



United Nations
Educational, Scientific and
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Bangkok Office
Asia and Pacific Regional Bureau
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Asia-Pacific
ERI-NET
Education Research Institutes Network

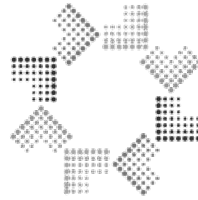


**2013 Asia-Pacific
Education Research Institutes Network (ERI-Net) Regional Study on**

TRANSVERSAL COMPETENCIES IN EDUCATION POLICY AND PRACTICE

(Phase I)

Regional Synthesis Report



MINISTRY OF
EDUCATION
REPUBLIC OF KOREA



MEXT
MINISTRY OF EDUCATION
CULTURE, SPORTS,
SCIENCE AND TECHNOLOGY JAPAN



2013 Asia-Pacific
Education Research Institutes Network (ERI-Net) Regional Study on

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(PHASE I)

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Published in 2015 by the United Nations Educational, Scientific and Cultural Organization
7, place de Fontenoy, 75352 Paris 07 SP, France

and

UNESCO Bangkok Office

© UNESCO 2015

ISBN: 978-92-9223-509-3 (Electronic version)



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TH/EPR/14/027-E

Contents

Foreword.....	v
Acknowledgements	vi
List of Abbreviations.....	vii
Introduction.....	1
Background.....	2
Terminology for the ERI-Net research	2
Trends and challenges in integrating transversal competencies into education	2
Methodology	3
Research questions, scope, and data collection methods	3
Working definition of transversal competencies.....	4
Key Findings and Analysis: Policies and Curriculum	5
Policy review of transversal competencies in education	6
Rationale for integrating transversal competencies into education	6
Positioning of transversal competencies in policy documents.....	7
Approaches to implementing transversal competencies.....	9
Modes of integration.....	11
Similarities among documented skills and competencies	13
Classification of skills, competencies, values and attributes.....	13
Diversities in skills and competencies mentioned in educational policies of ten countries and economies	15
Revisiting the UNESCO framework for transversal competencies	17
Achievements and challenges.....	18
Achievements	18
Challenges.....	19
Conclusion.....	21
Policy recommendations.....	22
Limitations of the study.....	23
Recommendations for future study and UNESCO-led activities	23
Bibliography.....	24
Annex A: Summary of case studies.....	26
Annex B: Research framework and questionnaires.....	61

Contents

List of Tables

Table 1: UNESCO's Working Definition of Transversal Competencies.....	5
Table 2: Rationale for Integration of Transversal Competencies into Education	6
Table 3: Positioning of Transversal Competencies in Policy Documents.....	8
Table 4: Modes of Integration.....	12
Table 5: Inclusion of Transversal Competencies by Country and Economy.....	16
Table 6: Revised UNESCO Framework for Transversal Competencies.....	18
Table 7: Key Competencies in Character Education in Republic of Korea.....	40

List of Figures

Figure 1: General Capabilities from the Australian Curriculum.....	9
Figure 2: Competencies and Skills from the Hong Kong SAR (China) Curriculum.....	10
Figure 3: Japan's Zest for Living.....	11
Figure 4: Number of Countries and Economies by Skills and Competencies listed in the Working Definition.....	14
Figure 5: Types of Challenges in Integrating Transversal Competencies into Education Policies and Practices.....	19
Figure 6: Examples of Definitional, Operational, and Systemic Challenges	20

Foreword

Countries face many challenges in preparing their learners for the current global realities. Economic, social, environmental, and technological changes, not to mention competition from within and across borders, are prevalent and require appropriate measures. Education policies and curricula aim to incorporate a broad range of skills and competencies necessary for learners to successfully navigate the changing global landscape. “Transversal competencies”, sometimes referred to as “21st Century skills”, are broad based skills that aim to meet these challenges, such as technological advances and intercultural communication.

Debate still exists as to how best prepare our learners for a successful and meaningful life outside of the classroom. Some recognize that traditional approaches to learning, namely “academic” subjects such as mathematics, sciences, and language, often fail to properly address new global challenges. To counter, “non-academic” skills and competencies are increasingly viewed as integral to helping learners succeed in an adaptable and changing world. These skills and competencies encompass a range of non-traditional ideas, including: innovative thinking, creativity, adaptability, respect, global awareness and communication. Recognizing a need to better prepare young learners, countries are now incorporating these skills into education policies and curricula.

The Asia-Pacific Education Research Institutes Network (ERI-Net) is well placed to oversee and facilitate the transition from traditional to non-traditional methods of learning. As a regional platform for education policy research, ERI-Net promotes and assists knowledge sharing among partners and members. It also serves to support the efforts of countries to identify and implement transversal skills and competencies for future development. At the 2012 ERI-Net Annual Meeting, the members agreed to select the term “transversal competencies” to reflect the varied language and terminology across the region.

The following report provides an understanding of how transversal competencies are viewed, implemented, and adapted in education policy and curriculum across the Asia-Pacific region. The publication consolidates the results of ten country studies carried out in 2013-2014 in ten countries and economies of the Asia-Pacific region. The findings from these studies will be used to identify successful implementation strategies, as well as how to address current challenges. It is hoped this report will be a key resource for countries in the region to apply to education policy and contribute to progress in implementing and incorporating transversal skills into education curriculum.



Gwang-Jo Kim

Director

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Acknowledgements

This report is the result of collaborative efforts in conducting a regional study on integrating 21st century/transversal competencies in education policy and curriculum framework in ten countries and economies of the Asia-Pacific Region conducted under the framework of the 2013 activities of Asia-Pacific Education Research Institutes Network (ERI-Net).

We would like to thank our partners who have made this study possible by conducting the research and producing the case studies for the ten selected countries and economies: Australia: Martin Westwell and Kristin M. Vonney of Flinders University; Shanghai, China: Xu Jinjie and Yan Jiaping of Shanghai Normal University; Hong Kong, Special Administrative Region (SAR), China: Kerry Kennedy and Sammy King Fai Hui of Hong Kong Institute of Education; India: Anjee Prakash and Deepika Sharma of Learning Links Foundation; Korea, Republic of: Misook Lee, Youngsun Kwak, and Jimin Cho of Korea Institute of Curriculum and Evaluation (KICE); Japan: Shinobu Yume Yamaguchi, Junko Onodera and Mihoko Kurokawa of Tokyo Institute of Technology; Malaysia: Sheela Nair and Asmah Ahmad of Ministry of Education; Mongolia: Javzan Sukhbaatar of Institute of Finance and Economics; Philippines: Fe Hidalgo of Foundation for Upgrading the Standard of Education and Melissa Alma R. Orenca, Marla C. Papango, Wilma S. Reyes and Rita Bumanglag-Rusco of Philippine Normal University; and Thailand: Paitoon Sinlarat, Jawalaksana Rachapaetayakorn, Janpha Thadphoothon and Rosukhon Swatevacharkul of Dhurakij Pundit University.

In addition, we would like to extend appreciation to our external peer review group; namely Harry Anthony Patrinos, Alexandria Valerio, Namrata Raman Tognatta, and Luis Benveniste from the World Bank; Carmela Torres from the International Labour Organization; and Maki Hayashikawa and Nyi Nyi Thuang from UNESCO Headquarters.

Our sincere gratitude also goes to the many teachers, school principals, education officers and researchers who provided information and facilitated the organization of and participation in interviews, questionnaires and discussions conducted for this study. We would also like to express our thanks to the young people from across the region who provided their thoughts of 21st century skills through articles and video films submitted to a regional e-contest, *Skills for a Better Life*, which was organized in the context of the research.

This regional synthesis report was prepared by a team led by Satoko Yano of Education Policy and Reform Unit, UNESCO Asia and Pacific Regional Bureau for Education (Bangkok, Thailand), based on the initial synthesis report prepared by Kai-Ming Cheng, the University of Hong Kong. Many UNESCO staff and interns contributed to the preparation of the report. Sofia Strandberg played a major role in drafting the report, while Naoko Asano Enomoto, Jin-A Hwang, Swee Noi Tang, Mark Manns, Paola González-rubio Novoa, and Stephanie Choo provided valuable research and editorial support. The report also benefited from comments received from Gwang-Chol Chang. Technical assistance was also provided by Ratchakorn Kulsawet.

This regional research was made possible by the generous support and collaboration of KICE, Tokyo Institute of Technology, the Ministry of Education (Republic of Korea), and the Ministry of Education, Culture, Sports, Science and Technology (Japan).

List of Abbreviations

ATC21S	Assessment and Teaching of 21st Century Skills
CBSE	Central Board of Secondary Education (India)
CCE	Continuous and Comprehensive Evaluation (India)
ERI-Net	Asia-Pacific Education Research Institutes Network
GDP	Gross Domestic Product
HDI	Human Development Index
ICT	Information and Communications Technology
ISCED	International Standard Classification of Education
IT	Information Technology
KICE	Korea Institute of Curriculum and Evaluation
KLAs	Key Learning Areas
KSSM	Standard Curriculum Secondary School (Malaysia)
KSSR	Standard Curriculum Primary School (Malaysia)
MEXT	Ministry of Education, Culture, Sports, Science and Technology (Japan)
MIL	Media and Information Literacy
MTBMLE	Mother Tongue-Based Multilingual Education (Philippines)
NCERT	National Council of Educational Research and Training (India)
NCF	National Curriculum Framework (India)
NIER	National Institute for Educational Policy Research (Japan)
OBEC	Office of Basic Education Commission (Thailand)
OECD	Organisation for Economic Co-operation and Development
P21	Partnership for 21st century skills
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
RTA	Right to Education Act (India)
SACE	South Australian Certificate of Education
SAR	Special Administrative Region
SUPW	Socially Useful and Productive Work
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organization

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Introduction

The Asia-Pacific region has been spearheading global, social, and economic development for the last several decades. Millions of people have been lifted out of poverty and basic education (primary and lower secondary) has become near universal in many countries in the region. Upper secondary and higher education enrolment rates have also increased significantly. However, while these are tremendous achievements, education quality remains a major concern among emerging economies and industrialized nations alike. While some countries in the region excel in international assessments, such as the Programme for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS), and the Progress in International Reading Literacy Study (PIRLS), other countries still attain low scores. National assessment results of countries that have not participated in international assessments reveal large knowledge and skills disparities among students of the same country. In some cases the results also indicate a very low attainment level of basic skills, even after years of schooling.

At the same time, the debate surrounding what actually constitutes quality education and learning in the 21st century is ongoing. There is a growing concern that education systems are focusing too much on the accumulation of academic “cognitive” skills at the expense of the more elusive and hard-to-measure “non-academic” skills and competencies. The accumulation of these skills and competencies, which include skills and competencies in efficient communication with others, innovative thinking, respect for diversity and the environment, conflict resolution, team work, problem solving, and so on, is not only important for students to be adequately prepared for the world of work, but is also paramount in ensuring future generations are equipped to live meaningful, sustainable, and responsible lives in a rapidly changing and interconnected world.¹ The effects of the limited attention paid to such skills and competencies in education can be felt in a number of domains and include, for example: poor respect for diversity (including socio-economic, ethnic, and gender equality), neglect of environmental issues, and a lack of innovation and social entrepreneurship among students.

To counter these challenges, many countries and economies in the Asia-Pacific region have introduced, or are in the process of introducing, policy and curriculum changes aimed at enhancing the cultivation of such “non-academic” skills and competencies in learners. To date, these important reforms in the Asia-Pacific region have not been widely documented, and hence, in 2013 members of the Asia-Pacific Education Research Institutes Network (ERI-Net), hosted by UNESCO Bangkok since 2009, agreed to make this their next topic of investigation. The research aims to document and consolidate reform initiatives for knowledge dissemination and policy consideration to the benefit of countries and economies in the Asia-Pacific region and beyond. In phase I, the 2013 ERI-Net research examined how different countries and economies in the region define and apply “non-academic” skills (often termed “non-cognitive skills”) in their education policies, practices, and curriculum frameworks, and identified emerging trends and challenges. This report synthesizes ten case studies² and includes important information and insights gained from the discussions held during the ERI-Net annual meeting 2013. The objectives of the report are: (i) to capture the movements in the realm of “non-academic” learning in ten education systems in the Asia-Pacific region; (ii) to identify possible policy recommendations for promoting and enhancing well-rounded and holistic learning; and, (iii) to suggest further stages of investigation.

¹ The importance of this has been frequently highlighted on many occasions, such as the regional high-level expert meetings on education and learning beyond 2015 (May and November 2012 in Bangkok, Thailand).

² Reports were received from Australia, Hong Kong SAR (China), India, Japan, Republic of Korea, Malaysia, Mongolia, Philippines, Shanghai (China) and Thailand.

Background

Terminology for the ERI-Net research

Various terminologies are currently used within the international research community to refer to the category of “non-academic” knowledge, skills, values, and attitudes deemed necessary and integral to life in the 21st century. Some international research projects or institutions prefer the term “21st century skills” or “21st century learning” (e.g. the Assessment and Teaching of 21st Century Skills [ATC21S], the Partnership for 21st century skills [P21], Asia Society, and International Society for Technology in Education), whereas the Organisation for Economic Co-operation and Development (OECD) uses the term “key competencies” (e.g. OECD 2005). In addition, there are also a number of interpretations of which particular skills, attitudes, and values belong in this category.

To date, no consensus has been reached among the ERI-Net members on a single term for referring to non-academic skills, non-cognitive skills, 21st century skills, or transversal competencies, and this is reflected in the reports from the respective countries and economies. In the report from the Philippines, the term used is “non-cognitive skills”. The report from the Republic of Korea uses “character education”, whereas the Hong Kong SAR (China) report uses the term “cross curriculum skills or generic skills”. At the ERI-Net annual meeting in October 2013, an additional term, “transversal competencies”, was suggested and adopted.³ All terms broadly refer to and encompass skills, competencies, values, and attitudes required for the holistic development of learners, such as: collaboration, self-discipline, resourcefulness, and respect for the environment. While no preference is given to any term, for the ease of the reader a single term is used throughout this document hereafter: transversal competencies. It is recognized, however, that the issue of terminology will need to be continuously revisited as the concept continues to evolve.

Trends and challenges in integrating transversal competencies into education

Existing studies indicate that many national curricula have moved towards integrating transversal competencies as a response to the number of social, economic, and cultural changes brought on by globalization and the rapid development and proliferation of Information and Communications Technology (ICT) (European Commission 2002, OECD 2004, Hipkins, Boyd & Joyce 2005, Voogt and Pelgrum 2005). In their review of nine theoretical frameworks for transversal competencies, Choo and Villanueva (2012) found that one of the major challenges in embedding transversal competencies in learners is how to best integrate transversal competencies into existing curricula. Further to this, Dede (2010a,b) highlights that in the discussions surrounding this challenge, little attention is paid to what aspects are actually really new and why transversal competencies are beneficial to students. This is problematic since many of the competencies defined as transversal are not necessarily new nor completely absent in the existing curricula (e.g. collaboration). Another challenge concerns how and to what extent transversal competencies should be expressed in national and school curricula, as discussed by Trier (2003).

³ More information about the ERI-Net annual meeting in 2013 can be found here: <http://www.unescobkk.org/en/education/epr/epr-partnerships/eri-net/eri-net-seminar-2013-oct/>

There are several approaches to placing transversal competencies within existing curriculum. P21, one of the major theoretical frameworks of transversal competencies, highlights that the importance of mastering traditional core subjects (i.e. mathematics, science, language, arts, and social studies) should not be ignored. P21 suggests identifying broad and contemporary topics that connect transversal competencies with core subjects (P21, 2009a,b). For example, environmental literacy within the P21 framework requires that students have a comprehensive understanding of environmental issues and that they transfer the knowledge they develop into action, meaning that they must have the ability to analyse, evaluate, and make sound and informed decisions at the citizen's level (Schneider, 1997).

Gordon et al. (2009) identified three ways of integrating transversal competencies into national and school curricula: (i) by adding transversal competencies to the already existing curriculum as new subjects or as new content within traditional subjects; (ii) by integrating transversal competencies as cross-curricular competencies that underpin all school subjects; or, (iii) by making transversal competencies part of a new curriculum in which the traditional structure of school subjects is transformed and schools are regarded as learning organizations.

Based on their study and analysis of the experiences of seventeen OECD countries, Ananiadou and Claro (2009) found that transversal competencies are integrated in a cross-curricular manner in many countries (e.g. Belgium, New Zealand, Finland, and Republic of Korea). However, they also reported that ICT-related content was predominantly added as new and separate subjects.

As illustrated above, there are several different approaches to integrating transversal competencies into existing curricula. Among these, recent studies tend to support the incorporation of transversal competencies across the curriculum due to the domain's complex and cross-disciplinary nature (Pacific Research Policy Centre, 2010, Voogt and Roblin, 2012). Indeed, multiple countries in the region have introduced policy and curriculum aimed at cultivating transversal competencies (e.g. Australia, Hong Kong SAR [China], and Japan). However, many of the research studies undertaken to date do not always include experiences of the Asia-Pacific region. Out of the seventeen participating OECD countries in Ananiadou and Claro's study (2009), only the Republic of Korea was from the region. In this regard, the ERI-Net research project is well positioned to make a significant contribution to existing research on transversal competencies by collecting and documenting perspectives and insights from the Asia-Pacific region.

Methodology

Research questions, scope, and data collection methods

With participation of ten countries and economies, the ERI-Net 2013 research project on transversal competencies in education policies and practice was conducted from March to December 2013. The research framework, which includes recommended research approaches and questionnaires, was developed by the ERI-Net Secretariat and approved by the ERI-Net members at the ERI-Net expert meeting held in March 2013.

The overarching research questions are:

- **What is the status of integrating and applying transversal competencies into education policy and practice in countries of the Asia-Pacific region?**
- **What are the experiences?**
- **What are the lessons learned?**

Under the overarching questions, participating countries and economies were requested to investigate the status of integration of transversal competencies into education policies, related legal documents, and curricula. The scope of the research encompassed general school education, referring to both primary and secondary education.

To reflect the exploratory nature of the study, the research framework proposed a number of possible approaches to the study. Most of the reports adopted a qualitative method. Proposed data collection and analysis methods included: (i) review of policy documents (e.g. the Constitution, national development plans, education sector plans, and education laws), curriculum frameworks, and related instruments; (ii) stakeholder interviews; and, (iii) questionnaires for policy-makers and teachers.⁴ Among the ten participating countries and economies, five chose to include the questionnaire proposed by the ERI-Net Secretariat in their study (Australia, India, Japan, Mongolia, and Shanghai [China]). India modified the questionnaires to suit the country's specific context.

The research produced diverse and varied results that showcase a broad spectrum of perspectives, interpretations, and definitions of transversal competencies in the Asia-Pacific region. This may be due to the range of approaches taken to investigate the research questions, but it may also be a reflection of the diverse situations and research contexts of the Asia-Pacific region, as will be discussed in the following sections.

Working definition of transversal competencies

As a foundation to the ERI-Net research on transversal competencies in education, the ERI-Net Secretariat drafted a tentative framework for the definition of transversal competencies consisting of four broad domains of skills, competencies, values and/or attributes. These are, as shown in Table 1: (i) critical and innovative thinking; (ii) inter-personal skills; (iii) intra-personal skills; and (iv) global citizenship. In recognising that there are significant variations in the definition and interpretation of transversal competencies among participating countries and economies, participants of the ERI-Net expert meeting in March 2013 agreed that each domain would remain generic. Each country and economy would clarify and use their own definitions of transversal competencies under each domain in their studies. Participants also recognized that each domain is not mutually exclusive and researchers may place the same competencies in different domains. Where applicable, researchers were encouraged to add new domains and clarify which skills, competencies and values that any new domain would include.

⁴ The full texts of the research framework and the research questionnaire are provided in Annex B

Table 1: UNESCO's Working Definition of Transversal Competencies

Domains	Examples of Key Characteristics
Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
Inter-personal skills	Presentation and communication skills, leadership, organizational skills, teamwork, collaboration, initiative, sociability, collegiality
Intra-personal skills	Self-discipline, enthusiasm, perseverance, self-motivation, compassion, integrity, commitment
Global citizenship	Awareness, tolerance, openness, respect for diversity, intercultural understanding, ability to resolve conflicts, civic/political participation, conflict resolution, respect for the environment
Optional domain: (Example) Physical and psychological health	Healthy lifestyle, healthy feeding, physical fitness, empathy, self-respect

Key Findings and Analysis: Policies and Curriculum

The case studies reveal that all countries and economies examined have moved or started to move towards placing greater emphasis on transversal competencies in their education agendas. Indeed, most of the education systems examined in the reports have recently launched policies to include or enhance transversal competencies as a significant part of the policy agendas. However, the research also shows that there is remarkable diversity in, for example, perspectives, incentives, and implementation stages of reform initiatives and changes. In addition, the research framework allowed for researchers to approach the research question from a number of angles. As a result, the reports are varied also in their focus and content. Some reports document significant education reforms that have taken place in which the discourse on transversal competencies plays a lead role (e.g. Philippines, Hong Kong SAR [China], and Malaysia). Other reports provide an analysis of the education system in question with particular attention paid to transversal competencies, and some reports document the opinions of the researchers, or the survey results of key education stakeholders.

Despite the presence of this diversity and variations in the reports, the research results provide clear evidence of the existence of a general trend in the Asia-Pacific region to integrate transversal competencies into education policy and curriculum frameworks. As such, the reports contribute significantly to the international research body on transversal competencies by documenting how the teaching of transversal competencies has moved beyond theory and emerged as important elements in education policies in the region. This evidence may serve to alert and encourage other education systems that are yet to revisit and initiate changes in their policy and curricula to do so. The following is a synthesis and analysis of the ten reports. It attempts to capture the great diversity within the transversal competencies movement in the Asia-Pacific region and the challenges it faces.⁵

⁵ Summaries of each case study are provided in Annex A

Policy review of transversal competencies in education

Phase I of the ERI-Net research entails a review and analysis of education policies in the Asia-Pacific region and aims to identify and document how and to what extent transversal competencies are articulated in these. The following section outlines the different incentives behind the introduction of transversal competencies, how these are positioned in policy documents, and the different approaches to integration. While there is diversity in these areas, some common patterns as to why transversal competencies are considered important (i.e. rationale) and how transversal competencies are reflected in policies (i.e. positioning) can be detected.

Rationale for integrating transversal competencies into education

The ten reports provide a detailed account of the various incentives and reasoning behind the introduction and integration of transversal competencies into their education systems. These can be classified into three discourses available at three broad levels of perspectives: economic, social, and humanity discourse, and global, national, and personal perspective, as illustrated in Table 2.

Table 2: Rationale for Integration of Transversal Competencies into Education

	Economic Discourse	Social Discourse	Humanity Discourse
Global Perspective	Competitiveness	Understanding & Peace	Global Citizenship
National Perspective	GDP Growth	HDI Growth	Patriotism
Personal Perspective	Employability	Community/Harmony	Moral Formation

For most countries and economies that participated in the ERI-Net research, the rationale behind their move towards the integration of transversal competencies into education is a combination of the above discourses and perspectives. At a glance, the economic discourse appears as the most powerful driver of this movement with, for example, boosting economic development and increasing international competitiveness cited by Japan, Mongolia, Thailand, and Malaysia as reasons behind education reforms aimed at the integration of transversal competencies. Some countries and economies also cited the employability of young people as another rationale (e.g. Australia, Mongolia, and Thailand). This stems from the implicit factor of the changing workplace, and hence, the changing expectations placed on new young employees. At the same time, some countries and economies also emphasized the social and humanity discourse in which education is seen as a vehicle for fostering a number of social, ethical, and moral attributes among students, such as national identity, respect for diversity, tolerance, and empathy, evident in, for example, the Republic of Korea's "character education" and Malaysia's strong emphasis on these competencies throughout the whole curriculum.

From the reports it is made clear that all countries and economies see integration of transversal competencies as imperative to the holistic development of their youth, and consequently their societies. All reports mention changing global and social contexts, including mounting threat of war and social unrest, as important factors driving the promotion of transversal competencies as these are seen as integral to fostering the attitudes and inter-personal attributes necessary to manage and cope with, for example, uncertainty and changes. None of the education systems researched views the acquisition of knowledge and "cognitive" skills as the sole target goal of education.

Positioning of transversal competencies in policy documents

While all countries and economies that participated in the research clearly show that integration of transversal competencies constitutes one of the key reforms in education, how these reforms are envisioned, articulated, and positioned in policy documents varies. Some countries and economies use specific terms and definitions of transversal competencies in their policy documents (e.g. “21st century skills” in Malaysia, “life skills” in Thailand, “generic skills” and “values and attitudes” in Hong Kong SAR [China], and “zest for living” in Japan). In India, the Central Board of Secondary Education (CBSE), one of India’s largest boards, uses phrases such as “life skills,” “co-curricular skills,” “attitudes” and “values” to represent transversal competencies. Other countries and economies do not use specific terms to refer to transversal competencies, but they are still explicitly or implicitly integrated in their key learning targets.

For instance, in the case of Japan, aspects of transversal competencies are observed in education acts such as Basic Education Act 2006 and School Education Act and these aspects are reflected into the national guideline of the curriculum (e.g. 1998 Courses of Study and 2008 Courses of Study). However, in the case of Mongolia, for example, there are no specific policies, plans, or projects explicitly aimed at the integration of transversal competencies, however, most of the policy-makers interviewed during the research consider such competencies extremely important.

The following table (Table 3) reveals the positioning of the key policy documents that appeared in the ten country/economy research reports. Transversal skills or competencies are integrated into the education systems in a variety of ways, from government legislation to curriculum and education programs, both explicitly and implicitly. The chart also reveals when these policy reforms were enacted or implemented, and what level of education is impacted. There is considerable variation in how countries have positioned transversal competencies, however there is evidence that these skills are present within each education system.

Table 3: Positioning of Transversal Competencies in Policy Documents

	Country/ Economy	Inclusion in Policies		Implementation Time Frame	Level of Education
		Legislation or Government Document	Curriculum Framework, Curriculum or Programs		
Explicit Policy or Curriculum	Australia	Melbourne Declaration on Educational Goals for Young Australians (2008)	Early Learning Years Framework (2009); Australian Curriculum (2008); Senior Secondary Curricula	National Quality Framework (2014); Australian Curriculum (2008–2017); e.g., Senior Secondary Curricula South Australian Certificate of Education (SACE) (senior secondary) 2009–2011	Early Childhood, Primary, Secondary Education
	Hong Kong SAR (China)	*N/A	Basic Education Curriculum Guide; Hong Kong General Education Initiative 2007;	*N/A	Primary, Secondary, Higher Education
	India	Right to Education Act 2009	National Curriculum Framework 2005; Continuous and Comprehensive Evaluation 2009	*N/A	Primary to Secondary Education
	Japan	Basic Education Act 2006, School Education Act 2007	1998 Courses of Study; 2008 Courses of Study 2008	2008 Courses of Study (2011– 2013); Second Basic Plan 2013-2017	Primary to Secondary Education
	Republic of Korea	Comprehensive Plan for the Prevention of School Violence 2012	Supplementation of National Curriculum 2012	“Character Education” 2012	Early Childhood, Primary, Secondary Education
	Malaysia	National Philosophy of Education; National Education Policy; Malaysian Education Blueprint 2013-2025	KSSR (Primary School Curriculum) 2011, KSSM (Secondary School Curriculum) will be ready for 2017	KSSR 2011-2016, KSSM 2017~	Primary to Secondary Education
	Philippines	Republic Act No. 10533 (Enhanced Basic Education Act 2012)	2002 Basic Education Curriculum; 2010 Revised Secondary Education Curriculum; K-12 Enhanced Basic Education Curriculum 2012–2018	2012–2018	Primary to Secondary Education
	Thailand	National Education Act 1999; National Education Plan 2002–2016; 11th National Economic and Social Development Plan 2012-2016	Core Curriculum of Basic Education 2008	Second Decade of Education Reform 2009–2018	Early Childhood, Primary, Secondary, Higher Education
Implicit Policy or Curriculum	Mongolia	*N/A	General Education Curriculum 2013(reformed), “Upright Mongolian Child” program 2013	Mongolian Upright Child program 2014–2016	Early Childhood, Primary, Secondary Education
	Shanghai (China)	Outline of Shanghai’s Plan for Medium and Long-term Education Reform and Development (2010-2020)	1988 curriculum reform, 1998 curriculum reform, 2005 national spirit education, students life education	Medium and Long-term Education Reform Plan 2010–2020	Primary to Secondary Education

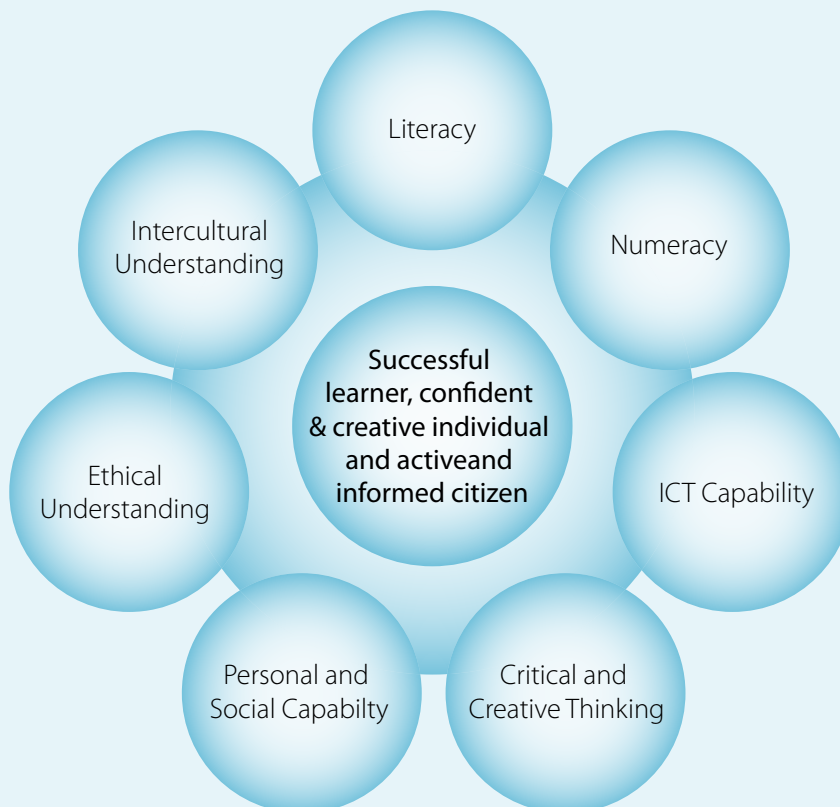
* N/A = No specific information was mentioned in the country/economy reports.

Table 3 is based on information gathered from the country reports, and hence, is subject to the interpretations by the report writers and the extraction of information may involve subjective elements.

Approaches to implementing transversal competencies

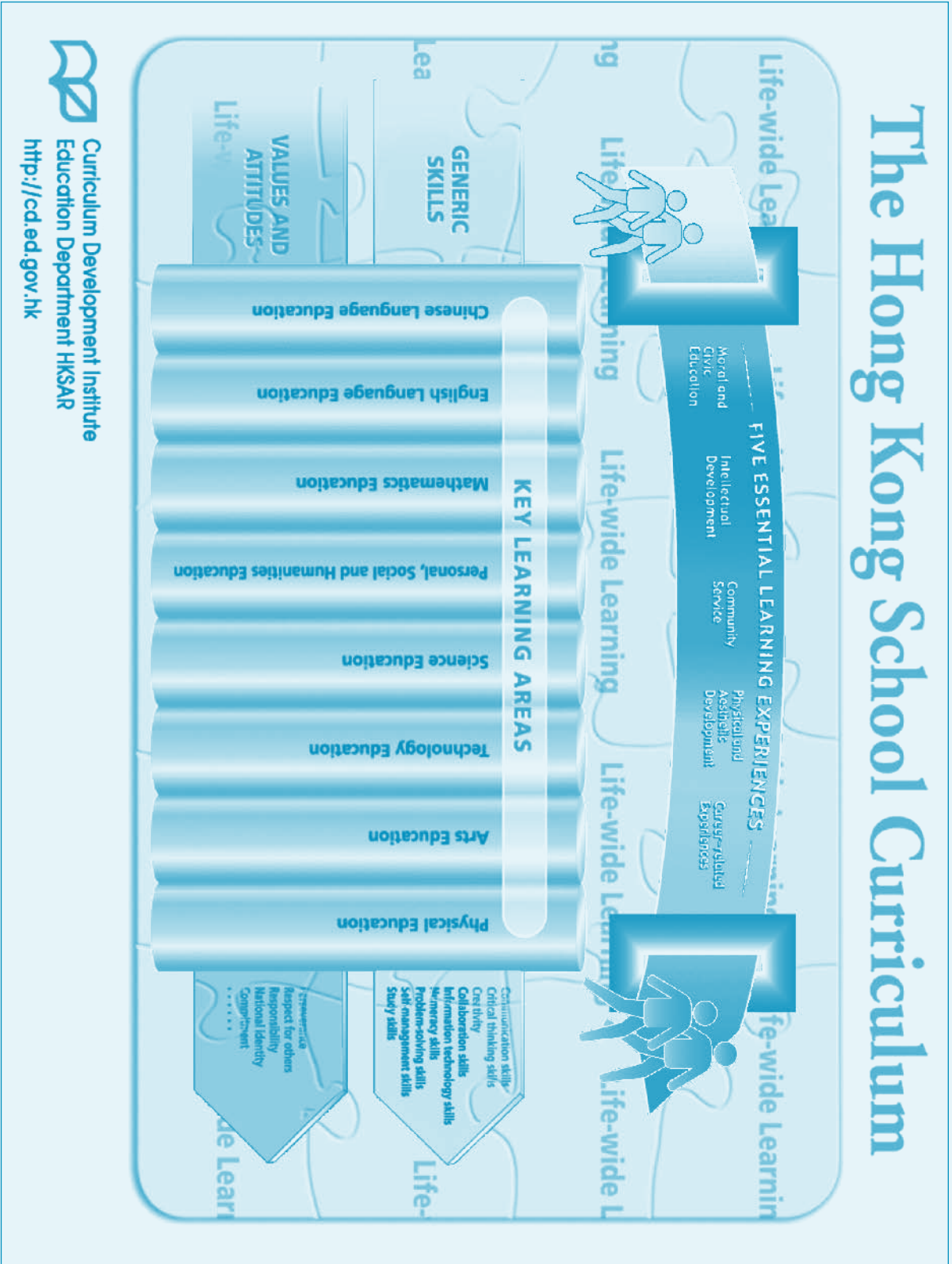
The ten participating countries and economies documented the various approaches in which their government developed their curriculum framework or other methods for the inclusion of transversal competencies. Although each study shows different education systems adopt different approaches, there are roughly two types of approaches: (a) the analytical approach and (b) the holistic approach. In the analytical approach, learning of transversal competencies is facilitated through a cluster of learning areas or learning experiences, each intended to provide the learner with a particular competency. The fulfilment of the target goal is therefore the satisfactory implementation of all the elements in the cluster. The elements in the cluster may or may not be seen as intrinsically associated with one another. This approach seems to have been adopted by all participating countries and economies except Japan. Figures 1 and 2 demonstrate examples of the analytical approach.

Figure 1: General Capabilities from the Australian Curriculum



Source: Australian Curriculum - <http://www.australiancurriculum.edu.au/GeneralCapabilities/Overview/general-capabilities-in-the-australian-curriculum>

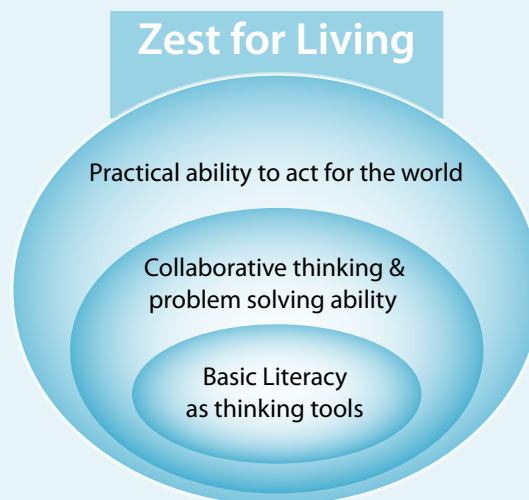
Figure 2: Competencies and Skills from the Hong Kong SAR (China) Curriculum





The holistic approach perceives learning of transversal competencies as an essential dimension of learning, and hence, views it as an overarching concept in which different activities take place, that is, learning of transversal competencies is introduced as a scheme that conveys an overall message. In a typical holistic approach, the scheme may not dictate concrete activities that should take place; rather, this is left to the schools and educators. Japan provides a typical example of the holistic approach (Figure 3), which according to the case study of Japan, is still subject to scrutiny and discussion in the country.

Figure 3: Japan's Zest for Living



Source: National Institute for Educational Policy Research (NIER), 2013.

The analytical approach often includes a clear list of activities – at times also implementation benchmarks – and hence, lends itself more easily to measurement and funding. The holistic approach, on the other hand, with its overall achievement goals provides a stronger theme and message. It leaves more room for interpretation by teachers, which it can be argued is more sustainable, as teachers tend to feel a greater sense of ownership of their policies and, hence, are more likely to engage actively with these. However, it may be more difficult to measure and compare student achievements, as the holistic approach may lead to diverse schemes.

Modes of integration

Different education systems utilize different methods of integrating the teaching and learning of transversal competencies into the curriculum. There are largely three modes through which learning of transversal competencies can take place:

- *Specific Subject:* Learning of transversal competencies is included as a well-defined entity within the formal curriculum, for example, a subject with specific goals and syllabuses for formal teaching.
- *Cross Subject:* Learning of transversal competencies runs across, infiltrates and/or underpins all “vertical subjects”, i.e. traditional school subjects.
- *Extra-Curricular:* Learning of transversal competencies is made part of school life and embedded purposefully in all types of non-classroom activities.

The three methods are not mutually exclusive and multiple modes can be utilized in any one education system. Table 4 illustrates the different modes of integration as conveyed in the case studies.⁶ According to the reports, most countries and economies utilize at least two methods. For example, the Australian curriculum implicitly and explicitly includes transversal competencies in every educational activity. To this end, the Australian curriculum provides detailed information on each capability and how it can be adopted across each subject. In Thailand, the core curriculum of basic education specifies “life skills” as important capabilities that every student should develop. Life skills are integrated into every subject and also taught specifically through various projects, which require cooperation from school administrators, parents, and communities. Malaysia utilizes a cross-curricular method but also promotes transversal competencies through extra-curricular activities, such as participation in societies, clubs, games, and sports. In Mongolia, the teaching of transversal competencies implicitly occurs across all subjects, in individual electives, and through the “Upright Mongolian Child” programme. In India, transversal competencies are integrated across subject (e.g. language and science), while there is also a specific subject (moral education) and extra-curricular activities (e.g. participation in organizations as Scouts).

While cross-subject integration of transversal competencies appears to be the most popular mode among the ten reports, certain skills/knowledge, such as ICT skills and citizenship, are taught as a specific subject. For example, in Shanghai (China) subjects titled “Labour and Technique” and “Information Technology” aim to equip students with the ICT skills needed for employment. The case of Thailand documents similar subjects. In Malaysia, citizenship education is taught as a specific subject for all students, while Islamic Studies and Moral Studies are also offered. In the Philippines, “Values Education” teaches, among other things, the values of patriotism and nationalism. In Mongolia, “project work” aims to develop students’ ability to prioritize and find solutions to urgent issues and to engage students in social and community activities. In the case of India, “Moral Education” is designed to emphasize on development of moral values. Further analysis on experiences of the countries/economies will be conducted in the next phase study.

Table 4: Modes of Integration

Country and Economy	Specific Subject	Cross Subject	Extra-Curricular
Australia	✓	✓	-
Hong Kong SAR (China)	✓	✓	✓
Shanghai (China)	✓	✓	✓
India	✓	✓	✓
Japan	-	✓	✓
Republic of Korea	-	✓	✓
Malaysia	✓	✓	✓
Mongolia	✓	✓	-
Philippines	✓	✓	✓
Thailand	✓	✓	✓

⁶ Table 4 is based on information gathered from the country reports, and hence, is subject to the interpretations by the report writers and the extraction of information may involve subjective elements.

Classification of skills, competencies, values and attributes

Similarities among documented skills and competencies

This section primarily discusses skills and competencies widely documented among the ten countries and economies. Figure 4 presents the number of countries and economies that mentioned skills and competencies listed in the working definition. Major findings are summarized into the following six points.

1. Skills and competencies found in all ten countries and economies

There are six skills and competencies referred to in the education policies of all participating countries and economies. They are: “critical thinking”, “innovative thinking”, “reflective thinking” and “reasoned decision-making”, categorized in *Creative and Innovative Thinking* domain; and “communication skills” and “collaboration”, categorized in *Inter-personal Skills* domain (highlighted in Figure 4, following page).

2. Prominance of *Creative and Innovative Thinking*

This domain is considered important by all ten countries and economies that participated in the research. “Critical thinking”, “innovative thinking”, “reflective thinking”, and “reasoned decision-making” are included by all countries and economies in their policy and curricula. “Creativity” and “entrepreneurship” are mentioned by nine countries and economies, “application skills” in eight, and “resourcefulness” in seven.

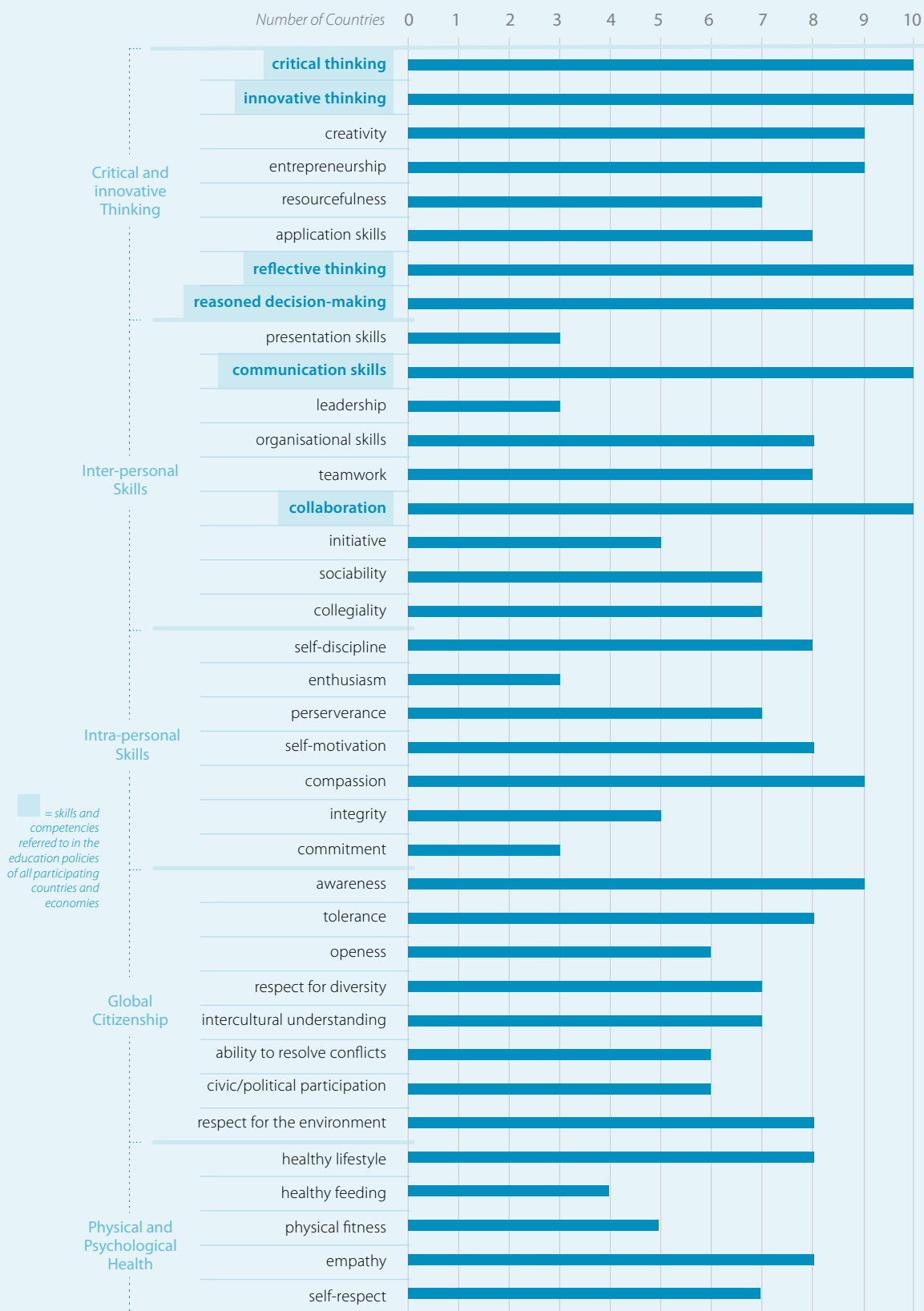
3. *Inter-Personal Skills* vary across countries and economies

Although skills and competencies categorized as *Inter-personal Skills* domain are referred to in the education policies of many countries and economies, differences are found for specific skills and competencies. “Communication skills” and “collaboration” are mentioned in policies and curricula of all ten countries and economies. Eight cases mention “organizational skills” and “teamwork”. “Sociability” and “collegiality” are mentioned in seven cases, “initiative” in five, and “leadership” and “presentation skills” in three. Other skills and competencies mentioned in the case studies that could potentially fall under this domain include: “love” (Malaysia), “language etiquette in speaking and writing” (Republic of Korea), and “ability to compromise” (Republic of Korea).

4. Different Interpretations of *Global Citizenship*

Skills and competencies related to this domain are mentioned in policies and/or curricula of all countries. “Awareness” is mentioned in nine reports; “tolerance” and “respect for the environment” are mentioned in eight reports; “respect for diversity” and “intercultural understanding” are mentioned in seven; “openness”, “ability to resolve conflicts”, and “civic/political participation” are mentioned in six. Other skills and competencies mentioned in the reports that can fall under this domain include: “responsibility” (Australia, Hong Kong SAR [China], Japan, Malaysia, Philippines, Shanghai [China], and Republic of Korea); “ethical understanding” (Australia, Hong Kong SAR [China], Mongolia, and Japan); “belonging/sense of unity” (Australia, Mongolia, and Republic of Korea); “respect for national language”, “culture, customs and ethics” (Mongolia); “national identity and patriotism” (Hong Kong SAR [China], Malaysia, Mongolia, Japan, Philippines, and Shanghai [China]); “local wisdom appreciation and preservation” (Thailand); “loyalty” (Malaysia); “respect for social norms” (Republic of Korea and

Figure 4: Number of Countries and Economies by Skills and Competencies listed in the Working Definition



Source: Created by the authors based on country reports.

Philippines); “respect for human rights” (Malaysia, Philippines, and Republic of Korea); “democratic procedure and justice” (Republic of Korea); “respect for community values” (Republic of Korea and Philippines); and “mutual understanding and peace” (Republic of Korea).

5. Importance of Physical and Psychological Health

Although physical and psychological health was an optional domain for research, several case studies document the inclusion of skills and competencies related to this domain in their policy documents. India’s case study, for example, documents a strong emphasis on yoga, health, and nutrition programmes. The promotion of a “healthy lifestyle” and “empathy” were mentioned in eight reports, whereas “self-respect” was mentioned in seven reports, and “physical fitness” was mentioned in five reports. Other examples of skills and competencies mentioned that fall under this domain include “physical and aesthetic development” (Malaysia), “handling crisis” (Shanghai [China]), and “managing emotions and stress” (Thailand and India).

6. Importance of Information and Communication Technology

Although the skills and competencies related to ICT were not included in the working definition of transversal competencies, seven countries and economies mentioned that acquiring ICT skills and competencies are important. In education policies of the seven countries and economies, the ICT related skills are listed specifically as follows: “ICT ability” (Shanghai [China]), “IT literacy” (Hong Kong SAR [China]), “application of technology” (Japan), “digital literacy” (Mongolia), “visual and information literacies” and “media literacy” (Philippines), “media and information literacy” (Thailand), and “ability to use ICT in an ethical and considerate manner” (Australia and Republic of Korea).

Diversities in skills and competencies mentioned in educational policies of ten countries and economies

The case studies illustrate the multiple skills and competencies reflecting diverse local contexts. The main findings are summarized into the following two points: 1) skills and competencies unique to specific countries; and 2) skills and competencies mentioned by a few countries and economies.

1. Skills and competencies unique to specific countries

Some unique skills and competencies are found in education policies of specific countries reflecting diverse local needs and contexts. These include: “dealing with stress” and “yoga and health” (India), “emotional intelligence” (Malaysia), “global spirituality” (Philippines) and “language etiquette in speaking and writing” and “cyber etiquette” (Republic of Korea).

In India, education reforms (2006) introduced “skills for dealing with stress” in order to reduce students’ examination stress. Prior to this, “yoga and health” was mentioned in National Curriculum Framework in 2005 for maintaining physical and psychological health of students. The report of Malaysia explains “emotional intelligence” as a concept that contains a number of key skills and attributes, such as “ability to feel empathy” and “self-awareness”. In the Philippines, “global spirituality” is added as one of the core values in education framework. The “global spirituality” consists of “faith in God”, “inner peace”, “religious tolerance” and “unity of all”. These skills and competencies are expected to be students’ foundation of “solid moral and spiritual guiding”, one of the desired outcomes in K to 12 frameworks of the Philippines. In the Republic of Korea, responding to the recent increase of bullying in schools, the government launched

Table 5: Inclusion of Transversal Competencies by Country and Economy

Countries and economies		Australia	Shanghai (China)	Hong Kong SAR (China)	India	Japan	Malaysia	Mongolia	Philippines	Republic of Korea	Thailand
Critical and Innovative Thinking	critical thinking	•	•	•	•	•	•	•	•	•	•
	innovative thinking	•	•	•	•	•	•	•	•	•	•
	creativity	•	•	•	•	•	•	•	•		•
	entrepreneurship	•	•	•	•	•	•	•	•		•
	resourcefulness	•		•		•	•	•	•		•
	application skills	•		•	•	•	•	•	•		•
	reflective thinking	•	•	•	•	•	•	•	•	•	•
	reasoned decision-making	•	•	•	•	•	•	•	•	•	•
Interpersonal Skills	presentation skills		•			•					•
	communications skills	•	•	•	•	•	•	•	•	•	•
	leadership						•		•		•
	organisational skills	•		•	•	•	•	•		•	•
	teamwork	•		•	•	•	•	•	•	•	
	collaboration	•	•	•	•	•	•	•	•	•	•
	initiative	•		•			•		•		
	sociability	•		•	•	•	•		•	•	
	collegiality	•		•	•	•	•		•	•	
Intrapersonal Skills	self-discipline	•		•	•	•		•	•	•	•
	enthusiasm							•			•
	perseverance	•	•	•	•		•	•			•
	self-motivation	•	•	•	•	•		•	•		•
	compassion	•	•	•	•	•	•		•	•	•
	integrity		•				•	•	•		•
	commitment			•				•	•		
Global Citizenship	awareness	•	•	•		•	•	•	•	•	•
	tolerance	•		•		•	•	•	•	•	•
	openness	•					•	•	•	•	•
	respect for diversity	•		•			•	•	•	•	•
	intercultural understanding	•		•			•	•	•	•	•
	ability to resolve conflicts	•		•			•		•	•	•
	civic/political participation	•		•			•		•	•	•
	respect for the environment	•	•	•		•	•	•	•	•	•
Physical and Psychological Health	healthy lifestyle	•	•	•	•	•	•		•		•
	healthy feeding	•			•	•			•		
	physical fitness	•			•	•	•		•		
	empathy	•	•	•	•	•	•		•	•	
	self-respect	•		•	•		•	•	•	•	

Source: mapped by the authors based on country reports

“School Bullying Prevention” in 2012, which promotes character education, support from families and communities, and learning appropriate ways of online communication. Given this background, “language etiquette in speaking and writing” as well as “cyber etiquette” skills were introduced in the curriculum. Components of “cyber etiquette” include appropriate use of social network services, such as Facebook, and how to protect oneself from bullying or harassment through the Internet.

2. Skills mentioned by a few countries and economies

There are skills and competencies shared among a few countries. Such skills and competencies include: 1) “independent learning” (Australia and Japan); 2) “risk taking” (Hong Kong SAR [China], Malaysia, and Philippines); and 3) “a sense of belongingness” (Australia, Shanghai [China], and Malaysia).

“Independent learning” is mentioned in education policies of Australia and Japan. In Australia’s education curriculum for early childhood learning, “The Early Years Learning Framework”, one of the education outcomes is “children are confident and involved learners”. Children are expected to foster their curiosity and self-motivation to learn, as well as knowledge in how to use tools at hand to enhance their learning. Hong Kong SAR (China), Malaysia, and the Philippines named “risk taking” in their education policies. In Malaysia, this skill is explained as “willingness to take risks and overcome challenges,” and should be developed through extra curricula activities such as sports. As for “a sense of belongingness”, Australia, Shanghai [China], and Malaysia listed this differently, such as “togetherness”, “sense of community” (Australia), “patriotism” (Shanghai [China]), and “national identity” (Malaysia). In the Australian context, “a sense of belongingness” means a sense of self in relation to others and world at large. In Shanghai (China) and Malaysia, “a sense of belongingness” refers to the bond between individuals and a nation as expressed in “patriotism” (Shanghai [China]) and “national identity” (Malaysia).

Revisiting the UNESCO framework for transversal competencies

As indicated above, the skills and competencies mentioned in the case studies align strongly with the UNESCO framework. However, the case studies also made it clear that there is a need to revisit, revise, and restructure the UNESCO framework to better reflect the skills, competencies, attributes, and values included and deemed important in the region’s education policies. The following is a discussion of the domains, competencies, and values that require particular consideration.

Media and Information Literacy (MIL)

Many case studies include skills and competencies related to ICT. The skills and competencies mentioned include the ability to use computers and related technology efficiently, expressed as: ICT ability (Shanghai [China]); IT literacy (Hong Kong SAR [China]; application of technology (Japan); digital literacy (Mongolia); visual and information literacies and media literacy (Philippines); media and information literacy (Thailand); and, ability to use ICT in an ethical and considerate manner (Republic of Korea and Australia). Considering the prominence of media and ICT competencies in education policies in the Asia-Pacific region, it would be beneficial to expand the UNESCO framework to include the MIL domain, as indicated in Table 6.

Physical and psychological health

While aspects of physical and psychological health were mentioned in all case studies, it is not possible to detect a coherent health domain applicable to all case studies. In the UNESCO health domain, empathy and self-respect were the most frequently cited competencies, however, these attributes can also be said to belong in the intra-personal or inter-personal domain. Skills and competencies that promote physical health and fitness were not as frequently cited. Considering the inconsistency in the documentation of health-related skills and competencies, a restructuring of the UNESCO framework to incorporate the key competencies associated with health under the intra-personal and inter-personal domains would be beneficial.

Additional important key competencies

The case studies also documented a number of competencies that fall under the different domains of the UNESCO framework, but have not been included as key examples. Considering the frequency with which these competencies were mentioned in the case studies, it would be beneficial to include them in the UNESCO framework. These include: self-awareness (which requires self-reflection and self-understanding/insight); ethical understanding; responsibility (towards self, others, and the community and world at large, including awareness of reciprocal rights); flexibility and adaptability; a sense of belonging (which was reflected in terms such as togetherness, sense of community, solidarity and inclusiveness); ethical understanding; and the ability to learn independently.

Table 6: Revised UNESCO Framework for Transversal Competencies

Domains	Examples of key skills and competencies
Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
Inter-personal skills	Communication skills, organizational skills, teamwork, collaboration, sociability, collegiality, empathy, compassion
Intra-personal skills	Self-discipline, ability to learn independently, flexibility and adaptability, self-awareness, perseverance, self-motivation, compassion, integrity, risk-taking, self-respect
Global citizenship	Awareness, tolerance, openness, responsibility, respect for diversity, ethical understanding, intercultural understanding, ability to resolve conflicts, democratic participation, conflict resolution, respect for the environment, national identity, sense of belonging
Media and information literacy	Ability to locate and access information through ICT, media, libraries and archives, express and communicate ideas through ICT, use media and ICT to participate in democratic processes, ability to analyse and evaluate media content.

Achievements and challenges

Achievements

All countries and economies reported that they have embarked upon substantial reforms aimed at integrating transversal competencies into education. Given the complexity of the issue, this alone can be considered an achievement. In the case of the Republic of Korea, it was reported that the foundation for character education has been laid firmly: teachers' awareness of the importance of character education has increased; physical and art education is recognized as important; and partnerships with local communities and families have improved. Similar progress is reported in the case of Thailand.

While in many cases the researchers felt that more time is needed to properly assess the impact of reforms (e.g. Australia and India), the case studies document positive changes in students. Most improvements appear to have occurred in the inter-personal skills domain, such as communication, presentation,

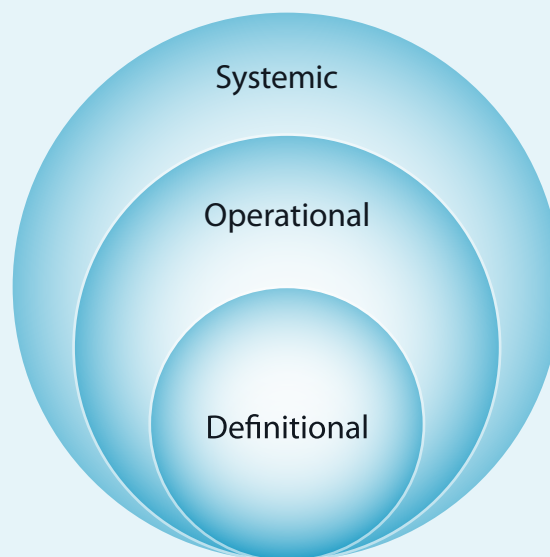
and discussion skills. However, improvements in critical thinking and creativity were also reported by Shanghai (China) and Thailand. And Hong Kong SAR (China), Mongolia, and Shanghai (China) reported that competencies related to global citizenship had shown some improvement.

The case studies suggest that education reforms involving transversal competencies have enhanced the way teachers and schools work. For example, the reports from the Republic of Korea, Japan, Shanghai (China), and Thailand mention improved collaboration between parents, schools, and the local community.

Challenges

While the case studies document substantial achievements in integrating transversal competencies into education policies and practices, they also document a number of challenges and bottlenecks. These can be categorized into three groups: definitional, operational, and systemic, as illustrated in Figure 5.

Figure 5: Types of Challenges in Integrating Transversal Competencies into Education Policies and Practices



Definitional challenges

Definitional challenges arise from a lack of or a vague definition of transversal competencies in policy documents, such as education plans and curricula. As reported in the case of Mongolia, Shanghai (China), and Australia, some teachers feel that the definition of what constitutes transversal competencies and the desired outcomes of non-cognitive learning are not made sufficiently clear.

Operational challenges

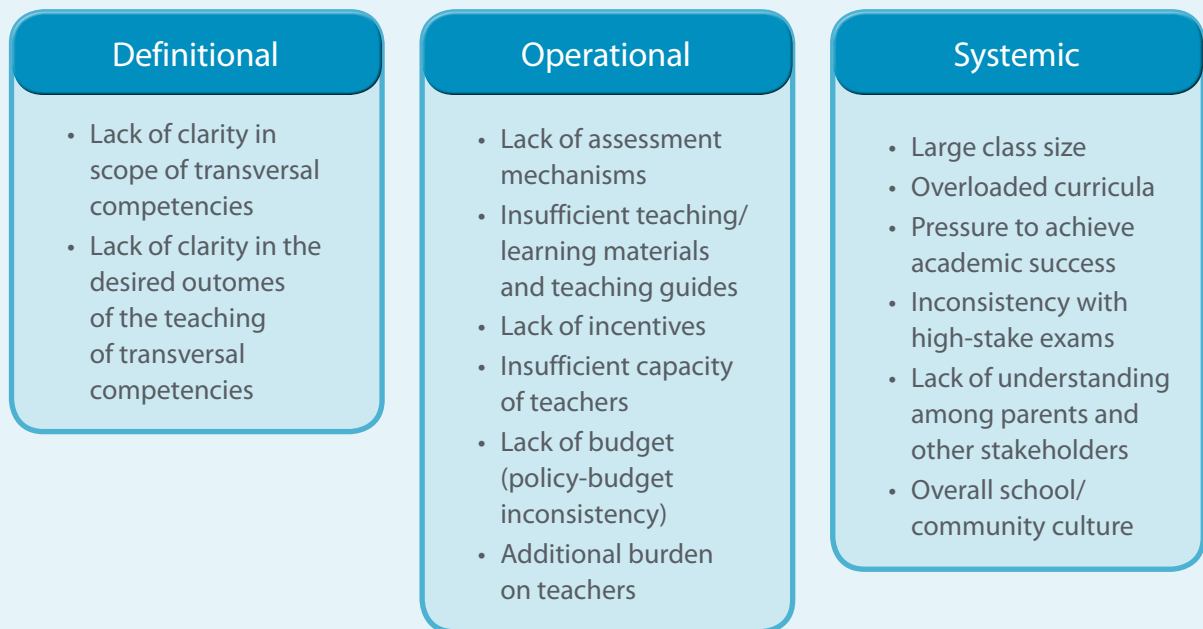
Operational challenges refer to an incomplete implementation or realization of policies. Since integration of transversal competencies in education practices may require major changes in teaching practices, it is understandable that many of these operational challenges are related to teachers. For instance, many case studies reported a lack of accountability or explicit assessment mechanisms as one of the major challenges in integrating transversal competencies into education (e.g. India, Hong Kong SAR [China, and Japan). In addition, most of the countries and economies cited insufficient capacity of teachers as a major bottleneck (e.g. Mongolia, India, Shanghai [China], Japan, and Thailand). Some also

mentioned insufficient incentives for teachers (e.g. Mongolia and Australia) and insufficient teaching/ learning materials and guidance (e.g. India, Mongolia, Thailand, and Australia). Other challenges concern a lack of funding to implement changes. The report from the Republic of Korea, for example, shows that some policies aimed at integrating transversal competencies are not appropriately funded. Lastly, the reports from Australia and the Republic of Korea show that frequent changes in education policies and curricula, together with increases in the administrative workload brought on by the reforms (cited as “more paper work”), are putting a lot of pressure on teachers and taking time away from teaching.

Systemic challenges

Systemic challenges stem from the education system as a whole and are not directly related to specific policies. For example, the report from Japan clearly shows that one of the bottlenecks to the integration of transversal competencies into education practices is the inconsistency between the skills and competencies promoted by the policy and what is tested (especially through university entrance examinations). Similar issues were reported by Hong Kong SAR (China), Shanghai (China), and India. Such inconsistency may have resulted in overcrowded curricula as reported by Australia and Thailand. It may also have resulted in the resistance, by parents and students, to learn these skills, which is considered one of the major bottlenecks in India. In the case of the Republic of Korea, the report states “overall school organization culture” may not be conducive to nurturing transversal competencies (i.e. character education).

Figure 6: Examples of Definitional, Operational, and Systemic Challenges



Conclusion

The research provides clear evidence that there is indeed a growing trend in the Asia-Pacific region to integrate and place greater emphasis on transversal competencies in education. The ten education systems documented in the study have all recently introduced or moved to strengthen existing dimensions of transversal competencies in their education policies and curricula. Indeed, the reports paint a picture of commitment and determination among the participating countries and economies to make transversal competencies a significant component of their education systems.

The growing emphasis on transversal competencies appears to stem from a broad range of economic, social, and humanity-related incentives. These include the need to boost development and remain competitive in an increasingly integrated and connected world, as well as the need to foster greater tolerance, respect, and understanding with regards to gender equality, cultural diversity, and the environmental, in order to ensure sustainable social and environmental development.

It is important to note that, to date, there is no singular or coherent movement for the acquisition of transversal competencies. Rather countries and economies around the world have started their movements towards the integration of transversal competencies into education voluntarily out of their own particular needs, stemming from their particular circumstances. As a consequence, frameworks, contents, competencies, modes, and expectations on the integration of transversal competencies vary between different education systems. Considering the great diversity of education systems in the Asia-Pacific region, this is perhaps a much-anticipated finding, as education systems move to make changes appropriate to their specific needs and context. However, while the non-tangible nature of transversal competencies allows for diverse definitions and interpretations, there is also a need for countries and economies to settle on a common pathway for the promotion and acquisition of transversal competencies among learners.

Within the realm of transversal competencies, a certain degree of ambiguity and vagueness is expected. However, in order to ensure continued progress in this field there is a need to classify the skills, values, and competencies that can be said to fall under transversal competencies, which is a valuable first step towards conceptualization. The analysis of the skills and competencies mentioned in the reports showed that, with a few minor edits, the ERI-Net framework is well suited to form a tentative starting point for classification (and consequently, conceptualization). It is important to point out here that this would, however, not entail developing a precise definition of transversal competencies, nor settling on a single term of reference for the domain, rather, this should be viewed as an ongoing process. A sound definition of transversal competencies will emerge as the domain continues to take form and develop through practice.

Overall, the reports are illustrative of an important global movement that calls for the need for education to move beyond the acquisition of knowledge and literacy and numeracy skills, which has been the dominant purpose of education in the economic discourse of formal education since the 1960s. This movement, which represents a milestone in education, is indeed appropriate in an era in which we are moving away from a purely manufacturing-based model of economy. In this context, the ERI-Net research study on transversal competencies in education is well positioned to add further to this process of development.

Policy recommendations

While the nature of this study is primarily exploratory, the findings of this research provide incentive for countries and economies around the world to consider including transversal competencies as an essential part of their education policies. The importance of doing so should not be viewed solely as a matter of remaining economically competitive, rather social and workplace changes also provide significant incentive for education systems to move beyond knowledge and skills, and importantly, beyond literacy and numeracy test scores. From the findings of this study, the following policy recommendations can be drawn:

a. The acquisition of transversal competencies is relevant to all learners, regardless of the development status of the country and economy and level of education.

There is a general argument that basic literacy and numeracy should be given first priority, and that transversal competencies should therefore be introduced at a later stage. However, such an approach is detrimental to development, as transversal competencies are needed by all, regardless of the economic and social development stage of the country and economy. Moreover, many transversal competencies such as organizational skills, perseverance, self-discipline, and teamwork have been proved to be important factors for improving student learning and knowledge. Therefore, transversal competencies should be integrated in education policies and practices of all education programmes, from Early Childhood Care and Education to higher education, as well as formal and non-formal education.

b. Governments should place transversal competencies at the heart of the education policy agenda for coherence and consistency.

In order for transversal competencies to be fully integrated into education systems, it is important that there is coherence and consistency across the education system, from one education level to another, and between curriculum, pedagogy, and assessment. Transversal competencies, therefore, should be a guiding principle of the education policy and practice, rather than an additional domain to be squeezed into the curriculum, which tends to already be stretched to the limit in terms of time allocation and resources.

c. Teachers must be better prepared and rewarded for their work in the integration of transversal competencies into the classroom.

Teachers arguably form the most important key to the successful integration of transversal competencies into education at the classroom level. This study has shown that teachers in the region may not feel sufficiently prepared or incentivized to move away from the role as transmitters of knowledge towards the role as facilitators of learning. Hence, it is crucial to develop teachers' capacity to integrate and teach transversal competencies through training, professional support and access to teaching and learning materials. Teachers must also be rewarded appropriately for their efforts.

d. Awareness and understanding of transversal competencies among key stakeholders must be promoted.

While the importance of transversal competencies is well recognized by the governments and policy-makers of the countries and economies that participated in this study, some case studies show that the notion of transversal competencies is still not understood and/or endorsed by other key stakeholders, such as parents, employers, and community members. This lack of knowledge and awareness can severely undermine the implementation of policies aimed at the integration of transversal competencies into education. Governments/schools may need to consider organising advocacy and awareness-raising activities to increase understanding and ensure buy-in among key stakeholders.

Limitations of the study

As one of the very first studies of its kind, this study has made a significant contribution to the knowledge base on transversal competencies in education in the Asia-Pacific region. However, this study is not free from limitations and there is a great need for further research. Some of the limitations are listed as per below.

a. The use of diverse concepts and terms to describe transversal competencies

Even though the research framework attempted to present a unified conceptual framework and terms for describing the skills, competencies, values, and attitudes that can be categorized as “transversal competencies”, terms and categories used in the participating countries and economies differ significantly. This made conducting a regional synthesis difficult and the region’s diversity may not have been fully captured.

b. Limited geographic coverage

While the study aims to provide a regional perspective on transversal competencies in education and all sub-regions are to a greater or lesser extent represented, the small sample of ten countries and economies cannot be said to be truly representative of the region at large. In order to produce research results that can ensure a more accurate representation of the region as a whole, it is necessary to expand the geographic coverage of the study.

c. Gaps between policies and practices

This study successfully collected, mapped, and analysed how transversal competencies are integrated into education policies and curricula. However, most of the case studies do not address the actual implementation of such policies and curricula. While in some case study researchers collected information through surveys and field visits in order to understand the status of actual implementation, other researchers relied solely on desk reviews due to limitations of time and resources. In order to arrive at a holistic understanding of the status and impact of the integration of transversal competencies into education, an analysis of the implementation itself is critical.

Recommendations for future study and UNESCO-led activities

This study of the Asia-Pacific region could well be the first regional research endeavour that utilizes a common research framework to document the integration of transversal competencies into education policy and practices. Hence, UNESCO Bangkok may be expected to assist in the replication of this study in other regions. From this follows that the next phase of this study should bear this mission in mind, so that outcomes of the study can be disseminated across regions. Some concrete recommendations for a future study (i.e. Phase II) are presented below.

a. **Maintain a flexible definition of transversal competencies**

Although there is a subtle consensus among the researched education systems on the importance of transversal competencies in education, there is significant diversity and variety in concepts and interpretations. Such diversity and variation should be treasured and seen as enriching. Any premature confining definition may prove detrimental. Hence, any further study, at least at this stage, should aim at demarcating the variety of concepts and practices utilized, so as to allow room for development.

b. **Further research effective pedagogy for the acquisition of transversal competencies**

Knowledge of pedagogy suitable for the teaching of transversal competencies is still relatively weak. There are a number of documented experiences that are yet to be supported and explained by theory. There are also findings from psychology and neuroscience research that are relevant to transversal competencies development, yet practices and policies are not informed by such findings. Without moving to the forefront of scientific research, UNESCO is well positioned to take the lead in reviewing and disseminating such research findings and to analyse gaps between policy intentions and practices.

c. **Further investigate implementation of policies and curricula aimed at nurturing transversal competencies inside and outside classroom**

The result of this study clearly shows that transversal competencies are considered important in most education sector plans and policies. However, some case studies indicate that such policies are not necessarily implemented in the intended manner. Should this be a correct observation, it will be important to understand what the bottlenecks are and propose possible solutions. It is therefore necessary for the next phase of the study to focus on actual implementation at the school level.

Bibliography

Ananiadou, K. and Claro, M. 2009. *21st Century Skills and Competences for New Millennium Learners in OECD Countries*. *EDU Working paper no. 41*. Organisation for Economic Co-operation and Development. [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP\(2009\)20&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2009)20&doclanguage=en) (Accessed 25 November 2013.)

Choo, S., Sawch, D. & Villanueva, A. 2012. *Educating for Twenty-first Century Global Capacities: Summary of Report*. New York: *Studies in Educational innovation*. <http://globalsei.org/WP/wp-content/uploads/2012/07/Educating-for-Twenty-First-Century-Global-Capacities.pdf> (Accessed 5 September 2012.)

Dede, C. 2010a. Comparing Frameworks for 21st Century Skills. In *21st Century Skills*, edited by J. Bellanca and R.Brandt. Bloomington, IN: Solution Tree Press, pp. 51–76.

_____. 2010b. *A Multi-user Virtual Environment for Building and Assessing Higher Order Inquiry Skills in Science*. *British Journal of Educational Technology*, 41(1), pp. 56–68.

European Commission. 2002. *eEurope 2005: An information society for all*. Brussels: European Commission.

Gordon, J., Halsz, G., Krawczyk, M., Leney, T., Michel, A., Pepper, D., Putkiewicz, E., and Wisniewski, W. 2009. *Key competences in Europe. Opening doors for lifelong learners across the school curriculum and teacher education*. Warsaw: Center for Social and Economic Research on behalf of CASE Network. http://www.case-research.eu/upload/publikacja_plik/27191519_CNR_87_final.pdf (Accessed 16 June 2014.)

Hipkins, R., Boyd, S. and Joyce, C. 2005. *Documenting Learning of the Key Competencies: What are the Issues? A Discussion Paper*. Wellington: New Zealand Council for Educational Research.

NIER. 2013. *Past and Present of Education in Japan*. Available at: http://www.nier.go.jp/English/EducationInJapan/Education_in_Japan/Education_in_Japan.html (In Japanese) (Accessed 30 July 2013.)

OECD. 2005. *The Definition and Selection of Key Competencies [Executive Summary]*. Available online at: <http://www.oecd.org/dataoecd/47/61/35070367.pdf> (Accessed 7 October 2010.)

_____. 2011. *The Case for 21st Century Learning. OECD Year Book 2011*. http://www.oecdobserver.org/news/fullstory.php/aid/3403/The_case_for_21st_century_learning.html (Accessed 15 December 2013.)

Pacific Policy Research Center. 2010. *21st Century Skills for Students and Teachers*. Research & Evaluation Division, Kamehameha Schools: Honolulu. <http://www.ksbe.edu/spi/PDFS/21%20century%20skills%20full.pdf> (Accessed 5 December 2013.)

Partnership For 21st Century Skills. 2009a. *Framework for 21st Century Learning*. http://www.p21.org/documents/P21_Framework.pdf (Accessed 18 November 2013.)

_____. 2009b. *Framework Definitions*. http://www.p21.org/documents/P21_Framework_Definitions.pdf (Accessed 18 November 2013.)

Schneider, S. H. 1997. *Defining and Teaching Environmental Literacy*. *Trends in Ecology & Evolution*, 12(11), 457.

Trier, U. 2003. Twelve Countries Contributing to DeSeCo: A Summary Report. In *Definition and selection of key competences. Contributions to the second DeSeCo symposium*, edited by D.Rychen, L. Salganik and M. McLaughlin (Neuchatel: Swiss Federal Statistical Office), pp. 7–59. 320

Voogt, J. & Pelgrum, H. 2005. *ICT and Curriculum Change*. *Human Technology; an Interdisciplinary Journal on Humans in ICT Environments*, 1(2), pp. 157–175.

Voogt, J & Roblin, N.P. 2012. *A Comparative Analysis of International Frameworks for 21st Century Competences: Implications for National Curriculum Policies*. *Journal of Curriculum Studies*, 44:3, pp. 299–321.

Annex A: Summary of case studies

Australia

Transversal Competencies in Australia

Transversal competencies are explicitly and implicitly incorporated into the curriculum frameworks in Australia. While none of the policy documents examined in the case study explicitly mention terms such as non-cognitive or transversal skills, the development of these capabilities are embedded in the curriculum and learning frameworks that guide the Australian education system.

Research Method

The research is based on an analysis of The Early Years Learning Framework, The Australian Curriculum and the senior secondary curricula (e.g. the South Australian Certificate of Education); a questionnaire, which was distributed to 117 educators and of five targeted policy-makers; and a case study of two South Australia schools that strategically incorporate transversal competencies into their educational purpose and practice.

Incentives for Reforms

Meeting social demand and increasing employability of students were considered to be the rationale behind the integration of transversal competencies into education by the policy-makers interviewed. This opinion was echoed by over half of the educators who responded to the survey. Pressure to achieve excellence was not selected by any of the policy-makers but many comments were made about improving learning outcomes, ensuring a rounded educational experience, and citizenship.

National Strategies and Policy Reforms that Promote Transversal Competencies

Over the past few years there have been a number of substantial changes in Australian education, not least the introduction of national curriculum frameworks. For the first time, Australia has nationwide statements of the intended learning of young people, including the core knowledge, understanding, skills and general capabilities important for all Australian students. These statements can be found in the Early Learning Years Framework (0-5 years), the Australian Curriculum (for all compulsory education), and the senior secondary curricula.

The primary responsibility for school education in Australia is constitutionally allocated to the state and territory governments (of which there are eight). Each state and territory has its own curriculum for senior secondary school. In one state, the South Australian Certificate of Education (SACE) has been significantly reviewed resulting in an overhaul of the certificate.

The introduction of the General Capabilities in the Australian Curriculum and the necessary pedagogical developments towards the integration of transversal competencies was seen as the major change in the curriculum frameworks by the policy-makers interviewed.

The Early Years Learning Framework

The Early Years Learning Framework lists five key learning outcomes, broken down into a number of components. Each learning outcome includes examples of the types of behaviours that children may show when developing or demonstrating the component. The components either contain or align closely with the transversal competencies. The learning outcomes are⁷:

1. **Children have a strong sense of identity**, e.g. children develop their emerging autonomy, inter-dependence, resilience, and sense of agency.
2. **Children are connected with and contribute to their world**, e.g. children develop a sense of belonging to groups and communities and an understanding of the reciprocal rights and responsibilities necessary.
3. **Children have a strong sense of wellbeing**, e.g. children take increasing responsibility for their own health and physical wellbeing.
4. **Children are confident and involved learners**, e.g. children develop a range of skills and processes such as problem solving, inquiry, experimentation, hypothesizing, researching, and investigating.
5. **Children are effective communicators**, e.g. children express ideas and make meaning using a range of media.

The Australian Curriculum

The Australian Curriculum includes mathematics, English, science, and history. Other learning areas will be introduced in stages. In addition to specifics of each learning area, the curriculum also includes general capabilities, which are to be developed through each learning area to some extent. In total, there are seven general capabilities, which have been developed to help ensure that “All young Australians become successful learners, confident and creative individuals, and active and informed citizens”, an education goal declared by the Government in 2008, these are:

- Literacy
- Numeracy
- Information and communication technology capability
- Critical and creative thinking
- Personal and social capability
- Ethical understanding
- Intercultural understanding.

While the enabling capabilities of literacy and numeracy will be familiar to all educators, the remaining five general capabilities incorporate a range of transversal competencies. The curriculum gives detailed information about their scope as well as how they can be incorporated into teaching and student learning.

⁷ A full description of the components of each learning outcome is available in the original case study of Australia.

The Senior Secondary Curricula

In South Australia, the senior secondary certificate is the South Australian Certificate of Education (SACE). SACE is designed to enable students to:

- **Develop the capabilities to live, learn, work, and participate successfully in a changing world.**
- **Plan and engage in a range of challenging, achievable, and manageable learning experiences, taking into account their goals and abilities.**
- **Build their knowledge, skills, and understanding in a variety of contexts, for example, schools, workplaces, and training and community organizations.**
- **Gain credit for their learning achievements against performance standards.**

The SACE was the product of a significant review of senior secondary education in South Australia, which led to a change in state legislation and the implementation of the new Certificate from 2009-2011. Originally, the SACE was underpinned by a set of five capabilities:

- **Communication**
- **Citizenship**
- **Personal Development**
- **Work**
- **Learning**

However, due to the close alignment with the general capabilities outlined in the Australian Curriculum, the SACE formally incorporate the general capabilities into their curriculum documents (replacing the SACE Capabilities). The authors point out that this development illustrates: (1) that transversal skills and capabilities are being increasingly incorporated into curriculum developments (in Australia); (2) that curriculum developers arrive at similar descriptions of these capabilities even when they are working independently; and (3) that in Australia, the opportunity provided by the Australian Curriculum to define a common set of transversal competencies is slowly starting to be realized.

Method of Integration

The recently introduced curriculum frameworks in Australia implicitly require educators to incorporate the development of transversal competencies throughout teaching and learning. Transversal competencies are integrated in a cross-curricular manner. In addition, new compulsory subjects have been introduced at the upper-secondary level of education in which transversal competencies are given significant attention, such as the “Personal Learning Plan” and the “Research Project” of SACE.

Achievements and Challenges

The teacher survey revealed that the impact of the curriculum frameworks that promote transversal competencies is perceived as being mixed but is generally positive. On the whole, teachers perceive that student-learning outcomes have improved as a result of the introduction of the new curriculum frameworks.

The survey results paint a picture in which Australian teachers value transversal competencies because of the resonance with their personal educational values and philosophy and the way in which they empower young people to capitalize upon their education and citizenship. Correspondingly, all of the respondents to the policy-makers' survey consider transversal competencies to be very or extremely important.

Education policy-makers and educators recognized that the curriculum frameworks contain transversal competencies throughout. However, both policy-makers and teachers called for more support to teachers to help them develop transversal competencies in their students. This sentiment is supported by the fact that approximately half of the teachers surveyed indicated that the definition of transversal competencies in the curriculum frameworks is unclear or that they do not know, while the other half indicated that the definition is very or somewhat clear. Teachers particularly requested the education system provide a clear message, both explicitly and implicitly (through, for example, assessment standards), on transversal competencies, as well as time, money, and trust in the professionalism of teachers. All policymakers also pointed out that there is a need to build and increase the value of transversal competencies.

Among the cohort of educators, fourteen individuals were involved in a project called the Graduate Qualities Project, which aims to develop the graduate qualities of school students (which are closely aligned with transversal competencies). Their responses indicate the differences that might occur when teachers undertake professional learning and are given the opportunity to use that learning, plus their own educational values, expertise, and experience to develop young people's transversal competencies. For example, those educators involved in the Graduate Qualities Project who had undertaken targeted professional learning in the transversal competencies and had been given time to reflect them in their practice, were much more likely to consider the learning objectives to be well described than the rest of the respondents. In addition, the Graduate Qualities Project teachers identified the value of sharing of practice among teachers and were less likely to want mandated guidelines. They also perceived a greater improvement in students' learning outcomes and were less likely to see resistance from students as a barrier to developing transversal competencies.

In concluding, both surveys revealed the value of transversal competencies. However, in order to effectively capitalize upon the changes that are occurring in Australian education and to fully utilize the opportunities presented by the curriculum frameworks, there is an urgent need to support educators with professional learning. As the survey of educators indicates, where such support has taken place, driven by the vision and values of school leaders (and not contrived programs and products), successes are already apparent.

Hong Kong SAR (China)

Transversal Competencies Hong Kong

In Hong Kong, the terminology for referring to transversal competencies is cross curriculum skills or generic skills. These competencies are explicitly integrated into policy documents and curricula.

Research Method

The research is based on a desk review and analysis of relevant policy documents and curricula for basic education, senior secondary education, and higher education. The researchers also administered a separate survey of nine secondary schools and collected responses from 1,715 students. The survey aimed to get a sense of how Hong Kong's senior secondary students are progressing with the development of broad generic skills. The survey questions aimed at assessing students against the Cultural Literacy Scale developed by Hui (2012).

Incentives for Reforms

The main driver of education reforms aimed at the promotion of transversal competencies is the need to ensure that Hong Kong is equipped to meet the realities of an increasingly globalized world.

National Strategies and Policy Reforms that Promote Transversal Competencies

On 1 July 1997 Hong Kong returned to Chinese sovereignty. While this was essentially a political transition, it had important implications for education. Some government functions reverted to the control of Beijing, for example Foreign Policy and Defence, but other functions were retained by the government of the new administrative region, among these was education. Consequently, for the first time in almost 150 years, local education policy could be determined locally rather than by colonial authorities and Hong Kong's new government was free to develop an education system for the 21st century.

Education was given a very high priority as Hong Kong authorities sought to reorient the city to the realities of an increasingly globalized world. Thus, Hong Kong embarked on a process of significant education reform envisioned by the Chief Executive Tung Chee Wah, who argued that education should go beyond imparting academic knowledge to students and encompass also the development personal character, skills, attitude, and physique, so that students can learn how to become responsible and caring individuals. Tung also pointed out the importance of embracing lifelong learning in order to ensure that Hong Kong continues to develop. As such, there was a need to strengthen the education system's ability to instil an interest in learning in students, as well as the ability for students to acquire knowledge throughout their lives and to adapt to changing circumstances. What this meant was that the competitive, academic, grammar school curriculum bequeathed by 150 years of colonial rule was no longer appropriate for a knowledge-based society. The ten-year reform process put in place by Tung's government was extensive and deep.

Method of Integration

The Basic Education Curriculum

Today, the aim of Hong Kong's School Curriculum is frequently described as “whole person development”. The curriculum’s main characteristic is that it attempts to bring together academic learning in the form of Key Learning Areas (KLAs) with more generic forms of skills learning, such as collaboration, information technology, numeracy, problem solving, self-management, and study skills. In addition, values and attitudes are also stressed: perseverance, respect for others, responsibility, national identity, and commitment. The curriculum does not privilege a single form of learning; rather, it places emphasis on many different and interconnected ways of learning. Academic learning is experienced in the form of school subjects such as Chinese, English, mathematics, humanities, physical education, health education, etc., but students also experience other forms of learning in the form of generic skills and values and attitudes. The curriculum stipulates that all students should be entitled to the following five essential learning experiences for whole-person development:

- **Moral and Civic Education**
- **Intellectual Development**
- **Community Service**
- **Physical and Aesthetic Development**
- **Career-related Experiences (for junior secondary students).**

Senior Secondary Curriculum

With the reforms, the senior secondary curriculum received a new structure that aims to ensure an integrated learning experience and to introduce a broad range of learning opportunities for senior students. Today, all students in the senior secondary years are required to take four core subjects: Chinese, English, mathematics, and a new subject titled “Liberal Studies”, which together take up between 45-55% of the total time available, plus at least two electives accounting for 20-30% and other learning experiences accounting for 15-35% of time.

Liberal studies has been designed to broaden students’ knowledge and boost their social awareness through the study of a wide range of contemporary issues. It is intended that liberal studies will lead to a better understanding of Hong Kong society, the development of China, globalization, and citizenship. Liberal studies borrows knowledge and perspectives from other subjects to enhance its study. Topics are chosen so that students have the opportunity to:

- **Connect knowledge and concepts across different disciplines**
- **Expand perspectives beyond single disciplines**
- **Study contemporary events not covered by a single disciplines.**

Liberal studies places emphasis on inquiry learning and promotes an assessment process designed to support self-directed learning. This means that students are provided with time to research, collect data, and write up their studies. The purpose is to try and move away from an entirely examination-based approach to senior secondary assessment and to encourage independent thinking, problem solving, creativity, and student engagement.

Generic skills and General Education in Hong Kong SAR (China) higher education

Based on the British three-year degree model, Hong Kong's higher education system has been redeveloped to accommodate four-year undergraduate degrees closer to the US and Chinese models. Today, all higher education institutions mention "graduate attributes", which align strongly with the ERI-Net Secretariat's definition of transversal competencies, although they are not exactly the same for each institution and they are talked about in slightly different ways. At the Hong Kong Institute of Education, for example, graduate attributes take the form of what is called "generic learning outcomes." These are⁸:

- **Problem Solving Skills**
- **Critical Thinking Skills**
- **Creative Thinking Skills**
- **Ethical Decision Making**
- **Oral and Written Communication Skills**

Similarly, the University of Hong Kong talks about learning outcomes in terms of the "pursuit of academic/professional excellence, critical intellectual enquiry and life-long learning, tackling novel situations and ill-defined problems, critical self-reflection, greater understanding of others, and upholding personal and professional ethics, intercultural understanding and global citizenship, communication and collaboration and leadership and advocacy for the improvement of the human condition."⁹

Another important development is the inclusion of General Education in the undergraduate curriculum, designed to broaden and extend undergraduate students' knowledge, skills and attitudes.

Achievements and Challenges

While the education system in Hong Kong has been significantly reoriented towards greater emphasis on transversal competencies, this has not occurred without challenges. Data gathered on the extent to which secondary students were progressing with the development of broader sets of generic skills indicate gaps in implementation. The data showed that only half of the students surveyed appear to have encountered generic skills in the course of their secondary education. Consequently, the challenge ahead for Hong Kong schools is to make generic skills more salient in the curriculum, as planned by the education reforms. This may take time and it may involve alerting teachers to the importance of these skills as opposed to examination preparation.

Furthermore, in regards to Liberal Studies, some students have complained that teachers still teach them model answers to exam questions rather than placing emphasis on open-ended inquiry. There have recently also been some cases of plagiarism related to the subject and this has fuelled other more general concerns about school-based assessment. Further to this, the authors point out that Liberal Studies has also been politicized to some extent with anti-democracy groups calling for it to be replaced with Chinese history. There are some important lessons here about change and innovation in the school curriculum, the authors argue, especially where established standards and practices are challenged. Changing the curriculum is always a political activity.

⁸ Examples of each skills group can be found in the original case study report.

⁹ The University of Hong Kong, information available here: <http://tl.hku.hk/reform/#anchor-1>

Lastly, the authors argue that perhaps just as well as we are talking about 21st century skills, we should also be talking about 21st century knowledge. That is, knowledge that enables students to be active and engaged citizens in their societies. The authors argue that knowledge, skills, and attitudes make up a trio that make more sense together than separately in creating understanding and wisdom. This approach, it is argued, avoids the problem of learning decontextualized skills or assuming the importance of purely vocational skills. An integrated approach to providing access to knowledge, skills, and attitudes may be an important pathway to the future and the uncertainties it will inevitably hold.

India

Transversal Competencies in India

In India, transversal competencies are implicitly included in education policy, and the National Curriculum Framework – 2005 (NCF 2005) provides directive for inclusion of transversal skills in the curriculum. The terminology used in curricula documents to refer to various transversal competencies is: “Life Skills”, “Co-Curricular Skills”, and “Attitudes and Values”.

Research Method

The research is based on a review of writings and publications that have outlined and analysed the treatment of transversal competencies within the curriculum in recent times, as well as a small survey of teachers and policy experts in a few urban schools regarding their views on current practices and policies. The thirty teachers surveyed were from private schools and schools affiliated to the Central Board of Secondary Education (CBSE). The sixteen policy experts were represented by individuals involved with organizations that influence policy-making, school administrators that implement policy, education experts that understand and interpret policy, education consultants working with schools, school program managers. A limited number of responses were received due to time constraints. Admittedly, the sample sizes are small, but the research may still provide valuable insights and validation of policy. The questionnaires used were designed by the ERI-Net Secretariat, however, some modifications were made to better suit India’s context.

Incentives for Reforms

Overall, transversal competencies are seen as important components in developing the human capital of India. In the survey, both teachers and policy experts listed increased international competition, meeting social demand, and countering excessive academic pressure on students as the top three incentives for the introduction of transversal competencies in the curriculum. Interestingly, meeting employers’ demands for work-place relevant education was cited as one of the least important motivations (ranked last for policy experts and second last for teachers), even as the debate on transversal competencies outside education circles tends to centre on workplace requirements.

Policy Reforms that Promote Transversal Competencies

The nature of India’s education system is extremely diverse. According to the NCF – 2005, the types of schools range from expensive ‘public’ (private) schools, to which the urban and elite send their

children, to the “free” or low-cost, local-body-run primary schools where children from economically and educationally deprived communities attend.¹⁰

The key driver of education has long been to service the requirements of urban-centred industrial enterprises. As a result, pedagogy has been textbook-led and exam-oriented. However, a review of recent policy literature brings forth a very current and liberal view of what education should be. This view breaks away from cognitive constructs and seeks to include a multiplicity of transversal competencies in the curriculum that are relevant to the world today.

The National Council of Educational Research and Training (NCERT) is responsible for curriculum matters in school education in India and is the architect of the 2005 National Curriculum Framework (NCF), the main curricular document that Indian schools follow. The NCF – 2005 alludes to the problems that exist in the current education system and acknowledges that there is a need to reform education by introducing into the curriculum a variety of skills rather than mere subject mastery. The NCF – 2005 does not use the term transversal competencies, non-cognitive, or 21st century skills, but describes a number of competencies that should be included in the curriculum, including critical thinking, decision making, problem solving, and skills to cope with a variety of situations and how to manage oneself (i.e. competencies which are critical in dealing with the challenges of everyday life).

The initiative of including transversal competencies in the curriculum is driven by the Central Board of Secondary Education (CBSE), which is the largest national board in the country. Through its Continuous and Comprehensive Evaluation (CCE) system, the CBSE attempts to implement a lot of what has been envisaged for Indian education in the NCF-2005. In 2009, the CBSE introduced a curricular reform in all its affiliated schools (approximately 12,300 schools across India) to include transversal competencies in school assessments. The reform saw the establishment of a new assessment pattern which includes formative assessment that allows for periodic assessments of progress made by each student in totality (in the cognitive and non-cognitive, transversal and co-curricular domains), and an end-of-year summative assessment in curricular subjects. To support teachers in this reform, comprehensive manuals for gathering, interpreting and evaluating information, and for making decisions about a child have been developed. The underlying pedagogical approach in the new curriculum is child-centric, and learning is to take place through inquiry, exploration, discovery and inclusive participation.

In addition to the CBSE affiliated schools, as the Right to Education Act (RTE) has come into effect since 2010, all state government schools are now also mandated to adopt the CCE system. State government schools account for a majority of country’s schools, meaning that if successfully implemented, this change could have a very large impact on students.

In CBSE’s documents, transversal competencies are referred to as “Life Skills”, “Co-Curricular Skills”, or “Attitudes and Values”. The competencies embodied in these different terms align with the ERI-net framework for transversal competencies. Below illustrates how examples of transversal competencies found in the CBSE documents closely align with the ERI-Net framework’s main domains in spirit:

¹⁰ National Curriculum Framework 2005, available here: <http://www.ncert.nic.in/rightside/links/pdf/framework/english/nf2005.pdf>

- **Critical and innovative thinking**
Thinking skills: Self-awareness, problem-solving, critical thinking, dealing with stress, creative thinking.
- **Interpersonal skills**
Social Skills: Interpersonal relationships, effective communication, empathy, etc.
- **Intrapersonal skills**
Emotional skills: managing feelings/emotions, dealing with stress, etc.
- **Global citizenship**
Affiliation with organizations such as the National Cadet Corps, the Red Cross, Scouts and Guides is encouraged as part of school co-curricular activities.
- **Physical and psychological health**
Yoga and health programs, nutrition programs at elementary stage.

Method of Integration

Transversal competencies are integrated in teaching and learning in three ways: (i) in all regular subjects, (ii) in specific subjects (which focus on particular competencies), and (iii) through extra-curricular activities. Examples of specific subjects through which different aspects of transversal competencies are emphasized include Socially Useful and Productive Work (SUPW), Yoga, Physical education (as these build leadership skills, interpersonal skills, cooperation, and moral values). Extra-curricular activities that are encouraged include National Social Service, National Cadet Corps, and Scouts and Guides.

Achievements and Challenges

While the CCE system has been implemented in all CBSE affiliated schools, it is wise to expect variability in implementation due to India's great diversity in schools. Overall, as a consequence of this diversity, it is difficult to make any definitive statement on the status of transversal competencies education in India. However, data gathered from the survey sample reveals that 22% of teachers believe the new curriculum has had a positive impact on students and 68% indicated that the new curriculum has had a "somewhat" positive impact.

While there are promising indications of a positive trend, the researchers identify a number of obstacles to the successful implementation and integration of transversal competencies into the education system, such as: adverse pupil-teacher ratio (being as high as 43:1 in some government schools); lack of 'know-how' amongst the teacher community (due to inadequate training); ambiguity of the scope of transversal-competencies education (since it is "new"); academic pressures stemming from an examination and evaluation system that still focuses on cognitive learning (difficult to brush off the old tried and tested way); and the position of the stakeholders (the research shows that parents' attitudes to transversal competencies make up one of the barriers).

The research conducted for this study has shown positive reaction from teachers with respect to teacher training in the new system; 65% of teachers felt that they have received sufficient training compared to 22% of teachers who indicated that while they have received training, it was not sufficient. In addition, when asked if they were supported with guidance and materials to implement the new curriculum, almost half of the teachers said that they had received enough while an equal number responded that

they had received some but that it was not enough. However, a majority of schools researched were private schools and the same results are perhaps not to be expected had the majority of schools been government schools.

The CCE system initiative is still relatively new and a large effort is yet required to get teachers trained in the new system. For example, despite teachers receiving in-house training, there appears to be lack of awareness of “what to look for” in students (i.e. what is to be evaluated and how it is to be evaluated), particularly in the area of personal and social skills. In addition, an overloaded curriculum does not afford teachers the time to observe students. Hence, the authors recommend that teachers be given more training and time to internalize the new system and to learn what to look for.

The authors recommend that to ensure smooth implementation, public-private partnerships to step-up teacher training in the CCE system should be explored in greater depth, manuals for reference need to be provided, and technological solutions for evaluation need to be explored. Fundamentally, the system needs to ensure that it is not “pouring old wine into new bottles”, that is, disguising old assessments in new formats, and that it is able to report skill effectiveness and return this information back into the system to help students improve and support them to become wholesome participants in their learning process.

With a population of nearly 1.27 billion people, 50% of which is below the age of 25, India has a great potential for development if the millions streaming into adulthood and into the employment market are educated, trained and skilled appropriately. The end goal of developing a skilled workforce is an urgent one given the fact that India needs to quickly reap its demographic advantage. Overall, the research showed that there is strong alignment in policy proclamations about the need to enhance education through inclusion of non-cognitive learning, given that the Continuous and Comprehensive Education system has just been implemented in government/government-aided schools (from which responses were not obtained for the survey) since 2010, new sets of challenges could emerge.

Japan

Transversal competencies in Japan

In Japan, transversal competencies are embodied in the principles underlying the concept “Zest for Living”, which was first introduced into the Courses of Study¹¹ of 1998. Zest for Living is thought to arise out of the acquisition of a balance of “Chi-Toku-Tai”, which can be translated to solid academic prowess, well-rounded character and healthy body. As such, the concept Zest for Living stresses the importance of achieving a balance between academic knowledge, morality, and physical and mental health. Zest for Living embodies a number of competencies that are seen as essential to life in a fast-paced and integrated society and can be described as “competencies for positive living” (NIER, 2013).

The framework for curriculum contents for nurturing Zest for Living contains twelve skills and competencies, categorized into three domains. These are:

¹¹ The Courses of Study provides the guiding principles for curriculum development from primary school to high school in Japan, and is generally revised every ten years.

- a. Independence and autonomy for individual life
 - 1. Self-understanding and self-responsibility
 - 2. Promotion of health
 - 3. Decision-making skill
 - 4. Life planning skill
- b. Relationship with others in school and family
 - 5. Collaboration and responsibility
 - 6. Sensitivity/ Expression
 - 7. Establishing good relationship with others
- c. Relationship with the society for career and living in community
 - 8. Responsibility, rights and work
 - 9. Understanding of society, culture and natural environment
 - 10. Application of language and information
 - 11. Application of knowledge and technology
 - 12. Problem-identification and solving skill

In order to further promote key skills and competencies, the National Institute for Educational Policy Research (NIER) has developed basic principles of curriculum composition that links competencies required in the future and knowledge and skills through a cross-subject approach. NIER has also suggested a preliminary idea of the 21st century skills and competencies in Japanese context. The framework refers to “key competencies” of OECD and “21st century skills” of ACT21s, but further incorporates specific conditions and educational context of Japan.

Research Method

The case study of Japan is based on a desk study of policy papers and documents by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the NIER; interviews with a total of twenty-one policy-makers, researchers, journalist, academics, teachers and officers of the board of education in Joetsu city; and a questionnaire. The authors also visited a public primary school (Otemachi Primary School in Niigata prefecture) for on-site interviews and lesson observations. In total, twelve questionnaires from education experts and policy-makers, fourteen questionnaires from teachers of Otemachi Primary School, nineteen questionnaires from teachers of Ugo Junior High School in Akita prefecture were collected and analysed. The questionnaire consisted of the original research questions proposed in the research framework drafted by the ERI-Net Secretariat, as well as additional questions.

In total, MEXT has identified ninety-six pilot schools across Japan that have the authority to develop their own curricula and examine its effectiveness (unlike regular schools which use a standard curriculum based on the Courses of Study). Otemachi Primary School and Ugo Junior High School are two of these pilot schools.

Incentives for Reforms

Globalization, the rise of the knowledge society and the hollowing out of industry, the prevalence and heavy reliance on Information and Communications Technologies (ICT), the increase in global and regional interactions and competition, an aging population, and the Great East Japan Earthquake are some of the factors and events known to place new demands and expectations on citizens and that have provided incentive for education reforms in Japan. In addition, declining PISA results over successive years, a weakening interest in mathematics and science and a dwindling ability among students to apply knowledge in real life situations have also spurred reforms. Thus, transversal competencies in Japan are promoted to ensure that learners are able to cope with various situations and cooperate with people of different cultures and backgrounds, but also as to improve application and critical thinking skills.

Policy Reforms that Promote Transversal Competencies

In 2006 a number of amendments were made to the Basic Act on Education, in which transversal competencies featured strongly. Among other things, the amendments aimed to ensure learners acquire an enriched sense of empathy, morale, and self-reliance, and to improve civic responsibility, respect for Japanese culture and tradition, and promote world peace and development. Following this reform, the School Education Act was revised in 2007, stipulating three basic purposes of education: (1) to acquire basic knowledge and skills; (2) to nurture the ability to think, make decision, express and other skills to tackle issues; and (3) to foster positive attitude toward learning. These three core elements came to lay the foundation for the curriculum and guidelines stipulated in the 2008 New Courses of Study, which was gradually implemented from 2011 to 2013.

In the 2008 New Courses of Study, Zest for Living continues to play a significant role. Overall, it aims to ensure that education strikes a balance between the acquirement of basic knowledge and skills and critical thinking, decision-making, expression and problem-solving skills.

The “Second Basic Plan for the Promotion of Education” (The Second Basic Plan), which was adopted in 2013, stipulates policies and measures with the main purposes of promoting life-long learning and nurturing creative and self-reliant citizens that are able to collaborate with others and take on leadership roles in society. The Second Basic Plan outlines four basic policy directions, eight missions and thirty actions that are to be implemented 2013-2017. The four key policy areas are: (1) development of social competencies for survival; 2) development of human resources for a brighter future; (3) establishment of learning safety net and (4) establishment of vibrant communities based on strongly-tied society. Transversal competencies are explicitly addressed within the first policy direction, in which nurturing Zest for Living makes up one of four missions. The mission includes seven actions with twenty-five policy efforts that serve to strengthen transversal competencies in education, including follow-up and steady implementation of the 2008 New Courses of Study, moral education to counter bullying and school violence, and health promotion through quality school lunches, food education, and sports activities in schools and communities.

In order to ensure a smooth implementation of the four policy directions, the government has also stipulated a number of actions to be taken at the administrative level, such as: administration reform to further local ownership and creativity; re-examination of school size and staffing; and strengthening of the social environment to encourage further collaborations among schools, local governments, universities, communities, and enterprises for creating vibrant communities.

Method of Integration

In the 2008 New Courses of Study, transversal competencies are predominantly promoted through verbal activities, which are integrated into all subjects. Relevant examples and model cases are widely distributed to schools by MEXT. Verbal activities aim to improve and develop learners' ability to think critically, analyse, summarize, communicate, and discuss information.

The 2008 New Courses of Study also brought other changes, such as a 10% increase in lesson hours and updates to the curriculum content, including, for example, enrichment of moral education, and the promotion of extra-curricular activities. Further, schools are also required to form partnerships with the local community, local enterprises, and other educational institutions, such as libraries and museums. Such institutions are also expected to provide students with more experienced-based learning opportunities for not only building solid academic prowess but also nurturing well-rounded characters by active interaction with people outside of the schools.

In the framework of curriculum contents and objectives for nurturing Zest for Living, "solid academic prowess" makes up one of three fundamental principles. It requires students to be able to apply their academic knowledge and skills to "think, make decisions and express one's ideas." In the framework, these skills are specified as the following four abilities: (1) to express what is learned from experiences; (2) to obtain and effectively present information; (3) to apply knowledge and skills into daily life; (4) to draw up a plan, implement it, and evaluate the action for further improvement. Following this, teachers are expected to plan their lesson activities in order to promote these abilities in thinking, decision-making, and expression.

Achievements and Challenges

The case study identified a number of bottlenecks to the successful and complete implementation of Zest for Living and the 2008 New Courses of Study. The authors stress the urgent need for further research on measurement criteria and methodologies of transversal competencies development, in order to ensure student performance and progress can be measured and assessed properly. In addition, continued reliance on "traditional" entrance examinations that focus on students' academic achievements, rather than critical thinking skills, etc. was suggested as another factor hampering the full integration of transversal competencies.

The research also revealed that teachers do not have sufficient time to work on lesson plans nor to participate in in-service training, despite the fact that the method of utilising verbal activities to promote transversal competencies places greater demands on teachers, both time and skills-wise. In order to build capacity of teachers, it is important to establish institutional arrangements among schools, universities, and education boards which can support teachers in acquiring the necessary knowledge and skills for furthering transversal competencies, as well as provide more teachers training in line with the 2008 New Courses of Study.

Lastly, the research highlighted that the principles of Zest for Living is not well understood by stakeholders, and there is a need to increase awareness among parents and community members of the importance and rationale behind the promotion of transversal competencies.

The research report surveys only two selected pilot schools that have implemented Zest for Living into practice, meaning that the results cannot be interpreted to be indicative of a general tendency of all Japanese schools. However, the research shows that most teachers recognize positive changes among their students after introducing their unique curriculum.

Although discussion is still continuing and more specific implementation plans need to be developed, it is clear that the 2008 New Courses of Study and the Second Basic Plan mark a new phase in Japanese education towards greater focus and emphasis on transversal competencies.

Korea, Republic of

Transversal Competencies in the Republic of Korea

In the Republic of Korea, transversal competencies are referred to as key competencies. Key competencies are defined as basic abilities required for learners to be effective in work and life. They are not limited to a specific aspect of human characteristics. Key competencies are predominantly promoted through what is termed “Character Education”, which is integrated into the different subjects outlined in Table 7, as well as promoted through other Character Education programmes implemented at the school level.

Table 7: Key Competencies in Character Education in Republic of Korea

Subjects	Key competencies in Character Education
Korean Language Education	Self-respect, self-control, self-reflection, respect of others, sympathy, mutual understanding, responsibility, participation
Social Studies	Respect of human rights, understanding of differences, sympathy, concern of others, respect of others, generosity, coexistence, communication, obeying the law, responsibility, participation, conflict resolution, problem solving, etc.
Moral Education	Respect of others, responsibility, concern of others, self-control, sincerity, self-restraint, etiquette, collaboration, obeying the law, patriotic spirit, will for unification, love for humanity, love for nature, etc.

Research Method

The research is based on the following: a desk review and analysis of government policy documents and curricula; a case study of seven schools (four elementary and three middle schools) that have made significant efforts to promote Character Education; observations and interviews with principals, vice principals, heads of research departments, and teachers conducted during field visits; and an elementary and middle school teachers’ conference. The purpose of the study was to understand in detail how schools that implement Character Education organize their school curriculum.

Incentives for Reforms

Education reforms in the Republic of Korea with the purpose of fostering transversal competencies among learners stem from two factors. Firstly, the transition to a knowledge-based society has come to demand changes in the school system to further the application of knowledge rather than the accumulation of knowledge. Secondly, the Republic of Korea is grappling with an increase in school violence, conflicts, and teenage suicide. This situation is illustrated by the fact that among thirty-six OECD countries, Korean teenagers ranked second in terms of intellectual competency, whereas they

ranked thirty-fifth in terms of social interaction competencies. In addition, reports suggest that Korean students spend more time studying compared to students from other OECD countries and are under significant emotional pressure in their school lives. As such, Character Education is seen as a means to prevent conflict and to nurture coexistence. The authors argue that, due to intensified individualism, value diversification, and growing individual differences, it is no longer sufficient for key competencies to be nurtured in the home; rather, schools also need to play a part in this.

National Strategies and Policy Reforms that Promote Transversal Competencies

In 2012, the Government introduced a school bullying prevention plan that includes Character Education, the promotion of greater family and community interaction, and the prevention of harmful factors, such as addiction to the Internet and computer games. The plan stipulates the inclusion of Character Education programmes from preschool to upper secondary school. The plan also includes a move to strengthen elements of character-oriented competencies in Korean Language, Social Studies, and Moral Education, and a shift from a knowledge-centred form of education to a case/practice-centred. In educational activities particular focus is placed on developing capabilities in empathy, communication, conflict resolution, tolerance, and justice. Character Education is now reflected and strengthened in the national curriculum in a number of ways, as indicated below.

Changes to the General Guidelines of the National Curriculum

The education goals for elementary school to high school have been supplemented to consistently put Character Education into practice. The preambles of the education goals of elementary school and middle schools have been supplemented to emphasize good character and promote caring individuals. The goals of high school education have been complemented to stress global citizenship, in particular in regards to living with and cooperating with others. The new curriculum also stipulates reducing the number of subject matters included in one semester and a strengthening of sports club activities in middle schools. Sports club activities, which also comprise 'club activities' and 'creative experiential activities', are seen as central in overcoming school violence and important in promoting general physical and mental growth and learning. Sports club activities should be organized in all middle schools in Korea for 34–68 hours in each semester. Lastly, the changes also included the establishment of student guidelines to healthy attitudes to life and learning and sound behaviour patterns.

Changes to Korean Language Education

In the new national curriculum, the achievements standards for Korean Language Education have been revised, supplemented and amended to reflect the key competencies that Character Education encompasses.

Changes to Social Studies

The social studies curriculum has been modified with the particular motive of countering and preventing school violence. Teaching and learning guidelines have been revised in order to further emphasize respect for human rights, social justice, senses of unity, careful concern of others, generosity, and compromise. In addition, teaching of social skills and values and attitudes has been further strengthened. In total thirteen achievement standards have been amended and supplemented.

Changes to Moral Education

As key competencies such as sympathy, communication skills, conflict-solving ability, tolerance, and justice were already regarded as core competencies to be promoted in “Moral Education”, the curriculum has been improved by supplementing it with concrete methods of teaching and learning and a greater emphasis on learners’ self-initiated participation in moral inquiry and self-reflection.

Achievements and Challenges

The revision of the National School Curriculum has been successful in laying a stable foundation for the promotion of school sports club activities, which aim to promote physical health as well as good-natured individuals. Considering the fact that Korean students tend to lack time for sports, leisure, and even sleep, and the level of happiness and life satisfaction among Korean students is ranked the lowest among OECD countries, the policy measure to enforce sports club activities in every semester carries much significance. The reflection of transversal competencies, such as sympathy, participation, self-reflection, citizenship, and consideration of others, in the achievement standards of the curriculum has also served to increase their significance among educators.

The case studies performed as part of the research indicate that actual changes aimed at the promotion of key competencies are taking place in schools. One school, for example, has made Character Education the priority motto of the school, established an “etiquette club”, and implemented other initiatives that serve to promote volunteering and a community spirit. Many schools are also taking a keen interest in art education and providing the educational opportunities for this.

Another improvement observed is that experience-based education is increasingly reinforced through mechanisms such as extra-curricular volunteer programmes or career experiences implemented within regular class hours. Lastly, the research also indicates that schools have started to implement programmes that facilitate and encourage the exchange of thoughts and feelings between students themselves, but also between students and members of their families.

However, despite these achievements the research indicates that there is a large gap between policy and practice, and teachers who participated in the conference expressed concern over the difficulties in implementing the curriculum changes. To make the process successful, the overall organizational culture of the school has to change in parallel to the curriculum changes. In order to create a positive culture of caring for each other, one teacher argued, the way teachers view students, how students view their teachers, how students view other students, and how teachers view their co-teachers, must change as well, not just the curriculum.

To ensure more meaningful Character Education, the authors make a number of recommendations. For example, they suggest that the connection between schools and local communities needs to be strengthened and students should be encouraged to seek educational experiences in their spare time. They also point out that the volume of learning needs to be adjusted to allow for experience and practice-focused Character Education to take place, rather than knowledge-focused education. Teachers also need greater support in the form of teaching and learning materials that promote transversal competencies, such as practice-focused textbooks.

Malaysia

Transversal Competencies in Malaysia

While transversal competencies are embedded in education policy and curricula in Malaysia, there is no specific term used to refer to this set of skills and competencies, such as ‘non-cognitive skills,’ ‘transversal skills,’ ‘21st century skills’ or ‘soft skills.’ However, these skills and competencies are explicitly integrated into learning. Transversal competencies within the Malaysian context refer to:

- **Fostering unity and racial harmony by learning to understand, accept, and embrace differences.**
- **Acquisition of leadership skills, including entrepreneurship, resilience, emotional intelligence, strong communication skills and strong universal values such as integrity, compassion, justice, and altruism.**
- **Inculcating strong ethics and spirituality in every child in order to face challenges, resolve conflicts peacefully, use sound judgment, and become caring and value-driven individuals.**

Research Method

The research method includes an analysis of data and information gathered from the various divisions of the Ministry of Education Malaysia, including documents on curriculum development, curriculum specifications, textbook development, policies pertaining to co-curricular activities, achievements in various academic and non-academic fields, and the Malaysia Education Blueprint 2013–2025. In addition, the researchers organized a workshop attended by officers from various divisions of the Ministry of Education, at which the topic of transversal competencies in education was discussed.

Incentives for Reforms

Malaysia’s rich socio-political heritage has greatly influenced the development, provision and rationale for including transversal competencies in education. As such, the fundamental principles on which the national education system is based can be seen as a reflection of Malaysia’s colourful history. Since independence in 1957, transversal competencies have been integral to education as a means to foster unity, tolerance, and respect for diversity. Since then, new global demands have provided the incentive for the Ministry of Education to place even greater emphasis on transversal competencies in recent education reforms. These demands include the need to ensure that learners are sufficiently equipped to face the new challenges of the rapidly changing social, economic, and political circumstances of the 21st century, as well as the need to ensure that learners are able to meet the demands of the workforce, and display solid work ethics, good communication skills, creativity, critical thinking and the ability to work with people from diverse cultural backgrounds.

As such, transversal competencies in education in Malaysia does not only play a crucial role in promoting a united national identity, but also in ensuring the nation’s success in today’s global economy which demands high levels of knowledge, skills, and competencies in order to remain relevant, competitive, and progressive in a rapidly changing environment.

National Strategies and Policy Reforms that Promote Transversal Competencies

Education in Malaysia has undergone several phases of development since independence in 1957. Throughout these phases, the main purpose of education has been to create unity, establish a common identity and to foster tolerance and respect for diversity.

The National Philosophy of Education, which governs the education system of Malaysia, clearly states that the purpose of education in Malaysia is to develop well-balanced individuals who excel both in academic and non-academic fields and are equipped with values and attitudes that make them good citizens and good human beings. These statements are echoed in the National Education Policy, which stipulates that equal prominence should be given to the development of the intellectual, spiritual, emotional, and physical aspects of the individual.

A comprehensive and extensive review of the education system in Malaysia was undertaken in 2011 to gauge the efficiency of the existing system and its relevance to the current needs of the nation. From the review stemmed the Malaysian Education Blueprint 2013–2025 which outlines strategies for education system reform and provides a clear vision for education in Malaysia for the next thirteen years. The Blueprint includes aspirations in terms of access, quality, equity, unity, and efficiency of education and also specifies individual student aspirations in knowledge, thinking skills, leadership skills, bilingual proficiency, ethics and spirituality, and national identity. In order to achieve these aspirations the Blueprint outlines eleven shifts out of which “Develop Values-driven Malaysians” is particularly relevant to the promotion of transversal competencies. It encompasses:

- **The introduction of the subject Civic Education**
- **A strengthening of Islamic and Moral Education**
- **Greater emphasis on co-curricular activities for the holistic development of individuals**
- **Enhancement and expansion of the programme “student integration and unity”.**

Beginning in 2011, the Ministry of Education introduced a new standard-based curriculum for primary schools, the Standard Curriculum Primary School (KSSR), which is expected to be fully implemented by 2016. A standard-based reform of the existing curricula for secondary schools – the Standard Curriculum Secondary School (KSSM) – will be ready for Form 1 students by 2017. In comparison with the previous curricula, the KSSR places more emphasis on skills such as reasoning, creativity, innovation, and entrepreneurship with additional focus on spiritual attitude and values, humanities, and physical and aesthetic development. The KSSM is expected to adhere to similar fundamental elements.

Method of Integration

Transversal competencies are integrated into the education system implicitly and explicitly. The teaching of values and non-academic skills is stipulated in the national curriculum and included in the syllabus of every subject taught in national primary and secondary schools. These values and attitudes are inculcated in learners through classroom-based activities.

Transversal competencies are also explicitly incorporated into education through specific subjects which are taught in the classroom, such as: civics and citizenship studies, Islamic studies for Muslim students, and moral studies for non-Muslim students. Transversal competencies are also explicitly evident in co-curricular activities which occur outside the classroom.

Co-curricular activities in schools can be divided into several categories, such as clubs, societies, sports and games, and uniformed bodies. In addition to more than fifty types of sports, games and athletics, the Government has approved about nineteen different uniformed bodies that can be formed in schools, among which are the Malaysian Red Crescent Society, Scouts, Girl Guides, School Orchestra, Police Cadet, Taekwondo and Karate. There are also twelve academic societies and thirty-five clubs that cover areas such as consumerism, nature, music, computers, photography, welfare, and recreation.

Achievements and Challenges

The research indicates that the provision for the holistic development of students by schools in Malaysia is at a satisfactory level. However, while the National Curriculum calls for a balance between students' academic and non-academic achievements, the actual process of implementing this policy still needs to be improved to ensure that the objectives are fully achieved.

While the academic development of individuals can be captured through standardized tests and evaluation methods, the development of the non-academic domain is not easy to measure because it involves the development of individuals who possess values and skills which are not easily measurable. Currently, the education system does not include a standardized measure of transversal competencies development of students. However, schools have been using observable variables such as student behaviour, attitudes, discipline, interaction patterns among students from various ethnic groups, and students' participation in various school activities as indicators of their overall development. For example, non-academic student outcomes can be measured by examining the extent of their participation and performance at national and international activities and competitions. The Arts and Co-curriculum Division's Annual Report for 2012 lists seventy national level competitions, which were carried out in 2012.

Malaysian students have also successfully participated in international programmes such as the ASEAN Student Exchange Programme 2012, The 8th Malaysia Thailand Youth Camp 2012, World Robot Olympiad 2012, F1 in Schools World Finals, 2012. In addition, the performance of the Ministry of Education Malaysia in sustaining students' spiritual, emotional, and physical development can be gauged by examining available sources of data on school's self-assessed scores on student outcomes, results of targeted school inspections on student discipline, and overall level of discipline in schools.

However, in order to ensure that interventions can be planned and implemented in the most efficient matter, it is important to develop a system through which transversal competencies can be properly defined as well as measured more effectively and accurately.

Another obstacle that is hampering the integration of transversal competencies in education in Malaysia is the mind-set of educators and parents who tend to measure the success of students' educational outcomes based on academic achievements alone. This means that activities that promote the development of the non-academic domain often are considered as secondary.

To ensure continued improvements and better integration of transversal competencies the authors make the following recommendations:

- **Service learning approach in teaching and learning to encourage active and inter-active student participation, specifically when teaching subjects such as civic and citizenship studies, languages, moral education, history, and science to help learners develop interpersonal and intra-personal skills.**
- **Encourage non-governmental organizations, government-linked companies and other corporate organizations in Malaysia to carry out projects involving schools to provide opportunities for new learning experiences outside the school setting.**
- **Enhance the existing curriculum for teacher training by including more materials to teach novice teachers how to successfully incorporate transversal competencies into their daily lessons in the classroom.**
- **Develop a systematic, evidence-based, and robust approach to measuring the acquisition of transversal competencies based on the principles of socio-psychology.**

Lastly, the authors point out that the definition of transversal competencies within the Malaysian context does not perfectly fit into the framework provided by the ERI-Net Secretariat. The study also suggests that there is no clear delineation between what is meant by cognitive and non-cognitive domains.

Mongolia

Transversal Competencies in Mongolia

In Mongolia there are no specific policies or plans that explicitly focus on the promotion of transversal competencies among learners. However, the research shows that a number of policy documents implicitly include several of the examples of transversal competencies listed in the ERI-Net framework for integration into education. In addition, a recently introduced government programme, “Upright Mongolian Child” places great emphasis on the promotion of transversal competencies, albeit implicitly.

Research Method

The research method includes a review of policy documents obtained from the Ministry of Education and a questionnaire. In total, fifteen policymakers (officers of the Ministry of Education and Science of Mongolia and experts of the Institute of Educational Research) and fifteen primary and secondary education teachers responded to the questionnaire.

Incentives for Reforms

The majority of the questionnaire respondents listed “increased international cooperation”, “meeting social demand”, and “response to employers’ demands to increase ‘employability’ of students”, as the top three incentives for the integration of transversal competencies into education. Other possible options, such as “declining students’ learning achievement”, “excessive pressure on students to achieve academic excellence”, “boosting economic development”, and “self-development, living without stress”, received much less approval from the respondents.

Policy Reforms that Promote Transversal Competencies

Mongolia's primary and secondary education sector has undergone drastic changes over the last twenty years since the country embarked on a large-scale political, economic and social transformation, including the transition from 10-years to 12-years of schooling in a relatively short period of time. The first graduates with twelve years of schooling are expected in 2014-2015. This reform has significantly affected and caused frequent changes to curricula, programmes, and subject content.

Another significant change in Mongolia's education system is the shift from an academic-focused instruction method to a practice-oriented method, which aims to develop students' competencies, capabilities, and skills for learning and living in a globalized world. The old school curriculum was characterized by a heavy emphasis on theories without practical application, which the new curriculum seeks to overhaul and replace with a child-centred methodology and more skills-oriented instruction. However, a lack of materials, resources, facilities, budgets, and trained teachers has inhibited the effectiveness of this improvement.

The most recent general education curriculum was approved in August 2013 by the order of the Minister for Education and Science of Mongolia. In accordance with this curriculum, students learn both basic content and school-coordinated additional content. Additional content includes citizen education, project work, and elective subjects. Forty pilot schools have been selected to implement the new curriculum and programs in the academic year of 2013-2014. Teacher training has been conducted at all selected pilot schools.

According to the researchers, major policy documents, such as education laws, national strategic plans and programs, and curriculum documents increasingly adopt terminology that is inclusive of transversal competencies. Overall, policy-makers appear to be well informed on the international trend of transversal competencies, and reported that this trend is reflected in relevant guiding documents in Mongolia. Therefore, it appears transversal competencies are an implicit part of the national reform agenda.

The research found that several of the current policy documents reflect a number of transversal competencies. In these documents, transversal competencies are usually included as the goals and objectives of the policies. There is no single policy document that is particularly focused on transversal competences. However, a recently introduced government programme (2013) titled "Upright Mongolian child" appears to be the only policy document which is entirely focused on the integration of transversal competencies into education. The programme aims to develop in each child competencies such as "Creative thinking", "Self-confidence", "Informed Decision-Making", "Collaboration", "Life-long learning", and "Respect for National Language, Culture, Customs and Ethics".

According to the survey of policy-makers, the most frequently cited competencies are: respect for the environment, self-discipline, collaboration, communication and problem solving. However, according to the teachers surveyed, these competencies are: creativity, collaboration, reasoned decision-making, working with others, enthusiasm, and application skills. Similarly, other skills notes by the policy-makers, such as self-discipline, communication, integrity, and tolerance, were absent in the teachers' responses.

Method of Integration

While it is believed that transversal competencies can be integrated into all subjects, currently, there is no official document that guides this practice and, according to the research, transversal competencies

are mainly promoted through additional planned activities, i.e. citizen education, project work, and elective subjects.

Citizen education is taught in all grades in order to cultivate in students respect and care for national customs, traditions, and values, and a collaborative and humanistic attitude. Project work, which encourages children's participation in social and community activities, is taught in grades 3-6. The subject aims to develop students' ability to determine and prioritize urgent issues and find solutions to problems. As for the elective subjects, the content of these may be decided at the school level with participation of teachers. The content is to meet the particular demands and needs of the students in question and tailored to suit their particular development needs.

According to the policymakers surveyed, citizen education and project work can be regarded as specific subjects for the promotion of transversal competencies. In the same manner, elective subjects, depending on their content, can also be used to nurture transversal competencies.

The "Upright Mongolian Child" programme, which consists of three sub-programs: Quality reform of preschool, primary and secondary education; Talent; and Book, is expected to be implemented in full from 2014-2016.

In addition to the planned activities, the survey revealed that there is a high student involvement in extracurricular activities, such as community activities, after-school sports and arts, and school council activities, which are also seen as a means to further transversal competencies.

Achievements and Challenges

Sixty-seven per cent of the teachers surveyed indicated that they see a "somewhat positive" change in their students following the new curriculum, whereas 33% indicated that there had been no change. Among the teachers that perceived improvements, interpersonal skills rated the highest, followed by critical and innovative thinking skills and intrapersonal skills.

While these are promising results, a number of challenges to the full and successful implementation of transversal competencies remain. Policies and programs that include transversal competencies are not fully enacted in practice and there are no specific policy documents that stipulate formal steps and actions for the introduction of these skills and competencies into the teaching and learning practice. The "Upright Mongolian Child" programme also lacks practical guidelines on actual integration. In addition, there is a lack of a clear definition of transversal competencies, evident in the fact that the policymakers who participated in the survey cited different sources of reference of transversal competencies.

Other bottlenecks to implementation include insufficient teaching/learning materials targeting the development of transversal competencies; lack of training, capacity building and guidance for teachers; lack of understanding among teachers, parents and stakeholders; and unclear assessment standards.

Discussions with policy-makers suggest that currently there are no specific programs to encourage teachers to develop transversal competencies in students. However, policy and procedural documents, such as ethical norms of teachers, guideline for teachers' performance evaluation, and policy on teachers' professional ranking, include teacher activities related to the development of some transversal competencies.

Seventy-three per cent of teachers said that they had received some materials and guidance but that it was not sufficient and two of the fifteen teachers surveyed said that they had not received enough or no materials and guidance at all. Similarly, 80% of teachers said that they had received some training but that it was not sufficient. The survey also revealed that teachers' understanding of transversal competencies is quite narrow compared to policy-makers. This may be due to the lack of clearly articulated policies on the integration of transversal competencies.

Furthermore, despite frequent changes in primary and secondary school curricula, pre-service teacher training institutions have not been enthusiastic about reflecting new concepts in their practice. Similarly, the absolute majority of teachers who took part in the survey indicated that currently there is no incentive mechanism for developing transversal competencies in students in Mongolia.

To mitigate these challenges, the authors point out that it is important for policymakers to reach a consensus regarding the definitions of transversal competencies. Such consensus can be facilitated through open discussions, forums, and conferences involving different education stakeholders.

In concluding, the authors argue that while Mongolian educators and teachers are well aware of the importance of transversal competencies, this awareness is not transferred into classroom practice. As such, there is a need for instrumental guidance in how transversal competencies can be integrated into classroom practice and extracurricular activities and to raise awareness of the benefits of transversal competencies among schools and the community at large.

Philippines

Transversal Competencies in the Philippines

In the Philippines, transversal competencies are deeply embedded and integrated into an overall framework of educational policies in both explicit and implicit ways. While there is no single agreed upon term for referring to these competencies, "non-cognitive skills" appears to be the most frequently used. In addition to the examples of competencies cited in the ERI-net framework, a number of other competencies, values and attitudes are mentioned in the Philippine education policies, for example, patriotism, sportsmanship, and sense of responsibility.

Research Method

The research is based on a desk review and analysis of policy documents and curricula. The research sought to examine the extent to which transversal competencies are integrated into policy and curricula, and whether such skills and competencies are clearly articulated, expressed and developed in the actual teaching practice. However, due to time constraint, data were not collected on implementation practices.

Incentives for Reforms

The goals and outcomes of the Philippine education system have developed and changed with the times. Transversal competencies have been increasingly integrated into education as a response to changing global and local contexts and to ensure the holistic development of learners so that future generations can lead more responsible and decent lives in a rapidly changing, diversified and interconnected world, while retaining their identities.

National Strategies and Policy Reforms that Promote Transversal Competencies

Over the last decade, three major curricular changes have helped shape the educational landscape of the Philippines: the 2002 Basic Education Curriculum, the Revised Secondary Education Curriculum of 2010, and the K to 12 Curriculum of 2012, the development process of which is still ongoing as of 2014. Each curricular programme has been designed to prepare learners to meet the various demands of a rapidly changing world.

Apart from the three major curricular reforms, the Government has also established the Madrasah Curriculum for Basic Education, the Indigenous People's Curriculum, the Alternative Learning System Curriculum, and the Universalization of the Kindergarten Curriculum in public and private schools in order to tailor education to the needs of special populations of learners and children. The Indigenous People's Curriculum has for example led to the development of localized curriculum materials that take into account the promotion of local culture and values of different indigenous groups in the country. One of the main purposes of the Madrasah Curriculum is the promotion of the Filipino national identity and the preservation of the Muslim cultural heritage.

Overall, the country's educational policies and curriculum programmes clearly articulate the desired learning outcomes of students, to which transversal competencies are central. Transversal competencies are directly or indirectly incorporated in all subject areas where relevant and particularly promoted in the subject area titled Values Education.

Values Education in the 2002 Basic Education Curriculum particularly focuses on the development of seven core values, as follows:

- **Physical Health and Harmony with Nature**
- **Peace and Justice**
- **Truth and Tolerance**
- **Love and Goodness**
- **Nationalism and Globalism**
- **Ecological Sustainability**
- **Spirituality**

Under each core value, related sub values are also identified, such as critical thinking, creativity, integrity, entrepreneurial spirit, social responsibility, promptness and punctuality, resourcefulness, self-reliance, etc. In the K to 12 Curriculum, the Values Education framework reflects most of these transversal values and can be further summarized into four core values, as follows:

- ***"Makabayan"* – Love of country**
- ***"Makatao"* – Humaneness**
- ***"Maka-Diyos"* – Faith in God**
- ***"Maka-kalikasan"* – Ecological Sustainable Development**

The 2010 revised Secondary Education Curriculum retained the principles of the Basic Education Curriculum and also expanded student learning opportunities through special curricular programmes in the Arts, Sports, Engineering and Science Education Programme, Journalism, Technical-Vocational Programme, and Foreign Languages.

The K to 12 curriculum aims at the holistic development of learners who are well equipped with transversal competencies for employment, entrepreneurship, middle-level skills or higher education. The K to 12 is anchored in the Enhanced Basic Education Act of 2012, which aims to develop productive and responsible citizens equipped with skills and competencies for both lifelong learning and employment. The law also stipulates the need to ensure that education promotes the ability of learners to coexist with local and global communities, as well as to engage in creative and critical thinking.¹²

The K to 12 curriculum outlines core compulsory learning areas as well as areas of specialization. Upon graduation, a K to 12 student must possess the following transversal competencies:

Information, media and technology skills, including visual and information literacies, media literacy, basic, scientific, economic and technological literacies and multicultural literacy and global awareness.

Learning and innovation skills, including creativity and curiosity, critical thinking problem solving skills and risk taking.

Effective communication skills, including teamwork, collaboration and interpersonal skills, personal, social and civic responsibility, interactive communication, and local, national and global orientedness.

Life and career skills, including flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility, and ethical, moral and spiritual values.

Moreover, the Philippine Constitution highlights the role of education in order to: manifest patriotism and nationalism, love of humanity, respect for human rights, appreciation of the role of national heroes in the historical development of the country, observance of rights and duties of citizenship, has strong ethical and spiritual values, as well as moral character and personal discipline, can think critically and creatively, has scientific and technological knowledge, and vocational efficiency.¹³ The overarching goal of the K to 12 curriculum is achieved when every K to 12 graduate demonstrates the above mentioned outcomes.

Method of Integration

Transversal competencies are integrated into teaching and learning across all the subject of the curriculum and are also given particular attention in the Values Education subject, and further promoted through co-curricular and community involvement programmes.

The K to 12 curriculum stipulates that the holistic development of learners should be nurtured in different ways and with particular focus areas in all clusters of subjects – Languages, Math, Science, Arts and Humanities, and Technology and Livelihood Education, and in all grade levels. For example, physical health and wellness are the focus of Physical Education and Health, whereas critical and innovative thinking is developed through science and math education, and entrepreneurship through Technology and Livelihood Education. Instructional materials, particularly textbooks and technology-based materials used in the classroom are laden with discussions on transversal competencies. The activities and experiences encouraged by the material also aim to ensure students develop their transversal competencies.

¹² Excerpts from the Philippine Enhanced Basic Education Act of 2013, Republic Act No.10533

¹³ Excerpt from Philippines Constitution, Article XIV, Section 3

Strong school–community partnerships are integral components of many educational programmes in the Philippines today. Such programmes serve to enable students to apply skills acquired in the classroom into practice and explore a number of activities designed to develop learners’ capacity to work with communities. These are powerful experiences that promote collaboration, initiative, and creative thinking.

In addition, the authors argue that a careful analysis of the hidden curriculum of schools reveals that transversal competencies are embedded in the day-to-day practices and experiences provided to learners. The school calendar also includes celebrations, such as Human Rights day, Programme on Environment, and Boys and Girls week, through which transversal competencies are nurtured.

Achievements and Challenges

The importance of developing transversal competencies in learners is clearly reflected in both past and present Philippine policy documents and curricula. Interestingly, there appears from the analysis that in addition to the examples of transversal competencies listed in the ERI-Net framework for transversal competencies, a number of additional skills and competencies are clearly articulated in many educational programmes and policies. For instance, respect for human rights is strongly valued and an integral part of the curriculum goals and reflected in the instructional materials being developed. While this may be considered a component of Global Citizenship, in the Philippine curriculum, human rights education is viewed as a framework for educating the young. Similarly, caring for the environment and ecological sustainability appears to be strongly emphasized in the curriculum, not merely as a component of global citizenship but as a separate domain of transversal competencies. Multiculturalism, multiple perspectives, and respect for local cultures are likewise strongly valued. They permeate the different subject areas and are defined within the framework of Mother Tongue-Based Multilingual Education (MTBMLE), indigenous education and the localized curriculum.

While transversal competencies are enshrined in many education policy documents, the extent to which they are taught, applied, and acquired by learners continues to be a challenge in the new K to 12 curriculum, in which enhanced pedagogies are currently being tried out. In order to move the process forward, there is an urgent need to develop assessment and evaluation strategies and tools that can determine how and to which extent transversal competencies are taught and acquired. Thus, the authors suggest the development of a coherent framework for integrating all transversal competencies into the overall basic education framework to serve as basis for deliberate and systematic development of these competencies in the curriculum and in the related educational programmes and activities.

The authors recommend a follow-up study on how transversal competencies are actually translated and practiced in school contexts, which is foreseen as Phase 2 of the ERI-Net project. The authors recommend that the study focus on collecting empirical evidence from teachers and students in the field through surveys and observations, as well as further research into assessment strategies and monitoring and evaluation of teaching practice. Lastly, the authors draw attention to the extent to which teachers’ beliefs and attitudes toward the teaching of transversal competencies influence how they are developed in learners, and the need for more in-depth and focused teacher training in transversal competencies.

Shanghai, China

Transversal Competencies in Shanghai

Although there is no clear framework for 21st century skills, non-cognitive skills or transversal competencies in Shanghai's education policies, this group of skills, values and competencies are implicitly integrated throughout Shanghai's education curriculum, education plans and strategies. In Shanghai's education context, transversal competencies are promoted through the education system's strong emphasis on enabling students' lifelong development and promotion of a spirit of innovation and ICT literacy.

Research Method

The research is based on a literature review and analysis of policy papers and documents from the Ministry of Education People's Republic of China, and Shanghai Municipal Education Commission, and data gathered through a survey of policy-makers, education experts and teachers. In total, fifteen education experts and policy-makers and 112 teachers of primary and junior secondary schools responded to the survey, which was designed to obtain information on the rationale and factors behind reforms related to the integration of transversal competencies into basic education. In addition, the authors also visited three public primary and junior secondary schools in different Shanghai districts for field observations and on-site interviews.

Incentives for Reform

Education reforms in Shanghai have been spurred by a number of domestic and global challenges and trends, including the growth and intensification of globalization and the need to ensure national competitiveness and innovation in the global knowledge society and to promote lifelong development of learners. Domestic drivers include Shanghai's economic development strategy and the need to improve the capacity for self-innovation and to build a harmonious society.

National Strategies and Policy Reforms that Promote Transversal Competencies

While the 2009 PISA results revealed that students in Shanghai have achieved a top level of academic performance compared to the national average level, the education system is facing a number of challenges, including limited time given to self-directed learning, a limited curriculum offered at school, and the use of traditional concepts, technologies and methods for educational evaluation. The PISA results also made evident that Shanghai students have a very heavy homework burden, ranking the highest among the participating countries and regions.

Together with the global and domestic incentives mentioned above, the PISA results provided stimulus for education reform. The Outline of Shanghai's Plan for Medium and Long-term Education Reform and Development (2010-2020) (from hereon: the Plan) aims to improve the quality of education and to foster the spirit of innovation and practical capabilities in students. The fundamental purpose of the reform is to promote comprehensive qualities in all students. An important step in achieving these goals is decreasing the amount of homework to give students more time to develop their characters and potentials. The Plan outlines a number of working guidelines for Shanghai's basic education. These are in brief.¹⁴

¹⁴ A full list of the guidelines can be found in the original case study report.

- Putting people first and implementing quality-oriented education
- Establishing and fostering new values on education and quality, caring more about people's and students' overall development
- Developing students' characters
- Enhancing students' awareness of innovation, lifelong learning, and capacity for practice to lay a solid foundation for their lifelong development
- Enhance the teaching force by raising teachers' professional identity and competency

The Plan also contains a number of strategic goals and themes, including:

- Increased emphasis on education for social responsibility; i.e. the promotion of traits such as honesty, patriotism, spirit of truth seeking, social responsibility, and gratitude for parents and teachers
- Promotion of moral education to foster good behaviours and habits through interesting and entertaining school activities
- Incorporating and embedding moral education into teaching and learning in schools, at home, and in the society

In order to reduce students' heavy workload and homework burden, several experimental and pilot projects have been initiated with the aim of transforming class teaching and give students more time to broaden their visions, connect with society, enrich their personal learning experience, and to improve the effectiveness and quality of teaching. The projects include initiatives such as:

- **Happy education:** Aims to transform teachers' concept of teaching, and to shift from teaching for the sake of students' learning to teaching for the sake of students' joyful learning
- **Success Education:** Aims to enhance the level of students' thinking and self-directed learning while reducing teachers' class teaching.
- **Happy Activity Day:** Aims to enable primary school students to learn and develop through active participation in thoughtfully organized activities that are conducted or coordinated with social communities, institutions, or other relevant organizations. This form of learning emphasizes students' capacities for learning to be, learning to cooperate, learning to do, and learning to take exercises to promote their overall development.

The Plan also stipulates that student performance assessment must shift from a sole emphasis on students' academic performance to a comprehensive assessment of their overall development. As transversal competencies are increasingly incorporated, assessment methods must also be adjusted accordingly. As part of this work, Shanghai has established its own quality monitoring system for student performance based on curriculum standards, called the Green Indicator System for Student Performance in Primary and Secondary Schools.

In addition, according to the twelfth Five-year plan for Shanghai's Basic Education Reform and Development (2011-2015), primary and secondary schools in Shanghai are to be equipped with full coverage of Wi-Fi to improve the ICT literacy of teachers and students.

Curricula reforms

In 1988, Shanghai started its first round of curriculum reforms, which was focused on improving students' quality according to social demands, individual development and a discipline system. The new curriculum included concepts and subjects such as "character development", "mental quality" and "labour skills and quality".

The second round of curriculum reforms was launched in 1998 and was spurred on by the financial crisis of the same year. In this round of reforms, students' overall development was placed at the core of the curriculum and particular emphasis was placed on the spirit of innovation, practice ability, and capacities for lifelong and sustainable development. The curriculum is based on three objectives; attitude and value, process capability and methodology, knowledge and skills. The curriculum aims to foster basic learning outcomes as well capacities for further development and creativity, including:

- **ICT ability involving information processing, analysis and application**
- **Initial and formative capacities for research, practice and making choice**
- **Critical thinking skill and spirit of innovation**
- **Skills for cooperation and communication**
- **Awareness of environment protection**
- **Basic taste and ability for aesthetic appreciation**

Method of Integration

The new curriculum stipulates three types of courses: basic, enriched, and inquiry-based. In general, basic courses are compulsory courses, which focus on knowledge, skills, attitudes, and basic competencies. The majority of enriched courses are optional courses, which focus on extended knowledge, and skills and attitude development. The features of this type of course content are wide-ranging, multiple level, and selective. Inquiry-based courses are a form of activity course that focuses on students' spirit of innovation and practical ability.

Across twelve years of basic education, there are a total of eight learning domains known as integrated courses, e.g. social science, natural science, and twenty independent or specialized courses, such as geography, Chinese, and chemistry. The main feature of the new curriculum is the combination of integrated courses with independent or specialized subjects. For example, science education for students in grade 1-7 takes the form of the integrated course "Nature", but for students in grade 8-11, it takes the form of independent subjects, such as physics, chemistry and biology.

When students reach grade 12, science education is provided in the form of an integrated course once again.

Furthermore, in June 2005 the Shanghai Municipal Education Commission launched the Outline of Guidance for Students' National Spirit Education in Shanghai. National Spirit Education aims to promote a common culture, history, and lifestyle and to foster students' identity and sound moral values and habits. According to the outline, National Spirit Education should be integrated into different subjects as well as delivered as a separate subject. The content of National Spirit Education is divided into three major strands, including national awareness, culture identity, and citizenship. In each major strand, the content has been further divided into four parts.

Another outline launched in 2005 is Outline of Guidance for Students' Life Education in Shanghai. Life Education aims to help students understand, treasure, respect, and love life with passion, and to improve their quality of life and survival skills. Life Education contains four themes: life and health, life and growth, life and security, and life and values. Life Education is delivered in the separate subjects titled "Nature", "Moral and Society" and "Physical and Body Building" class, and through outside school educational activities, such as social activities organized by schools and social communities, festivals, and memorial days.

Achievements and Challenges

According to the results from the survey of teachers, the education reforms and other measures adopted in Shanghai have had a positive impact on students with 11.61% of teachers citing "very positive changes in their students" and 68.75% of teachers citing "somewhat positive changes in their students" following the reforms. The areas of interpersonal skills and critical thinking skills were reported to have improved the most, whereas the least changes were reported in the area of global citizenship.

However, the survey also shed light on a number of bottlenecks and challenges. A large proportion of teachers (43.8%) indicated that the definition of transversal competencies in government policy documents is "somewhat unclear". Further to this, 53.6% of teachers stated that while they had received training in the new curriculum it was not sufficient, and 60.7% of teachers indicated that they had received some training, but that they had not received sufficient specific guidelines or handbooks to implement the new curriculum in the classroom. To further the integration of transversal competencies the authors recommend teachers be given more targeted training, clearer guidelines, and learning materials.

Furthermore, the according to the interviews and questionnaire, the largest obstacle to the implementation of transversal competencies is the current college and university entrance examination system. As the authors point out, if the student assessment system remains the same, adding elements of transversal competencies into the curricula will simply serve to increase students' study burden.

Lastly, the survey revealed that employers in the private sector are poorly involved in organising education activities that promote transversal competencies. Hence, the authors recommend that the relationships between schools and the private sector should be strengthened, in particular when considering the importance of transversal competencies to the labour market.

Thailand

Transversal Competencies in Thailand

In Thailand, the term "life skills" is used by the Office of Basic Education Commission (OBEC) to refer to transversal competencies. Life skills are defined as the result of applying knowledge, values, attitudes, and different types of skills during the process of learning to know, learning to do, learning to be, and learning to live together. Life skills are a combination of different sets of skills and should be viewed and understood as a culmination of the combination of guide skills (skills related to doing or making something) and psychosocial abilities. In this sense, life skills are not a subject that can be taught or a set of skills that can be trained in an abstract and theoretical way. Rather, life skills are the result of applying knowledge, values, attitudes, and different types of skills during the process of learning to know, learning to do, learning to be, and learning to live together.

Research Method

The scope of the case study of Thailand encompasses general school education, referring to primary and secondary education. The research method includes a review of secondary data sources, such as data, information and publications from various offices, as well as a questionnaire and in-depth interviews. The survey was distributed to fifty basic education schoolteachers, and had a response rate of 96%. In-depth interviews were conducted with fifteen individuals comprised of policy-makers, administrators, and education experts.

Incentives for Reforms

The research shows that a number of incentives lie behind the government's move to integrate life skills into education. The top incentives cited by the policy-makers, education experts, and teachers interviewed are: meeting social demand; increased international competition; the rapidly changing society of the 21st century"; declining student learning achievements; the employability of students; and the need to boost economic development.

National Strategies and Policy Reforms that Promote Transversal Competencies

During the past ten years, Thailand has witnessed vigorous attempts at systemic reform of the national education system. While these reforms have brought improvements to the system, the authors point out that there are a number of problems in need of urgent solutions, such as: quality of learning outcomes for students, teachers, faculty staff, and educational personnel; efficiency of administration and management; and, the need for increased educational opportunities. In view of the above-cited problems, the Office of the Education Council was assigned the task of carrying out education reform in collaboration with all agencies concerned.

The Vision of the Second Decade of Education Reform (2009–2018) is for "All Thai people to be able to access high quality lifelong learning". The reform initiative places emphasis on the following three main areas of concern: developing quality standards of education and learning for all Thai people; increasing education and learning opportunities; and, strengthening participation of all segments of society in educational administration and management.

The National Education Plan 2002–2016, which serves as the fundamental law of the administration and provision of education and training, focuses on the integration of education into all aspects of people's lives and aims to promote a knowledge-based economy and society of continuous learning, and to involve all segments of society in the design and decision-making of public activities. The government is committed to improving access to and quality of education in order to empower Thai people to adjust to world trends and events while maintaining their Thai identity and developing desirable characteristics, such as virtue, competency, happiness, and self-reliance, as well as the ability to think critically, make rational judgment and live in harmony with all members of society.

In education policy documents, a number of life skills/transversal competencies are promoted by the government, such as creativity and self-discipline, problem solving, reasoned decision making, media and information literacy, and application skills. The core curriculum of basic education (2008) specifies life skills as important capabilities that every student should obtain. "Components of Life Skills as a Reform Approach", drafted by the OBEC in 2008, contains four basic components, these are in brief:¹⁵

¹⁵ A full definition of life skills is available in the case study of Thailand

- **Appreciation of one's own and others' value**
Realising and accepting oneself and others, knowing one's skills and pros and cons, as well as understand differences between each individual.
- **Analysing, making decisions and solving problems creatively**
Applying logical thinking in problem solving; analysing, examining, identifying and evaluating situations reasonably; building and maintaining friendships.
- **Emotion and stress management**
Understanding and becoming aware of emotional conditions of individuals; being able identify and manage the source of stress.
- **Building good relationships with others**
Ability to understand one's own and other people's emotions and feelings; showing sympathy towards others; ability to resolve conflicts and cooperate with others.

Method of Integration

According to the core curriculum of basic education, life skills should be emphasized and integrated into Thailand's eight subjects (knowledge groups) as well as other activities that aim to develop learners, such as guided activities and "homeroom activities", student activities (Scouts, Red Cross activities, etc.) and other social and public activities in which the school participates. The OBEC stipulates the focus points for life skills in the basic education system according to grade level. Examples of activities that serve to build and maintain life skills include:

- Activities that focus on preparing learners for life-long learning, including activities that allow learners to intellectually participate in knowledge generation and to discover knowledge by themselves.
- Activities that encourage learners to cooperate with each other, build relationships, and apply communication skills.
- Activities that encourage learners to gain a better understanding of themselves, display compassion for others, and realize their own worth.

Project-based learning

Life skills are also taught through project-based learning activities. In general, the projects require teamwork among students and co-operation from school administrators, parents, and communities and aim to develop students' basic professional knowledge and skills in order to prepare them for their future careers. Each project can incorporate a number of different learning areas. In total, there are seven learning areas:¹⁶

- **Environment Awareness**
Includes "Bank of Recycled Garbage" project and "Public Mind to Reduce Global Warming" project, which are integrated into biology in order to help develop students' "public mind" and their motivation to work collaboratively with other people.

¹⁶ A full description of the learning areas is available in the case study of Thailand.

- **Sufficiency Economy**
Projects provide knowledge and understanding of professions and is based on the concept of sufficiency economy initiated by King Bhumiphol Adulyadej of Thailand. Students design and create inventions using materials available in their local communities. Evaluation is performed by peers, teachers, guardians, and the students themselves.
- **Profession Integration**
“Mini Company” is a small-size business project that enables students to gain hands-on experience in doing business and aims at inculcating business knowledge and skills necessary for future careers.
- **Thinking Skills**
Projects are developed by teachers and are based on “Cooperative Learning” to develop thinking skills in students.
- **Ethics and Morality**
Projects aim at fostering ethics and morality in students and require collaboration among school, parents, and the community in the design and monitoring of project activities.
- **Democracy Promotion**
The “Student Council Project” aims to encourage student leadership through student-led and initiated projects. Teachers give guidance and act as councillors to the students.
- **Local Wisdom Appreciation and Preservation**
Projects teach students “local wisdom”, particular to their locale (for example, needlework) and give students the opportunity to practice it themselves.

In general, these non-cognitive or life-skills projects require teamwork of students and co-operation from school administrators, parents, and communities to develop students’ basic profession knowledge and skills in order to prepare them for their future careers. It is noted that these projects integrate different learning areas into one project. Students are trained to learn and do by themselves and how to evaluate their own performance.

Achievements and Challenges

The survey results indicate that the impact of the integration of life skills in education policy on students’ learning achievement is very promising. The research documents that with the implementation of the new curriculum, student competencies in critical and innovative thinking, interpersonal and intrapersonal skills, and global citizenship have improved. The research also indicates that the major contributors to this positive development are communities and families.

However, a number of challenges remain. The research revealed a general inconsistency in policy and practice and the new curriculum is yet to be fully implemented. Almost half of the policy-makers and education experts cited a 10-year time frame for the implementation of the new policies, which follows the time frame of the Second Decade of Education Reform (2009-2018). In addition, the authors argue that the lack of a unified definition of the term life skills is one of the fundamental obstacles to the concepts successful implementation.

A number of bottlenecks to the complete integration of life skills into education were identified through the survey. In regards to teachers the most prominent obstacles appear to be a lack of competency and

training for teachers; insufficient teaching/learning materials and information about life skills; and, a lack of time to conduct life skills activities. For example, 25% of the teacher respondents said that the definition of life skills is “somewhat unclear” and 30% of the teachers viewed that the learning objectives related to life skills were “somewhat clear”. In addition, while the education reforms for the promotion of life skills promote the use of a student-centred approach, the research findings indicate that some teachers do not fully utilize, manage or even understand what this approach entails.

To counter these problems, the authors argue that it is imperative for teachers to receive more training and learning materials and better class room facilities, such as computers. The OBEC should provide teachers with support and clearer guidelines, knowledge sharing mechanisms, learning materials, and training, not only in regards to the definition of life skills but also in regards to how to teach as per the curriculum. There is also a need to develop life skills assessment criteria to assist teachers in integrating life skills into the core subjects.

Another major challenge in implementing the new curriculum identified by the research is a lack of understanding among parents and other stakeholders as to the meaning and purpose of transversal competencies, seen as influencing coordination of activities and student participation. The authors therefore point out the need to ensure that relevant knowledge is distributed to parents and other stakeholders. They also recommend that the OBEC pay more attention to facilitating partnerships for the integration of life skills into education between all stakeholders.

Teachers’ heavy workloads were also cited as obstacles to implementation. The authors therefore argue that burdens that are not related to teaching should be decreased so that teachers will have more time to improve their instruction methods and develop their skills. This is particularly important in regards to ensuring learners acquire self-directed learning skills, which are seen as vital to life-long learning. In order to be able to enhance the learner autonomy of Thai students, teachers need to know and understand how to implement the self-directed learning approach appropriately and effectively.

At the regional level, the authors point out the need for a unified understanding of transversal competencies in the Asia-Pacific region. The authors propose that the term be composed of three components; higher order thinking, relationship, and leadership. To facilitate knowledge sharing on transversal competencies in the Asia-Pacific region, the authors recommend a “non-cognitive skills network” be established.

Annex B: Research framework and questionnaires

ERI-Net 2013 Research Programme Research Framework for “Integrating Non-cognitive/transversal Skills in Education Policy and Practice (Phase I)”

Proposed Questionnaires

Purpose of the questionnaires

The ERI-Net research undertaking identified common questions for collecting information from two key stakeholder groups (i.e. policy-makers and teachers) in addition to document review. Via face-to-face interviews, written questionnaires, or online surveys, we believe that this information will be critical to triangulate/validate findings of the document review. It will also allow cross-country comparison where appropriate.

This document contains two sets of proposed questions: one for policy-makers and another for teachers. Each section below presents a “cluster” of research questions, namely (1) policy review, (2) curriculum framework, and (3) achievement and challenges. Questions for policy-makers are designed to obtain information on the rationale and logic behind reforms related to integration of non-cognitive/transversal skills in education. Questions for teachers, on the other hand, aim at understanding the impact of the reform at the classroom level (e.g. teacher preparedness, classroom management, and students’ development etc.). Researchers can add, delete, and modify the questions to fit the country context.

Definition of non-cognitive/transversal skills

The term “non-cognitive skills” and its definition are often debated.¹⁷ For this study, a working definition was developed, as per below. Non-cognitive/transversal skills are part of holistic development of learners, often not taught explicitly in classrooms and not assessed in conventional exams (highlighted in yellow). They are categorized into four: (1) critical and innovative thinking; (2) inter-personal skills; (3) intra-personal skills; and (4) global citizenship.

Promoting acquisition of foundation, specialized and transversal skills						
Foundation skills	Specialized skills	Non-cognitive/transversal skills, competencies and values				
		1. Critical and innovative thinking	Inter-personal skills	Intra-personal skills	Global citizenship	(Optional) Ex. Physical and psychological health

¹⁷ Other terms referring to these skills and competencies include “21st century skills,” “soft skills,” “higher-order skills,” “non-academic skills,” and “transferable skills.”

Examples of key characteristics of each domain of non-cognitive/transversal skills are also defined as following:

Domains	Examples of key characteristics
Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
Interpersonal skills	Presentation and communication skills, leadership, organizational skills, teamwork, collaboration, initiative, sociability, collegiality
Intra-personal skills	Self-discipline, enthusiasm, perseverance, self-motivation, compassion, integrity, commitment
Global citizenship	Awareness, tolerance, openness, respect for diversity, intercultural understanding, ability to resolve conflicts, civic/political participation, conflict resolution, respect for the environment
Optional	
Physical and psychological health	Healthy lifestyle, healthy feeding, physical fitness, empathy, self-respect

Questions

1 For policy-makers (e.g. government officials and administrators) and experts

Background information

1. What are your major responsibilities?
2. How long have you been working in the current position?

Section 1: Policy review

1. According to the policy documents, how important is integration of non-cognitive/transversal skills in education?
 1. Extremely important
 2. Very important
 3. Moderately important
 4. Slightly important
 5. Not at all

2. If the answer to the above question is “no,” what do you think should be done?

(Please select all that apply.)

- Further research on non-cognitive/transversal skills
- Identification of skills and competencies lacking in the current education system
- Curriculum reform
- Teacher training reform
- Others (please specify)
- Do not know

3. What are the key policy documents on integration of non-cognitive skills in education and what is the time frame for the new policies to attain expected results specified in the key documents?

(Please provide links where possible.)

4. In your opinion, what is the rationale behind your Government’s move towards integration of non-cognitive skills? (Please select all that apply.)

- Increased international competition
- Meeting social demand
- Boosting economic development
- Declining students’ learning achievement
- Excessive pressure on students to achieve academic excellence
- Response to employers’ demands to increase “employability” of students
- Others (please specify)
- Do not know

5. What skills and competencies are promoted by these policy documents?

(Please select all that apply.)

- | | | |
|----------------------------|------------------------------|--------------------------------|
| • Creativity | • Media/information literacy | • Tolerance |
| • Entrepreneurship | • Integrity | • Openess |
| • Resourcefulness | • Digital literacy | • Intercultural understanding |
| • Application skills | • Decision-making | • Ability to resolve conflicts |
| • Reflective thinking | • Working with others | • Civi/political participation |
| • Reasoned decision-making | • (Career) Planning | • Respect for the environment |
| • Problem-solving | • Self-discipline | |
| • Presentation skills | • Enthusiasm | |
| • Communication | • Perserverance | |
| • Leadership | • Compassion | |
| • Organization skills | • Integrity | |
| • Collaboration | • Commitment | |
| • Self-motivation | • Awareness and diversity | |

6. What levels of education is covered by these policy documents? (Please select all that apply.)

- Primary (ISCED 1¹⁸)
 - Lower secondary (ISCED 2)
 - Upper secondary (ISCED 3)
 - Others (please specify)
-

7. What is the desired outcome of your Government's reform measures as stated in the policy documents? (Please select all that apply.)

- "Character" development of students
- Increased international assessment ranking (e.g., PISA, TIMSS)
- Development of knowledge-based economy
- Increased international competitiveness
- Others (please specify)
- Do not know

Section 2: *Curriculum framework*

1. What are the major changes introduced to your curriculum framework in light of the attempt to integrate non-cognitive skills in education? (please select all that apply.)

- New subjects introduced
 - Number of subjects reduced
 - Subjects were merged/integrated
 - Subjects modified to explicitly incorporate non-cognitive skills
 - Total lesson hours increased
 - Total lesson hours decreased
 - Use of ICT increased
 - Textbooks revised
 - Introduction/increase of group activities
 - Introduction/increase of experts
 - Introduction of assessment of certain skills and capabilities
 - Others (please specify)
 - None
-

2. Are there specific (separate) subjects especially designed to nurture non-cognitive skills? Which skills are they addressing? How much time is allocated to those subjects?

¹⁸ For definitions of ISCED levels, please refer to UNESCO-UIS: <http://www.uis.unesco.org/EDUCATION/Pages/international-standard-classification-of-education.aspx>

3. According to the new curriculum, how is teaching of non-cognitive skills integrated in regular subjects?

Math	
Natural science	
Social science	
National language	
Foreign language	
Moral/social studies	
Arts (e.g. creative art, music, drama, etc.)	
Others (please specify)	

4. What are students *encouraged* to do in order to nurture non-cognitive skills outside of regular school hours as extra-curricular or co-curricular activities? (Please select all that apply.)

- After-school sports and arts activities
- Community activities
- School council activities
- Volunteering
- Local cultural activities
- Others (please specify)
- Nothing

5. Are there guidelines for teachers to implement the new curriculum? If so, for which subject/grade?

Section 3: Achievements and challenges

1. What was done to integrate non-cognitive skills in education? (Please select all that apply.)

- Reformed the course/curriculum standard
- Revised textbooks
- Developed teaching guides for teachers
- Reformed pre-service teacher training
- Conducted in-service teacher training
- Reformed the student assessment system
- Advocated parents and other stakeholders
- Others (please specify)
- Nothing

2. What are your Government's future plans for integration of non-cognitive skills in education?
(Please select all that apply.)

- Revising textbooks
- Developing teaching guides for teachers
- Increase in-service teacher training
- Reforming pre-service teacher training
- Reforming the student assessment system
- Advocacy for parents and other stakeholders
- Others (please specify)
- None
- Do not know

3. What kind of partnerships have been built in order to integrate non-cognitive skills in education?
(Please select all that apply.)

- Private sector
- Communities
- Families
- Others (please specify)
- None
- Do not know

4. In your opinion, what are the bottlenecks to implementing these government policies? (Please select all that apply.)

- Lack of understanding among teachers
- Lack of capacity among teachers
- Lack of training among teachers
- Lack of time conducting related activities
- Insufficient teaching/learning materials targeting development of non-cognitive skills
- Lack of understanding among parents
- Resistance from the students
- Others (please specify)
- None
- Do not know

5. In your opinion, what are the areas that require more research and evidence for your Government to strengthen the policies related to integration of non-cognitive skills in education? (Please select all that apply.)

- Value of non-cognitive skills
- Pedagogy
- Student assessment
- Teacher training
- Teacher evaluation
- School evaluation
- Curriculum evaluation
- Textbooks
- Others (please specify)
- None
- Do not know

2

For teachers

Background information

1. Which subjects do you teach?
2. Which grades do you teach?
3. What is your gender?
4. How many students do you have in your class?
5. How many classes per week do you teach?
6. How long have you been working in the current position?
 - Less than a year
 - 1-3 years
 - 3-5 years
 - 5-10 years
 - More than 10 years
7. How long have you been working as a teacher?
 - Less than a year
 - 1-3 years
 - 3-5 years
 - 5-10 years
 - More than 10 years

Section 1: Policy review

1. What do you think was the rationale behind your Government's reform to integrate non-cognitive skills in education? (Please select all that apply.)

- Increased international competition
 - Meeting social demand
 - Boosting economic development
 - Declining student learning achievement
 - Excessive pressure on students for academic excellence
 - Response to employer demands to increase "employability" of students
 - Others (please specify)
 - Do not know
-

2. To what extent do you think the definition of non-cognitive skills is clearly stated in policy documents?

- Very clear
 - Somewhat clear
 - Somewhat unclear
 - Very unclear
 - Others (please specify)
 - Do not know
-

3. In your opinion, what skills and competencies are important to develop in your students? (Please choose the top five)

- | | |
|------------------------------|---------------------------------------|
| • Creativity | • (Career) planning |
| • Entrepreneurship | • Self-discipline |
| • Resourcefulness | • Enthusiasm |
| • Application skills | • Perseverance |
| • Reflective thinking | • Compassion |
| • Reasoned decision-making | • Integrity |
| • Problem-solving | • Commitment |
| • Presentation skills | • Awareness and respect for diversity |
| • Communication | • Tolerance |
| • Leadership | • Openness |
| • Organization skills | • Intercultural understanding |
| • Collaboration | • Ability to resolve conflicts |
| • Self-motivation | • Civic/political participation |
| • Media/information literacy | • Respect for the environment |
| • Digital literacy | • Others (please specify) |
| • Decision-making | |

4. Under the new policies, do you feel that the role of teachers has changed?

- Very much changed
- Somewhat changed
- Unchanged
- Others (please specify)
- Do not know

5. If the answer to the above question is (1) very much changed or (2) somewhat changed, please describe how your roles have changed following the new policies?

Section 2: Curriculum framework

1. How did the implementation of the new curriculum framework change the ways in which you teach?

2. Do you think that learning objectives related to non-cognitive skills are clearly described in the curriculum for you to plan lessons?

- Completely agree
- Somewhat agree
- Somewhat disagree
- Completely disagree
- Others (please specify)
- Do not know

3. How do you judge the changes in your students following the new curriculum?

- Very positive
- Somewhat positive
- Somewhat negative
- Very negative
- Others (please specify)
- No change
- Do not know

4. Did you receive specific guidelines and/or handbooks to implement the new curriculum in your classroom?

- Yes, we have received enough materials and guidance
- Yes, we have received some but not sufficient
- We have not received any additional materials
- Others (please specify)

5. Have you received training to implement the new curriculum in your classroom?

- Yes, we have received enough training
 - Yes, we have received some but not sufficient
 - We have not received any additional training
 - Others (please specify)
-

6. What are the incentives for you to develop non-cognitive skills in your students?

Section 3: Achievements and challenges

1. What kind of partnerships have you or your school sought/strengthened to help implement the new policies/curriculum (please select all that apply)?

- Private sector
 - Communities
 - Families
 - Others (please specify)
 - None
 - Do not know
-

2. Do you think that your classes are being carried out in accordance with the (annual) curriculum plan?

- Faster than planned
 - As planned
 - Behind schedule
 - Do not know
-

3. What are the major challenges in implementing the new curriculum in your classroom?

(Please select all that apply.)

- Lack of knowledge among teachers
- Lack of experiences among teachers
- Lack of understanding among parents and other stakeholders
- Unclear definition of non-cognitive skills
- Insufficient guidance for teachers
- Unclear assessment standards
- Resistance of students
- Lack of teaching/learning materials
- Lack of information on implementation of the new curriculum
- Others (please specify)
- None
- Do not know

4. After implementing the new curriculum, how do you perceive changes in the students?
(Please check each item.)

	Increased	No change	Decreased
Critical and innovative thinking			
1. Students developing critical thinking			
2. Students can analyse and evaluate information			
Interpersonal skills			
1. Students can express what he/she think/feel			
2. Students can summarize and present own ideas			
3. Students can present			
4. Students can discuss with others			
Intra-personal skills			
1. Students with motivation to learn			
2. Students with regular study habit			
Global citizenship			
1. Students with understanding of local environment and society			
2. Students interested in global issues			
3. Students respect diversity			
Others			
1. Students with good acquisition of basic knowledge and skills			
2. Students understanding facts clearly			
3. Students behind class			
4. Students who feel tired			
5. Learning achievement as a student group			
6. Gap in academic performance among students			

5. What do you suggest the Government should do to support teachers to implement new policies/ curriculum? (Please select all that apply.)

- More in-service teacher training
- Clearer guidelines
- More teaching/learning materials
- Mentoring
- Information sharing among teachers
- Others (please specify)
- None
- Do not know

