations of the education system, it is premature to incorporate them into sets of indicators.

8. It may be relatively easy to find indicators for the competencies relating to interactive use of tools, since 'tools' are generally related to traditional subjects, disciplines or learning domains long subject to assessment. Other key competency areas are more challenging.

9. Proxies chosen must be relevant to New Zealand society and its peoples. The norm of any proxy measurement will depend on the nature of what is being measured and its intended purpose.