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2014 Regional Study on Transversal Competencies
in Education Policy and Practice (Phase II)

School and Teaching Practices for Twenty-first Century Challenges

Lessons from the Asia-Pacific Region



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Regional Synthesis Report



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ERI-Net Asia-Pacific Regional Policy Series 2014 Regional Study on Transversal Competencies in Education Policy and Practice (Phase II)

School and Teaching Practices for Twenty-first Century Challenges: Lessons from the Asia-Pacific Region

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Acronyms

ATC21S	Assessment and Teaching of 21st Century Skills
CCE	Continuous and Comprehensive Examination (India)
ERI-Net	Education Research Institutes Network
ICT	Information and communication technology
GCED	Global Citizenship Education
GPE	Global Partnership for Education
NCF	National Curriculum Framework (India)
OECD	Organisation for Economic Co-operation and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
VNEN	Viet Nam Escuela Nueva

Foreword

What should education look like in the twenty-first century? How can countries properly prepare learners for the rapid pace of change we are experiencing? These are some of the questions educators are asking today.

We face many challenges in preparing learners for the current global realities with rapid economic, social, environmental, and technological changes taking place. Education systems must adapt to assist learners to face these challenges. Education policies and curricula need to incorporate the broad range of skills and competencies necessary for learners to successfully navigate the changing global landscape. They must provide learners with more than just the knowledge to succeed; they must provide the tools to allow learners to use and apply that knowledge, and the tools to enable them to become productive and integral members of society.

There is an ongoing dialogue on how to best prepare learners for a meaningful life once they leave the classroom. Traditional approaches to teaching and learning are being challenged by ‘modern’ approaches that aim for a more holistic learning environment, one that aids learners to address the challenges that we experience throughout our lives, particularly once we leave the classroom. The competencies we need include an array of skills, values and practices – such as critical thinking, creativity, communication, respect for diversity, adaptability, entrepreneurship and innovation.

Education systems in the Asia-Pacific region are now incorporating these competencies into their curricula to prepare learners for the challenges they will face. These ‘transversal competencies’ are sometimes referred to as ‘twenty-first century skills’, ‘non-cognitive skills’ and ‘non-academic skills’. While there is no consensus on the terminology, there is no denying the importance of these competencies. Learners must be able to adapt to a variety of contexts, using various competencies, to navigate life successfully.

This report follows from the success of earlier work on transversal competencies by researchers from the Asia-Pacific Education Research Institutes Network (ERI Net). Many challenges were identified in the initial report. The follow-up study, reported here, examined some key questions: how transversal skills are actually manifested at the school level and how teachers bring these skills to life in the classroom. The findings of this study provide valuable information, supporting countries of the region to reflect on and review their education policies, curricula, teaching practices and teacher support with regard to the competencies needed for today and tomorrow.



Gwang-Jo Kim

Director
UNESCO Bangkok

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1. Introduction

The world is undergoing incredible economic, technological, social and cultural changes and is becoming increasingly interconnected. In the face of these changes, more and more people in education agree that it is vital to incorporate 'non-academic skills' into teaching and learning.

Such skills are described variously as 'twenty-first century skills', 'soft skills', 'generic skills' and 'non-cognitive skills'. In October 2013, UNESCO's Asia Pacific Education Research Institutes Network (ERI-Net) annual meeting adopted the term 'transversal competencies'¹ to encompass all of these skills, values and attitudes, including collaboration, self-discipline, resourcefulness and respect for the environment, recognizing that these are the competencies required for learners' holistic development and for learners to become capable of adapting to change. Furthermore, research and literature suggest that transversal skills are as important predictors of success in school and career as academic abilities (Rauber, 2007; Rosen et al., 2010; Heckman and Kautz, 2012).

Although various international initiatives have been conducted to identify which among these skills are truly reflective of students' needs, such as the 'Assessment and Teaching of 21st Century Skills' (ATC21S) project,² a study by the Organisation for Economic Co-operation and Development on social and emotional skills (OECD, 2015) and the Asia Society's work on twenty-first century skills (Roberts et al., 2015; Soland et al., 2013), little was known in 2014 on how these competencies were being incorporated into policies and curricula in the Asia-Pacific region.

To contribute to the body of knowledge on cultivating transversal competencies among learners in the Asia-Pacific region, ERI-Net embarked on an initiative to examine how the countries of the region define and apply these competencies in education policies and practices.

1 The term 'transversal competencies' is used in the absence of a shared agreement on a more suitable term to describe these 'skills'. While 'cognitive' skills refer to academic learning measured by conventional assessment methods, 'transversal competencies' refer to other skills that are often not measured but are required for the holistic development of learners. Typical examples include creativity, communication skills, environmental awareness and the ability to change (please refer to Table 1 for details of the ERI-Net definition of transversal competencies).

2 For more information on the ATC21S project, please visit their website: <http://www.atc21s.org/>

1.1 Phase I: National policies and plans

Results of the Phase I study (UNESCO, 2014) indicated that the ten Asia-Pacific countries and economies³ that participated in the study place great emphasis on transversal competencies in their education agendas.⁴ The findings of the Phase I study (see Box 1) indicated that all of the ten participating countries and economies had policy documents or curricula that promoted (either explicitly or implicitly) competencies found in the ERI-Net transversal competencies framework/working definition. This was a significant finding, and countered the widely-held view that Asian education systems focus on academic achievement and rote learning.

All cases indicated that these skills and competencies have been introduced or integrated in various national policy documents or curriculum frameworks. The rationale behind the move towards the integration of these skills into education systems is a combination of discourses (economic, social and humanities) and perspectives (global, national and personal). While the integration of transversal competencies is acknowledged as one of the key reforms in education, how this integration is envisioned, articulated and positioned in policy documents varies between education systems.

3 Phase I participating countries and economies: Australia, Hong Kong (SAR China), Shanghai (China), India, Japan, Republic of Korea, Malaysia, Mongolia, Philippines, Thailand.

4 The Phase I case studies are available in their full format on UNESCO Bangkok's National Education Systems and Policies in the Asia Pacific (NESPAP) Open Platform: <http://nespap.unescobkk.org/eresources>

Box 1: Highlights from the Phase I study

Phase I of the ERI-Net study sought to review whether countries in the Asia-Pacific region have recognized transversal competencies and have integrated them into their education policies.

Study findings

The findings regarding the rationale for, the modes of integration into curricula, and the types of transversal competencies that are emphasized are summarized below.

Prominent skills:

The study found that the competencies included most prominently in education policies and/or curricula by all of the ten countries and economies were those related to creative and innovative thinking and interpersonal skills: for example critical thinking, innovative thinking, reflective thinking, reasoned decision-making, and communication skills, teamwork and collaboration.

Rationale behind integrating transversal competencies into education policy:

Though there seem to be several reasons for integrating transversal competencies into education policy, the economic discourse appears to be the most powerful driver, as transversal competencies are perceived as serving to boost economic development and increase the international competitiveness and employability of young people.

Modes of integration into curricula:

While education systems have varying methods of integrating transversal competencies into curricula, there are mainly three modes used in the ten cases studied:

- **Specific subject:** Transversal competencies are included as a well-defined entity within the formal curriculum, for example, a subject with specific goals and syllabus for formal teaching.
- **Cross subject:** Transversal competencies are introduced across 'vertical subjects' (i.e. traditional school subjects) or they infiltrate and/or underpin them.
- **Extracurricular:** Transversal competencies are made part of school life and are embedded purposefully into all types of non-classroom activities.

Challenges in integrating transversal competencies

The study found that the types of challenges to fully integrating transversal competencies include:

- **Definitional challenges**, arising from a lack of, or a vague definition of, transversal competencies in policy documents.
- **Operational challenges**, such as a lack of adequate evaluation systems for transversal competencies.
- **Systemic challenges**, including inconsistency between transversal competencies in the curriculum and the contents of the existing high-stake examinations, especially for university entrance examinations.

Source: UNESCO, 2014.

1.2 Phase II: Rationale

While the Phase I study provided significant information on how transversal competencies are defined and applied in education policies and practices, the link between policy and actual practice in the classrooms was still not well understood. Therefore, Phase II was initiated. This phase examined the extent to which transversal competencies are integrated into classrooms and school activities. Specifically, this study explored how national education policies that promote transversal competencies are actually understood and implemented in primary and secondary schools.

This phase of the study aimed to: 1) identify current practices, emerging trends and bottlenecks in integrating transversal competencies in schools, classrooms and teaching practices and 2) compile and analyze best practices for teaching transversal competencies in the classroom. Best practices were studied so as to demonstrate how policy intentions can be successfully realized in schools and classrooms. Some best practices are highlighted in text boxes throughout this report.

This report presents the experiences of the ten selected countries and economies ('case studies') so as to identify how transversal competencies are being implemented at the school level in various contexts across the Asia-Pacific region.

2. Methodology

The regional study on transversal competencies should be understood as preliminary research to collect and document the experiences of participating countries in the Asia-Pacific region, rather than as aiming to compare these experiences. Therefore, although the regional study had a common research framework, researchers were allowed to collect information in the way best suited in their local contexts. This brought the richness of diversity to the study. It also introduced complexity, however, in terms of analyzing the results. Hence, this synthesis report presents the results of the case studies⁵ rather independently, based on the overarching questions.

This section presents the definition of transversal competencies used for the study, the research scope and data collection methods adopted by the researchers, followed by the limitations of the study.

2.1 Working definition of transversal competencies

The complexity of the term ‘transversal competencies’ is not easy to overcome in a study spanning such diverse cultural, social and economic backgrounds. Anticipating the difficulty the researchers would encounter, ERI-Net members sought to establish a common understanding of the term ‘transversal competencies’.

The first version of the working definition of transversal competencies was developed at the March 2013 ERI-Net expert meeting. Consensus on a definition was hard to reach given the diverse contexts and the differing extent to which transversal competencies are viewed and defined. At least six major overlapping terms are used in the region: ‘zest for living’ (Japan), ‘non-cognitive skills’ (Malaysia, Mongolia and India), ‘life skills’ (Thailand), ‘character/values education’ (Philippines and Republic of Korea), ‘general capabilities’ (Australia) and ‘generic or key competencies’ (Shanghai, China). The participants of the expert meeting were fully aware of the difficulty of this task but they shared the understanding that the working definition would be an important step in reaching an encompassing understanding of transversal competencies in the region. To this end, and with the aim of sharing information on processes, characteristics, similarities and differences, the participants agreed on a broad, common definition of transversal competencies, with the understanding that the definition could be updated throughout the course of the study.

⁵ Summaries of the Phase II case studies are available in Annex A.

The working definition of ‘transversal competencies’ incorporates not only skills, but also values, attitudes and beliefs. As shown in Table 1, ERI-Net’s definition of ‘transversal competencies’ has six domains: 1) critical and innovative thinking, 2) interpersonal skills, 3) intrapersonal skills, 4) global citizenship, 5) media and Information literacy, and 6) others. The domain ‘others’ was created as a way for researchers to include competencies, such as physical health or religious values, that may not fall into one of the other domains.

Understanding that countries vary significantly when defining and interpreting transversal competencies, it was agreed that each domain would remain generic and that researchers would clarify their own definitions of transversal competencies. It was also understood that each domain is not mutually exclusive and the country/economy may place the same skills within different domains. Where applicable, researchers were encouraged to add domains and clarify skills, competencies and values defined under such domains.

Table 1: The six domains of the ERI-Net working definition of transversal competencies

Domains	Examples of key skills, competencies, values and attitudes
1. Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
2. Interpersonal skills	Communication skills, organizational skills, teamwork, collaboration, sociability, collegiality, empathy, compassion
3. Intrapersonal skills	Self-discipline, ability to learn independently, flexibility and adaptability, self-awareness, perseverance, self-motivation, compassion, integrity, self-respect
4. Global citizenship	Awareness, tolerance, openness, responsibility, respect for diversity, ethical understanding, intercultural understanding, democratic participation, conflict resolution, respect for the environment, national identity, sense of belonging
5. Media and information literacy	Ability to obtain and analyze information through information and communication technology (ICT), ability to critically evaluate information and media content, ethical use of ICT
6. Others	Skills and competencies as defined by countries/economies

2.2 Selection of the participating countries and economies

The ten countries and economies from the Asia-Pacific region selected for the Phase II study were Australia, Shanghai [China], India, Republic of Korea, Japan, Malaysia, Mongolia, the Philippines, Thailand and Viet Nam⁶. These countries were selected so as to ensure representation of the region was as broad as possible. Thus, countries and economies were selected from **South-East Asia** (Viet Nam, Thailand, Philippines and Malaysia), **South Asia** (India), **East Asia** (Japan, Republic of Korea, Mongolia and Shanghai [China]) and the **Pacific** (Australia).

The criteria for the selection included: 1) initial research work on similar topics (e.g. Malaysia's 'twenty-first century skills', Japan's 'zest for living', Mongolia's 'non-cognitive skills' and the Republic of Korea's 'character education'; 2) current reform in education systems (e.g. Japan, Republic of Korea, Australia and Philippines); 3) perceived interest among ERI-Net members in conducting the research; and 4) diverse economic backgrounds. The selection of diverse countries and economies was intended to highlight practices unique to each case and allow deeper analysis and understanding of how integration of transversal competencies is being operationalized in the classrooms. Researchers from the ten selected countries and economies conducted their case studies between April and December 2014.

2.3 Research scope

The ERI-Net secretariat developed the general research framework, questionnaire and guidelines for classroom observations,⁷ which were approved by the ERI-Net members at the expert meeting in March 2014. The study examined the nature and extent to which transversal competencies have been integrated and incorporated into classroom and school practices, posing the following questions:

- What are some examples of integrating and applying transversal competencies in practice at the school level in the Asia-Pacific region?
- What are the enablers of integrating transversal competencies in schools?
- What are the lessons learned?

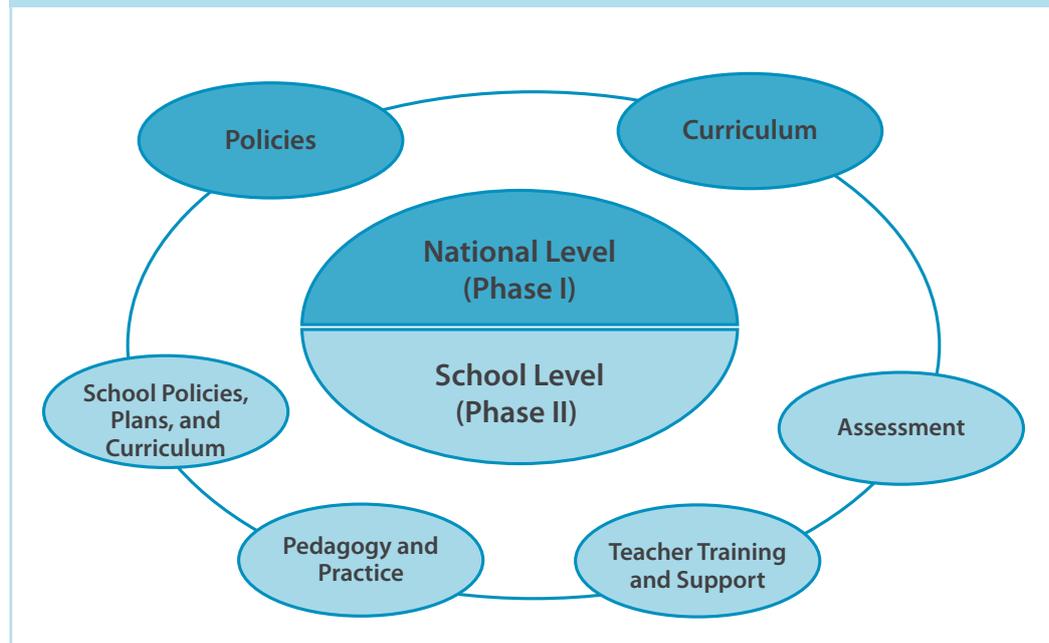
Since Viet Nam was not part of Phase I, the Phase II case study for Viet Nam not only covered the questions above, but also included a document review on national policies and curricula to cover the scope of the Phase I research.

To respond to the first question, the Phase II study examined the extent to which transversal competencies were present in school policies, pedagogies, assessments and teacher support and training (see Figure 1).

⁶ Viet Nam replaced Hong Kong (SAR China) in the Phase II study.

⁷ The research framework, questionnaires and guidelines are provided in Annexes B-E.

Figure 1: Elements of analysis: Phase I and Phase II



2.4 Data collection methods

The ERI-Net research framework for Phase II study provided guidelines for classroom observations and questionnaires for school leaders and teachers (see Annexes B-E). Researchers were encouraged to follow the guidelines as much as possible, but it was agreed that researchers could alter the methods according to their research context.

In line with the research framework, the researchers utilized various data collection methods including reviews of school policies and plans (e.g. annual development plans, lesson plans, curricula, school philosophies and other related documents); classroom observations; stakeholder interviews (particularly school leaders and teachers); and questionnaires. Researchers from some countries/economies also conducted interviews with policy-makers (Australia and Mongolia) and surveys of students (Viet Nam). The classroom observations, interviews and information collection for the document review were mainly conducted within selected primary and secondary schools. With regard to the questionnaires, many researchers surveyed teachers and school leaders from several schools, not only those schools they visited for classroom observations (Australia, Shanghai [China], India, and Japan). Table 2 summarizes the data collection methods used for each case study.

Table 2: Data collection methods utilized in Phase II, by case study

Case Study	Data collection methods in Phase II research				Other data collection methods adopted		
	School Policy Review	Classroom Observations	Interviews with school leaders/teachers	Questionnaires for school leaders/teachers*	National Policy/curriculum Review**	Interviews with policy makers	Questionnaires for students
Australia	-	●	●	●	-	●	-
Shanghai (China)	●	●	●	●	-	-	-
India	●	●	●	○	-	-	-
Japan	●	●	●	○	-	-	-
Republic of Korea	●	●	●	-	-	-	-
Malaysia	●	●	●	-	-	-	-
Mongolia	●	-	●	●	-	●	-
Philippines	-	-	-	●	-	-	-
Thailand	●	●	●	○	-	-	-
Viet Nam	●	●	●	○	●	-	○

* ○ - used modified ERI-Net questionnaire

** The national policy and curriculum review was the data collection method used in the Phase I study. Viet Nam conducted this review during the Phase II study; the other countries and economies conducted it during the Phase I study.

Each participating researcher was expected to select between five and ten primary and/or secondary schools to identify any education practices that integrate transversal competencies. The researchers observed classrooms, interviewed teachers and principals, and distributed questionnaires to the teachers and school leaders. Table 3 lists the number of schools (by level of education) and the number of questionnaire respondents sampled for each case study.

Table 3: Number of schools and questionnaire respondents, by case study

Case study	Schools by level					Questionnaire respondents			
	Primary school	Secondary		Other	Total	Teacher	School Principal	Students	Total
		Lower	Upper						
Australia	5	-	2	-	7	57	29	-	86
Shanghai, China	1	2	-	2♦	5	133	25	-	158
India	-	-	-	-	6*	132	46	-	178
Japan	4	5	-	-	9	231	46	-	277
Republic of Korea	3	3	4	-	10	-	-	-	-
Malaysia	4	4	-	8	-	-	-	-	-
Mongolia	-	-	-	-	-	73	28	-	101
Philippines	-	-	-	-	-	73	43	-	116
Thailand	3	3	-	-	6	32	6	-	38
Viet Nam	4	-	-	-	4	113	-	309	422

♦ The Shanghai (China) report included two combined primary and secondary schools.

* India observed 48 classrooms across six government schools – details of the school levels were not indicated.

The case studies were primarily descriptive, describing how transversal competencies are introduced and integrated into the classroom. In their case studies, researchers noted that they had adopted either a structural or semi-structural analysis of interviews, observation notes, policy documents and documents and materials from sampled schools. The particular methods and data analysis for each case study are described in the full case study reports.

2.5 Limitations of the study

This synthesis report was prepared based on the case studies submitted by the ten research teams. The varying research methods, sample selection methods and sample sizes used by the various teams limit the comparability of the findings.

Of the ten participating countries and economies, only four chose to use the questionnaire prepared by the ERI-Net secretariat (Australia, Shanghai [China], Mongolia and Philippines). Four countries altered the questionnaire to suit local conditions (India, Japan, Thailand and Viet Nam), while two countries did not conduct any surveys (Republic of Korea and Malaysia). This lack of continuity in the data collection methods led to varying results and limited comparability.

Many case studies used purposive and/or convenience sampling for selecting the sample schools. This was due mainly to logistical constraints, such as a lack of time and financial resources to carry out the research. For example, research teams from some countries (Australia, Japan, Mongolia, Philippines, and Viet Nam) did not have sufficient time and resources to observe and visit schools across the entire country. Thus, researchers from these countries were limited in their selection of schools and the sample sizes varied greatly between the countries/economies (see Tables 2 and 3).

Some of the researchers selected top-performing schools, or schools that were deemed, prior to the research, as being able to demonstrate good examples of the integration of transversal competencies into education (Shanghai [China], Japan, Mongolia, and Malaysia). Thus, the schools selected by these researchers were not necessarily representative of the national education system. Conversely, other countries (India, Republic of Korea and Thailand) sought to ensure broad representation, selecting schools from across several regions, and aiming to balance rural and urban schools. The India researchers also selected both private and government schools.

None of the researchers examined the differences in teaching transversal competencies across the various grade levels or age levels. Researchers simply aimed to establish the nature of transversal competencies within schools (both primary and secondary) and the extent of those competencies, and did not analyze the differences in curriculum content and objectives that might exist across grade levels. Most of the researchers also did not survey students' perspectives.⁸

Given the selection methods that were used, this report does not represent the general situation in schools in each of the countries/economies or in the region as a whole. Rather, this report (and each of the case studies) represents the views of those who participated (i.e. schools, teachers and principals) and the situations in the selected schools.

On the whole, this report provides an overview of the current practices relating to integrating transversal competencies into the classroom and identifies current positive trends, issues, challenges and policy implications. In addition, despite the limitations in sampling and data collection, this report highlights several examples of good practice in developing students' transversal competencies.

⁸ Only the Viet Nam research team polled students' opinions and collected students' feedback.

3. Key findings

3.1 School policies and plans

This section examines the findings of the Phase II study relating to school policies and plans, i.e. the extent to which school policies reflect the national policies, and the extent to which school plans and philosophies incorporate transversal competencies in classrooms.

All of the ten countries and economies participating in the Phase II study gave many examples of the importance of transversal competencies being stated at the school level or being indirectly implied in the school mottos or in school leaders' philosophies. In many cases, the school policies and plans implicitly incorporate transversal competencies within the curricula (often following policies and guidelines from the national level). The skills and competencies most commonly cited in the case studies were critical thinking, problem solving, creativity, collaboration and communication. These findings indicate that the importance of transversal competencies is reaching the school level.

The case studies from Shanghai (China), Republic of Korea, and Japan reported that transversal competencies are referred to in school plans. However, the extent to which the transversal competencies manifested themselves in the schools varied between the countries. For example, in many countries a key method of transmitting transversal competencies is through extracurricular activities, which are incorporated into school plans. While in other countries, such as the **Republic of Korea** for example, school policies encourage teachers to integrate transversal competencies into their lesson plans; this creates a positive endorsement for transversal competencies. Likewise, the national curriculum 'Character Education' is a key guiding factor for schools, and many schools incorporate the framework when developing their curricula.

In **Shanghai (China)** the course 'moral education' is a flagship for bringing transversal competencies, particularly interpersonal skills and global citizenship into the classroom, as many skills and competencies are found in this course. These are brought to life in the classrooms through, for example: "life education, self-discipline, ability to learn independently, self-motivation and self-respect" (GuMei School, a 9-year combined primary and secondary school) and "self-management, self-respect and being responsible" (Shanghai LuoShan Secondary School).

Box 2: Japan⁹: Prefectural effort to localize central education policy

Akita Prefecture, in northern Japan, exemplifies Japan's strategy for developing transversal competencies. The Akita Bureau of Education has clarified the objectives of their education policy so that school leaders and teachers can easily understand the policy and are able to put it into practice in schools. Akita Prefecture's approach to realizing Japan's education principle of 'Zest for living' (balanced development of academic prowess, mind and body) is to foster students' 'ability to ask questions'. The Akita Bureau of Education encourages students to learn proactively through developing their own questions. In this process, students inevitably develop their sense of curiosity and motivation for learning. Table 4 lists ways in which the ability to ask questions can be strengthened within three domains in schools: classroom lessons, classroom activities and school events.

Table 4: How to foster the 'ability to ask questions'

In classroom lessons	In classroom activities	In school events
<ol style="list-style-type: none"> 1. Conceptualize lesson objectives and implement appropriate verbal activities. 2. Set activities that enable students to reach the lesson objectives through interactions. 3. Develop lessons in which students ask and answer questions. 4. Share the process of problem solving. 5. Prioritize activities for predictions and reflection. 	<ol style="list-style-type: none"> 1. Build respectful relationships through voluntary activities. 2. Provide opportunities to realize self-worth and to make own decisions. 3. Guide the selection of meaningful agendas for classroom discussion. 	<ol style="list-style-type: none"> 1. Provide experience-based activities that bring awareness of the agendas. 2. Enrich social experience through interactions with many people from different backgrounds. 3. Provide pre-lessons to raise awareness of the objectives and provide post-lessons to enable students to express their feelings freely.

In addition, the academic advisors of Akita Board of Education play a significant role in establishing solid relationships between local governments and schools. Their regular visits to schools create strong networks with teachers and school leaders. Through this scheme, the Akita Bureau of Education is able to transmit the intended messages to local schools and at the same time collect suggestions and issues to be considered when planning education policies and practices in Akita.

Source: Japan Phase II case study.

⁹ The Japan case study mainly discusses education in Akita Prefecture, where students have achieved top scores in national standardized testing the past seven years.

Not all of the case studies found an emphasis on developing transversal competencies in school. In **Mongolia**, the case study shows that the recent government programme titled 'Upright Mongolian Child' reflects many transversal competencies in its main objectives but the programme lacks practical guidelines for the integration of these skills into the classroom. In addition, the performance rankings of general education schools is still based on students' cognitive achievements.

Similarly, while **Malaysia** has shown a great awareness of transversal competencies, the overall strategic plan in schools was found to be more aligned towards academic performance, as it acted as a blueprint to enhance students' performances in public examinations.

3.1.1 School philosophies and mottos

School philosophies are quite important for the integration of transversal competencies within the school. These philosophies are manifested in a number of ways, but particularly through the school's vision and mission statements, which are in turn reflected through school mottos and through leadership by the school principals and teachers, who directly influence the students.

The researchers sought to understand the schools' philosophies by asking teachers and principals about their school mottos. Mottos tend to incorporate both academic and non-academic achievements and mottos are often used as a means of instilling pride and school spirit in the student population. The researchers found that some schools (in Shanghai [China], Republic of Korea, Japan, Malaysia and Thailand) included transversal competencies in their school mottos. Examples include 'All-round development, human well-being and exploring the truth bravely' (Shanghai, China), 'Learning proactively and having compassion and zest for living' (Japan), 'Knowledgeable, Disciplined, Cultured' (Malaysia), 'Fostering creative and considerate global women leaders' (Republic of Korea) and 'Friendliness (Smiles), Good Thinking, Virtue (Salam)' (Thailand). A complete list of the school mottos identified by the researchers is presented in Table 5.

Table 5: School mottos, by case study

Case study	Examples of school mottos	School type
Shanghai (China)	Self -discipline and integrity	9-year combined primary and secondary school (public)
	Keep moving forward	9-year combined primary and secondary school (public)
	Morally good, reflective, self-motivation and self-stimulated	Primary school (public)
	All-round development, human well-being and exploring the truth bravely	Secondary school (public)
Japan	Be a child with dream and self-motivation, let's make our school a happy place to be	Primary school (public)
	Filled with dreams, being bright and having compassion and zest for living	Primary school (public)
	Learning proactively and having compassion and zest for living	Secondary school (public)
	To raise students who have compassion, zest for living and creativity	Secondary school (public)
Malaysia	Berfikir Asas Kebijaksanaan (Intelligence is based on one's ability to think)	Secondary School (public)
	Knowledgeable, Disciplined, Cultured	Primary school (public)
	Knowledgeable, Disciplined, Courteous	Primary school (public)
Korea, Republic of	A happy school where all students achieve their dreams	Elementary school (public)
	Be new day by day	High school (public)
	Sincerity, creativity and cooperation	Middle school (public)
	Self-reliance, Creativity and Sincerity	Middle school (public)
	Fostering children who learn, love and dream together	Elementary school (public)
	A school helps all students develop through true learning and teaching	Middle school (public)
	Quest for truth and service to humankind	High school (public)
	Fostering creative and considerate global women leaders	High school (private)
Thailand	Virtue, Academic, Health	Primary school (public)
	Friendliness (Smiles), Good Thinking, Virtue (Salam)	Primary school (public)
	Desirable Characters and Knowledge	Secondary school (public)
	Academic Excellence, Excellence in Sports, Virtue	Secondary school (public)
	Discipline, Knowledge, Virtue	Primary school (public)
	Knowledge, Discipline, Sportsmanship, Heroic Sacrifice	Secondary school (public)

Common themes emphasized in school philosophies included creativity, character, happiness, peaceful environments, and critical thinking. This indicates that the schools' visions and missions are not only focused on academic achievement – though that is certainly an area of emphasis – and that many schools are truly concerned with developing learners' transversal competencies.

In some cases, such as the **Republic of Korea**, for example, school philosophies are pursued through the determination and character of the school principals. One principal, for example, from a school with the motto 'A happy school where all students achieve their dreams', noted that the school's role was to nurture students' talents and help them achieve their dreams. In order to do this, he insisted that a paradigm shift was necessary: from an education system centred on hard work to one centred on the development of students as human beings. Another principal encouraged students to organize club activities and to volunteer in the community. The school's motto was 'be new day by day', which is clearly reflected in the principal's efforts to allow students to take ownership of their learning.

3.2 Pedagogies and practices

Even though many different teaching methods and approaches have been developed over the years, the lecture-based classroom is still a main delivery method teachers utilize to disseminate knowledge. However, transversal competencies such as critical thinking, interpersonal skills and intrapersonal skills are developed not only through obtaining knowledge but also through experience (UNESCO, 2014). In this regard, teachers need to provide an environment in which students take active roles in learning. This section will look at what common pedagogies and practices teachers utilize and how they attempt to incorporate transversal competencies into their lessons.

3.2.1 Common teaching practices

Overall, the case studies indicate that the most common approaches used by teachers are traditional lecture-based practices (see Table 6). Clearly there is an emphasis on teaching the curriculum content, and lectures are still one of the most effective delivery methods. On the other hand, while teachers responded that they understood the need to explore more diverse teaching methods (more information on educators' perceptions is provided in section 3.4), the case studies suggested that teachers use lectures because of time constraints, lack of teacher training in alternative methods, poor guidelines and the education system's emphasis on academic achievement.

In **Malaysia**, most of the teachers who were interviewed responded that they did not use student-centred methods because of time constraints and the need to focus on academic achievement and exams. Teachers said that their emphasis was on delivering content and preparing students for examinations. As one teacher remarked, 'I only touch on these values if I have time ... at the end of the lesson'.

The researchers in **Thailand** found that the classes they observed employed mainly lecture-based approaches, and rarely incorporated student-student interaction. This was the case across all of the subjects observed (mathematics, Thai, English, art and Thai culture) despite policy-level documents in Thailand (both national and school-based) emphasizing the importance of 'life skills' and student interaction.

Table 6: Teaching practices most utilized by teachers

Teaching practices	Australia	Shanghai (China)	India		Japan	Thailand	Overall Ranking
			GS	PS			
Lectures by teachers	1♦	2	1	2	1	1	1
Group projects and presentations		4	2	3	3	2	2
Computer-aided activities	4	1	5	1	4		3
Individual projects and presentations		3	3	4	2	5	4
Small group discussions	3		3		-	3	5
Field studies	5	5		5	5	3	6

GS Government School; PS – Private School

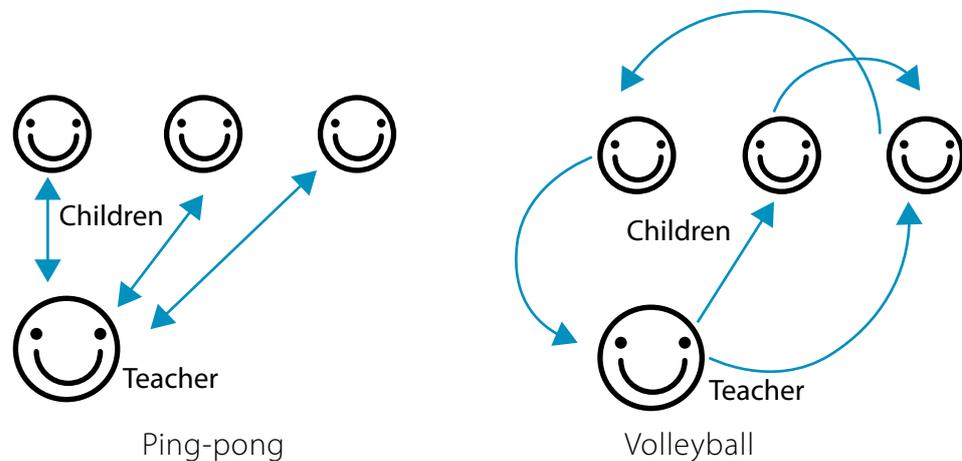
♦ Australia reported both 'others – scaffolding' and 'lectures' as the most utilized teaching practices.

However, the researchers in the Phase II study also found that student-centred approaches are increasingly recognized as a means of introducing transversal competencies. After 'lectures', teachers reported that they often utilized "group projects and presentations" and "computer aided activities" in their lessons. This indicates that teachers are trying to provide more balanced learning experience to students — incorporating student-centred activities, and interactive or experienced-based learning. This was found not only when talking with teachers, but also through observing lessons in classrooms. The researchers in almost all cases observed a concerted effort to use some student-centred approaches in the classroom.

In the case of **Shanghai (China)**, for example, teachers of a physics class about the characteristics of sound asked students to describe the volume of sound in various ways, including by drawing on the blackboard or by using a metaphor. These classes were assessed as being highly interactive and as effectively stimulating students' motivation and promoting their critical thinking skills.

Similarly, in **Japan**, teachers in Akita Prefecture used the 'volleyball' method. As Figure 2 illustrates, this method is different from the traditional two-way communication between a teacher and an individual student, known as the 'ping pong' approach. The 'volleyball' approach enables the teacher to develop discussions with high involvement from the students. The teacher poses a question ('serves the ball'), a student responds ('receives the ball') and other students respond to the student and/or to the teacher ('volley and pass the ball') rather than remaining silent and waiting to be asked a question directly, thus developing a discussion. The Japan report noted that the 'volleyball' approach allows students to exercise a variety of interpersonal skills, such as communication, teamwork, initiative, presentation and collegiality, as well as other transversal competencies, such as resourcefulness, application, reflective thinking, self-motivation, tolerance and the ability to resolve conflicts.

Figure 2: Lesson styles – 'ping pong' vs. 'volleyball'



Source: Japan Phase II case study.

In **Viet Nam**, teachers combined presentations with methods such as teamwork, individual activities, self-study textbooks and asking students to answer questions and defend their own views. One notable example was the Viet Nam Escuela Nueva (VNEN) model (see Box 3), which uses group work as a learning method.

Box 3: Viet Nam: Student-centred approach in the Viet Nam Escuela Nueva project

The Viet Nam Escuela Nueva (VNEEN) is a large education project developed by the Ministry of Education and Training in association with the Global Partnership for Education (GPE). This learner-centred approach aims at improving teaching and learning in primary schools by stimulating children's independence and creativity. The VNEEN project was launched in 2012/13 and has been implemented in 63 provinces and cities, with 746,000 primary student participants so far.

The teaching and learning approach used in schools participating in the VNEEN project is quite different from the traditional model. The main visible difference is the seating arrangement – children are seated in clusters of four or five, as compared to the row and bench seating in traditional classrooms. VNEEN classrooms also contain facilities and materials to provide intellectual stimuli to the children – mathematics and reading corners, community maps and a 'tree of words' to depict groups of words.

The VNEEN schools follow the same national curriculum as other schools, but present the curriculum in a way that is expected to better engage the students. For example, the VNEEN 3-in-1 learning guide (textbook, workbook and guidelines together in one book) includes interactive exercises to complement the stories, which make learning fun and engaging for children. Lessons are designed in such a way to ensure a balance between theory and practical skills. Each lesson focuses on one topic and is divided into three steps: self reading; understanding what is read so as to answer given questions; and applying the acquired knowledge in a practical situation either in the school, community or with their families. This way of learning and teaching is expected to help students to develop dynamism and creativity, two important elements that can shape their futures.

Using the VNEEN approach, teachers engage in less reading and writing on the board, and students spend more time participating in tasks. The VNEEN project provides tools (i.e. materials, protocols and methods) that enable even teachers of an ordinary level of ability to provide an enriching learning experience for their students. Under the VNEEN model, students are more engaged in class, with teachers serving as facilitators, and parents and other community members are more involved in making learning relevant to their children's lives. VNEEN encourages parents and the community to take part in the life of the school so as to pass on their traditions to the students. The lessons learned from the VNEEN model in relation to curriculum, teaching methods and student evaluation will inform changes in primary and secondary education post 2015.

Sources: Viet Nam Phase II case study; Vietnam Breaking News (2013); World Bank (2012).

In **Australia**, teachers use a variety of activities and strategies aiming to engage students in lessons. For example, teachers encourage students to brainstorm ideas in small groups; teachers mix students of differing abilities together in working groups; teachers frequently change student-pairings; and teachers request students to design rubrics for peer assessment.

While teachers do not use student-centred strategies at all times due to various constraints, the case studies nevertheless indicate growing awareness and increasing efforts in all countries to incorporate this type of approach.

3.2.2 Lesson design

The researchers observed various kinds of education practices being used to develop students' transversal competencies in lessons. Case studies, such as those from **Australia, Shanghai (China), Japan, and Republic of Korea**, gave examples in which teachers delivered student-centred lessons. In most of these cases, the lessons were divided into three sections: Introduction, Development and Conclusion/Reflection. The researchers found that during the Introduction section, teachers set the scene for students, indicating the learning objectives and academic contents of the lesson using various kinds of activities designed to generate students' interest and motivation for learning. The researchers found that the Development section usually included both 'individual' and 'group' learning activities, and often used student-centred approaches. The Conclusion/Reflection section allowed the teacher and students to summarize the lesson of the day.

In **Republic of Korea**, a teacher of a 6th grade Science class introduced the lesson by showing students a short video clip about climate abnormalities. Following the video, the teacher encouraged the students to identify what the key issue in the video was. In the development portion of the lesson, the teacher asked the student to work individually using tablet computers to conduct online research on cases of climate abnormalities around the world, then to write a summary and share that with others in a small group. Each group was then requested to synthesize the members' findings into a group presentation. Students prepared the presentations with photographs, cartoons, drawings and colourful sticky notes. Some students also used tablet computers and electronic whiteboards. This group work was followed by another individual activity, in which the teacher encouraged students to utilize the information they had gained so far from research and the presentations, as well as their own logic and imagination, to predict the future of climate change in the Republic of Korea. This activity was followed by a whole class discussion. The lesson concluded with teacher reviewing the important concepts and announcing the agenda for the next lesson. The researchers observed that the teacher had encouraged several transversal competencies in the lesson, including collaboration, creativity, communication skills and media and information literacy.

In **Australia**, it was observed that teachers posed thought-provoking questions in the Introduction section. In particular, teachers asked many open-ended questions to introduce the theme of the lesson, which allowed students to contextualize the lesson objectives, and posing questions that encouraged the students to develop their own ideas. The Development section of the lesson emphasized several transversal domains such as critical and creative thinking, interpersonal skills, intrapersonal skills, and global citizenship. For instance students are allowed to choose their own topic to investigate, and choose a group which they think they can work effectively with. Many lessons involved students working together in teams to achieve a particular goal, be it a completion of an assessment task or an in-

class activity. Most teachers were also aware of not letting small number of students dominate class discussions and used a variety of strategies to ensure it did not happen. To end the lesson, students complete 'class reflection sheets' to record their progress and raise issues with their teachers, if any.

In **Shanghai (China)**, the researchers found that during the Introduction section, teachers set the scene for students, indicating the learning objectives and academic contents of the lesson using various kinds of activities designed to generate students' interest and motivation for learning. For example, a Grade 8 Physics class started its lesson by introducing three features of sound through experiment. The Development section included both 'individual' and 'group' learning activities to understand characteristics of sound (e.g. volume, loudness). In order to apply the skills and competencies from the activities, the teacher made a connection between what the students had learned and the learning objectives that needed to be attained. To conclude the lesson, the teacher guided the students to summarize knowledge and practices they learned.

In **Japan**, all of the classes observed in Akita followed a standard lesson model. Each lesson began by sharing the lesson goals in question form in order to elicit students' interests. Teachers also used this time to review and relate the previous lesson to the current one. The Development section balanced individual learning and group work in which students could develop transversal competencies, such as critical thinking, communication skills, presentation skills, and reasoned-decision making. The use of various kinds of teaching materials and teaching pedagogies improved understanding and generated the interest of students. For example, in Japanese class at a junior high school, students wrote their opinions individually to sticky notes, and then shared their opinions by categorizing each opinion into groups. Each lesson ended with a reflection stage where students were asked to write a summary of their 'take away' of the lesson and share it with their classmates. Teachers have also been trained to utilize the blackboard to summarize lesson objectives, important concepts, and reflections.

3.2.3 Extracurricular activities

The researchers found that most educators deem extracurricular activities to be very important, and many of the schools include an emphasis on extracurricular (or co-curricular) activities – embracing the importance of activities outside the classroom and, in particular, being involved with the community.

In **Malaysia**, for example, great importance is placed on the celebration of 'Patriotic Month', which is an annual event to celebrate Malaysia's independence. Some of the activities of the month include competitions for the best-decorated classrooms, quizzes, poster-drawing competitions, public speeches and drama performances. The highlight of this month is usually a cultural performance, which highlights cultural features of the various ethnic groups in Malaysia.

The extracurricular or co-curricular component emphasizes the development of transversal competencies through sport and other activities organized by societies and clubs. All of the schools surveyed in the **Thailand** study spent a great deal of energy and effort on extracurricular activities as ways to develop students' moral qualities and social skills. Those activities were viewed as ways to instil non-academic skills, including the formation of 'Thainess' and other desirable attributes in Thai students.

The **Japan** case study provided detailed examples of how extracurricular activities that had been incorporated in schools had promoted transversal competencies. For example, students are encouraged to be involved in community activities and the student council, which encourages the development of leadership skills, sense of belonging, self-awareness and participation. These opportunities for engagement boost the students' use of transversal competencies in their daily routines and practices.

Most schools in **India** that follow the CCE promote transversal skills through co-curricular activities, whether through integration into curricular subjects or through after-school programmes. Responses from both types of schools (government and private) indicate that these practices are very much in place.

Both teachers and school leaders indicated that it was much easier and more appropriate to develop transversal competencies through activities outside the classroom than within school classes. This perception, and others, will be discussed in the next section.

3.3 Educators' perceptions of transversal competencies in schools

In general, teachers and principals view the integration of transversal competencies into education as a positive development for the learning outcomes of students. They also perceive the integration of transversal competencies as having a positive impact on teachers' wellbeing, as indicated by an increase in motivation, pride and self-initiative, to name a few. The findings of the case studies suggest that transversal competencies have a great influence on teachers' commitment and on school leadership, while also increasing student interest in learning and strengthening parent/community support. The study found that when teachers have a strong belief in the importance of transversal skills, they make more changes in their classroom teaching strategies, and when students and teachers become more competent in transversal competencies, they engage with one another and the community in a much more productive way, creating a virtuous cycle of learning.

3.3.1 Awareness and recognition of transversal competencies

The researchers all reported that there has been an increase in awareness of transversal competencies in recent years. This coincides with recent national education reforms (e.g. the implementation of the Australian curriculum that includes the General Capabilities). When asked (through questionnaires or interviews) if they had noticed changes in students and teachers since the recent reforms were introduced, the majority of teachers and school leaders responded positively, agreeing with statements saying that transversal competencies are an essential part of learning and should be a formal part of the school policy and curriculum. Many respondents agreed that they had witnessed 'positive changes' in students and teachers as a result of the recent education reforms. These positive changes included improved creativity, communication skills, teamwork/collaboration and perseverance among students, and improved motivation, pride, facilitation and interaction in the classroom among teachers, along with greater involvement in the school and community.

For example, principals of both private and government schools in **India** unanimously agreed that positive changes in students were a result of integration of transversal competencies into the curriculum. They indicated that students had improved in creativity, teamwork, communication and content knowledge. Similarly, respondents from both public and private schools in India perceived that transversal competencies have a positive impact on teachers with regard to their motivation, pride, self-initiative, involvement and interactions with parents and the community. While the beneficiaries of transversal competencies are primarily students, these findings suggest that these competencies also result in positive changes in communication and collaboration among teachers and the community.

Most of the respondents to the questionnaire in **Japan** observed positive changes in the area of interpersonal skills. Specifically, they perceived an increase in the number of students 'who can express their thoughts' (84 per cent), 'who can present their thoughts in organized way' (75 per cent) and 'who can make a presentation in front of people' (74 per cent).

In **Australia**, about half of the surveyed teachers and leaders reported noticing positive changes in a range of student characteristics (teamwork, communication skills, sociability, environmental awareness, computer literacy, critical thinking, self-motivation) following the reforms to integrate transversal competencies in education. A similar number of teachers thought that transversal competencies are given sufficient attention and adequate opportunities in the class, while over three quarters (85 per cent) of the school leaders felt that way.

Principals in the **Philippines** perceived that teachers have become better in involving their students in classroom activities. Moreover, they observed that teachers exhibited a greater sense of pride in being part of the school, were more motivated to perform their tasks, and interacted more with

parents and the community. The majority of the respondent teachers felt that teaching transversal skills to their students had changed them to some extent (e.g. communication, teamwork, compassion, creativity and critical thinking), which corroborated the observations of the respondent principals.

The interviews with school leaders in **Thailand** found that the reform to integrate key elements of transversal competencies into education has led to increased awareness and recognition of the student-centred approach to education. Most of the surveyed teachers (92 per cent) responded that they were aware of the reforms and that they had noticed several positive changes in their students across the skills and competencies. Among these, conflict resolution, self-discipline and perseverance ranked highest. The majority of the teacher respondents also perceived positive changes, feeling that they were more motivated, took more pride in the school and took more initiative in the classroom and in the community.

Similarly teachers in **Viet Nam** responded positively, noting that they were aware that if they organized many different activities and applied the content to real situations, they would help students gain competencies and demonstrate their abilities. The Viet Nam researchers also found that teachers exhibited improved knowledge and application of teaching the content of textbooks following the reforms, and also demonstrated improved participation in school activities.

Yet, two case studies reported that the community should bear a portion of the responsibility for developing these competencies. Educators in **Malaysia** felt that transversal competencies have a positive effect on students and teachers, but principals believed that the integration of transversal competencies should not only happen in the classroom, but rather parents should also take some responsibility for teaching these skills. Similarly in **Shanghai (China)**, educators believed that parents and the community were more responsible for developing transversal competencies than schools.

Nevertheless, the increased recognition and awareness has been accompanied by an understanding among educators regarding which skills and competencies are most important, or most valued, in schools and classrooms.

3.3.2 Most valued transversal competencies

The researchers found that, in general, educators felt that transversal skills were important for their students' learning. The skills most commonly referred to were communication, teamwork/collaboration, motivation, perseverance and compassion (see Tables 7 and 8). This follows on the previous section, where teachers not only show a greater recognition of these skills, but have also identified which skills and competencies are most important.

In **Japan**, a review of school policies in the sampled schools found that each school sets their own objectives, which include developing students' 'interpersonal skills', such as compassion, respect, relationships, collaboration, collegiality and empathy, as well as developing students' 'global citizenship skills', such as tolerance and openness.

When teachers in the **Philippines** were asked the importance of the five domains of transversal competencies (critical and innovative thinking, interpersonal skills, intrapersonal skills, global citizenship and media and information literacy), they responded that all of the categories were reflected to some extent in their school policies.

Mongolian principals strongly believed that schools have a responsibility to teach transversal competencies. About half of the Mongolian teachers indicated that certain critical and innovative thinking, intrapersonal and global citizenship skills have increased as a result of the new curriculum. In Mongolia, educators gave high importance to competencies such as teamwork/collaboration and communication skills, followed by creativity, sociability, self-motivation, compassion, self-discipline and perseverance. An overwhelming majority of teachers noted that skills such as 'students can express what he/she thinks/feels', 'students can discuss with others' and 'learning achievement as a student group' increased as a result of the implementation of the new curriculum.

Table 7: Most-valued skills and competencies (teachers)

Skills and competencies	Questionnaire responses*							Based on narrative description	
	Australia	Shanghai, China	India		Japan	Mongolia	Thailand	Malaysia	Republic of Korea
			GS	PS					
Content knowledge		•	•				•		
Creativity		•		•		•			
Critical thinking	•								•
Application skills							•		
Reasoned decision making	•						•		
Communication skills	•	•			•			•	•
Teamwork/collaboration		•	•		•	•	•		
Sociability			•			•			
Self-discipline			•	•		•			
Perseverance	•	•		•			•		
Self-motivation	•							•	•
Compassion					•	•			
Environmental awareness			•	•					
Tolerance									
Conflict resolution									
Computer literacy				•					
Others**					•			•	

GS Government School; PS – Private School

* The top five responses from the questionnaire.

** Others include: problem solving and resourcefulness (Japan); creative thinking, mutual understanding, leadership, and ownership (Malaysia)

Table 8: Most-valued skills and competencies (school leaders)

Skills and competencies	Questionnaire responses*							Based on narrative description	
	Australia	Shanghai, China	India		Japan	Mongolia	Thailand	Malaysia	Republic of Korea
			GS	PS					
Content knowledge				•			•		
Creativity		•				•			•
Critical thinking	•								•
Application skills		•		•					
Reasoned decision making							•		
Communication skills	•	•			•	•	•	•	
Teamwork/collaboration	•	•	•		•	•	•	•	
Sociability			•			•	•	•	
Self-discipline			•	•			•		
Perseverance	•	•		•	•		•		
Self-motivation			•				•		
Compassion				•	•	•	•	•	
Environmental awareness			•	•			•		
Tolerance	•						•		
Conflict resolution				•			•		
Computer literacy							•		
Others**					•			•	•

GS Government School; PS – Private School

*: The top five responses from the questionnaire. For India (PS) and Thailand, some skills and competencies were equally ranked.

** : Others include: problem solving (Japan); to serve and contribute to society, self-reliance (Republic of Korea); and innovativeness (Malaysia)

3.3.3 Views on pedagogies, practices and methods

Overall, the researchers found that teachers and principals believe that the best methods for teaching and learning transversal competencies are through group presentations, field studies, individual projects and presentations and extracurricular activities. They felt that these methods of learning allow students to practice collaboration, teamwork and experiential learning that engage the development of self-motivation, compassion, self-esteem and perseverance, the skills and qualities that educators believe to be most important.

Although lectures are still the main method of delivery, as mentioned earlier in this report, most educators recognize that such traditional methods are the least effective when it comes to teaching and learning transversal competencies, and that methods to enable experiential learning need to be used more. Tables 9 and 10 show the methods teachers and principals viewed as the most effective.

Table 9: Teaching methods perceived by teachers to be effective for transversal competencies, by case study

Teaching Methods	Australia	Shanghai (China)	India		Japan	Philippines	Thailand	Overall Ranking*
			GS	PS				
Group projects and presentations	4	2	1	2	1	1	2	1
Field studies	1	5	3	4	3		3	2
Individual projects and presentations	5	3	4	5	2	4	1	3
Small group discussions	1	4	2			2	5	4
Extracurricular activities	3	1			4	5	4	4
Computer-aided activities			5	1	5	2		6
Lectures by teachers				3				7
Others								

GS – Government School; PS – Private School

* Note - Rank of 1 is perceived as most effective. Rankings are distributed as such: 1 is given a weighted value of 5, 2=4, 3=3, 4=2, 5=1.

Table 10: Teaching methods perceived by school leaders to be effective for transversal competencies, by case study

Teaching Methods	Australia	Shanghai (China)	India		Japan	Thailand	Overall Ranking
			GS	PS			
Group projects and presentations	1	1	3	3	1	2	1
Field studies	4	1		1	2	1	2
Extracurricular activities	2	3	1	4	4		3
Individual projects and presentations	5	4	3	1	3		4
Small group discussions	3	5	1			3	5
Lectures by teachers				5	4	4	6
Computer-aided activities			5			5	7
Others							

GS – Government School; PS – Private School

* Note - Rank of 1 is perceived as most effective. Rankings are distributed as such: 1 is given a weighted value of 5, 2=4, 3=3, 4=2, 5=1.

While lectures are still common practice in **Japan**, teachers recognize the effectiveness of individual presentations and group work in developing transversal competencies. Survey respondents considered ‘group activities’ (69 per cent) as a very effective learning activity followed by ‘individual works and presentations’ (53 per cent) and ‘field study’ (45 per cent). In contrast, relatively few listed ‘lectures by teachers’ as very effective (14 per cent).

As noted earlier, in many countries/economies educators view extracurricular activities as one of the most effective methods for developing transversal competencies. In **Shanghai (China)**, both principals and teachers felt that extracurricular and group projects are the best method to instil transversal competencies into students’ learning experience. Likewise, in **Malaysia** some teachers and school heads felt that skills and values are more effectively inculcated during co-curricular activities outside the classroom. Similarly, **Vietnamese** schools use community activities that enable students to acquire transversal competencies to engage in dialogue about global problems, respect for the environment and human rights.

In **India**, teachers in both private and government schools felt that all of the categories listed (extracurricular activities, field studies, computer-aided activities, individual projects and presentations, group projects and presentations, and lectures by teachers) were ‘rather effective’. In **Thailand**, the surveyed administrators indicated that group projects, discussions and

presentations and field studies were effective methods of teaching transversal competencies. Half of the respondents felt that lectures would not be very helpful in teaching these skills to Thai students. The Thai teachers endorsed extracurricular activities and group discussions as the most efficient ways to practice transversal competencies in school.

In the **Philippines**, the teachers ranked group projects first, followed by small group discussions and computer-aided activities. Interestingly, field studies, although considered effective to some extent, were ranked in the last position. This may be due to the fact that it is a time-consuming method that is taxing for teachers. Similarly, the respondents did not find community engagement (such as with the local business sector) very useful in building transversal competencies.

3.4 Teacher support and training

According to the case studies, although all of the surveyed teachers and school leaders were aware of the various methods that can be effective in teaching transversal competencies, many teachers felt unprepared to use these methods. The studies found that most educators believe that teacher training and support are critical for the implementation of transversal competencies, yet feel that support for teacher training is not readily available.

3.4.1 Types and frequency of teacher training for transversal competencies

To identify the most-utilized training methods, the ERI-Net questionnaire asked teachers about the following forms of teacher training: lectures by specialists, model classrooms, mentoring, discussions with colleagues, distribution of guidelines and materials and online learning. Many teachers reported that they had received some training but were not sufficiently prepared to incorporate transversal competencies into the classroom. Overall the case study results on teacher training and support indicated significant variation – some cases seem to provide better training and support opportunities than others.

In **Australia**, around half (56 per cent) of the surveyed teachers indicated that they had sufficient access to training opportunities specific to transversal competencies, mainly via discussions with colleagues and lectures by specialists. Only 41 per cent of the surveyed school leaders reported that they had received some or a significant amount of professional development specific to transversal competencies, but, in general, most leaders felt they were adequately prepared to lead and guide teachers.

The data from **India** indicate that the government and private schools both provide plenty of opportunities for teachers to attend training sessions.¹⁰ And in both the private and governmental school systems all of the above-

¹⁰ This is true of the sample schools but larger picture could be different. Only six state schools in the 29 states in the country were surveyed. These state schools were those that are undergoing an intervention on training of teachers by a third party agency.

mentioned training methods were being used to develop transversal competencies. Despite the opportunities, however, only 31 per cent of private school teachers and only 18 per cent of government school teachers felt very well prepared.

The **Republic of Korea** offers very good training opportunities for teachers to learn how to develop transversal competencies (see Box 4). In an effort to create a peer-learning environment, teachers have opened their classrooms for observations by other teachers and have led voluntary workshops to help other teachers design curricula that are rich in activities that promote transversal competencies.

Box 4: Republic of Korea: Teachers learning together

A high school with 75 faculty members in Yongin City, Gyeonggi Province, provides an example of how teachers in the Republic of Korea are supported to improve their knowledge and teaching skills. Guided by the school's goal to become 'more than a school', and putting emphasis on teachers' accountability for student learning, the school principal introduced a teachers' community that emphasizes the importance of the student-centred approach, innovative teaching strategies and teachers' self-directed learning through a book discussion club. The club encourages teachers to participate in monthly discussions. It began with a few members, but eventually the whole teaching community joined. Teachers meet once a month to discuss topics in relation to the books they have chosen for the month. The books are principally about education, but also cover a variety of topics related to social issues, liberal arts, etc. During the discussions, teachers are able to share their ideas on a broad range of topics and reflect on their classroom practices based on what they have read. Since participation is voluntary, teachers are more open to talk, seek support and share their insights. According to the principal, the book discussion club provides opportunities to create a culture of sharing and unity in the school as well as to develop professionalism among teachers.

Another teachers' study group in the same school called the 'One-Ten System' has proven to also work well in helping teachers to improve their knowledge and teaching skills. The study group encourages teachers to open their classrooms for observation by other teachers. In return, that teacher can observe the classes of ten other teachers of his or her choice, and provide feedback. Through this support method, teachers are able to learn from each other and acquire and share innovative ideas and teaching strategies, not only regarding their areas of expertise but in other subjects as well.

Source: Republic of Korea Phase II case study.

The case study from **Japan** notes that school-based teacher training in that country involves activities designed to develop transversal competencies such as analytical thinking and interpersonal skills. Three teacher-training examples provided in the case study were: 'open lessons', 'skills development', and 'informal training'. In the 'open lessons', teachers allow other educators (from the same school and other schools, and experts from universities) to observe their classes and provide feedback. In the skills development trainings, teachers are trained in specific skills that may help them organize their lessons and facilitate activities in a more student-centred way. The informal trainings are discussion groups in which teachers can talk about various education topics with colleagues.

Some case studies reported both a lack of opportunities for training and a lack of preparation. In **Viet Nam**, for example, the study findings indicate that teachers are only required to attend one or two workshops per semester, and the workshops use a lecture-based method, giving teachers very little opportunity for practical application or pedagogical guidance through example. Despite the teachers' positive endorsement of transversal competencies for student growth and development, none of the teachers surveyed indicated that they had received training in pedagogical methods to develop students' transversal competencies (in this case 'critical thinking' and 'global citizenship education').

The **Philippines** case study reported that the majority of the respondents found teacher trainings, which are given one or two times per semester, to be inadequate. And among the modalities used in teacher trainings on the integration of transversal competencies, the majority of the respondents said that lectures by specialists was the most commonly used, followed by discussions with colleagues. Model classroom presentations and online learning were rarely used.

In **Thailand**, 55 per cent of respondents said they had received training to integrate transversal competencies at least one to two times in the academic year, and lectures were among the most commonly-used delivery methods. These training opportunities for teachers were not specifically dedicated to building students' transversal competencies.

In **Mongolia**, about 60 per cent of teachers noted that they received training on teaching transversal competencies one or two times per academic year. Almost 25 per cent of teachers responded that they received training one or two times per semester, while 17 per cent either did not receive any training or were unaware of any training on transversal competencies.

Overall, fewer than 50 per cent of the participants in each case study felt they were 'very well' prepared through formal training to teach transversal competencies and to integrate them fully into their curricula.

3.4.2 Teachers views on effective training methods

The case studies examined the teachers' perceptions regarding the most effective training methods for developing students' transversal competencies. The majority of teachers felt that training sessions should include: model classrooms/lessons, mentoring and discussions with colleagues. However, teachers in all of the case studies indicated that the 'lectures by specialists' method was currently the most common. This indicates that teachers are well aware of the types of skills and competencies that they are expected to develop, and realize that to enable them to move away from using lectures themselves, they need to explore other training methods.

The survey results from **India** indicated that teachers feel that the model classroom is the most useful method, but this method is the least utilized in teacher training workshops. In **Mongolia**, teachers ranked the trainings that offered discussion opportunities with other teachers, along with mentoring and teaching materials as among the most useful sessions.

In the **Australia** case study, teachers felt mentoring and model classrooms were among the most effective tools for developing transversal competencies. Likewise in **Shanghai (China)**, model classrooms, mentoring and discussions with colleagues were the three training modes selected as being most effective for integrating transversal skills into schools. In comparison, teachers found lectures, guidelines and materials, and online learning to be less effective.

3.5 Assessments

Beyond policies and plans, teaching methods and practices, and the training and support available for teachers – the other area that was examined is how transversal competencies can be assessed. The study found that, given the diversity of transversal competencies, there is no single approach to assessing them, but rather there are various approaches, with some that are more relevant in particular contexts than others. Assessment of these competencies therefore involves various methods and tools. Findings of many of the case studies indicate that schools and teachers are trying to assess these competencies, but teachers find it challenging due to the lack of conceptual clarity regarding the competencies, the varied pedagogical approaches and training methods that are used, and a lack of effective tools. If transversal competencies are incorporated, appropriate assessment guidelines, frameworks and methods need to be introduced and clearly articulated, and educators need to be trained to properly implement them.

Since many education systems and societies still place a high value on academic achievement, schools find it challenging to switch to an emphasis on teaching and assessing transversal competencies. The study found that teachers, students and parents are often only focused on the academic achievements, measured via traditional assessment mechanisms (i.e. tests and examinations on content). A traditional ‘paper and pencil’ test may not be the best method of assessing students’ transversal competencies, however.

3.5.1 Assessment methods

Most case studies did not have clear guidelines or frameworks that spell out how transversal competencies can be assessed. In many cases the operational definition of these competencies needs clarity, and as a result the corresponding methodology for assessing transversal competencies is also missing. Despite these limitations, many of the researchers reported that educators aim to assess these skills and competencies.

In most of the case studies, schools are using existing assessment systems (i.e. classroom assessments, examinations, and tests that are focused on academic content) to evaluate transversal competencies, whether or not there are explicit criteria for transversal competencies. In fact, teachers in several of the case studies (India, Japan, Republic of Korea, Malaysia, Philippines and Viet Nam) felt that, for the most part, the existing assessment mechanisms can be used for assessing transversal competencies. For example, Japan has a Special Activities and Period of Integrated Studies, officially coined in 1958, which is intended to foster a sense of identity and self-reliance through students' activities such as student assemblies and clubs. Approximately 70 per cent of the questionnaire respondents indicated that the evaluation criteria within the Special Activities and Period of Integrated Studies can be utilized for assessing transversal competencies to some extent.

Some case studies reported that schools have official guidelines and policies in place to assess transversal competencies. In **Shanghai (China)**, for example, the government has introduced the 'Green Indicator System' (2010) for basic education (see Box 5). Additionally, in the 'happy activity day', self-performance review and peer review are major forms of evaluation. Student's personal feelings and reflections are recorded in the 'Students Growing up Tracking Portfolio'.

Box 5: Shanghai, China: The Green Indicator system

The 'Green Indicator System for Student Performance in Primary and Secondary Schools' was established in 2010 by the Ministry of Education and the Shanghai Municipal Education Commission as a quality monitoring system for student performance based on curriculum standards. The system covers several categories of student behaviour, skills and competencies in addition to academic performance, which are evaluated over the course of the school year (Figure 3).

Figure 3: Student assessment in the Green Indicator System



About 65,000 students in primary (grade 3) and junior high schools (grade 9) participated in a local test of the Green Indicator System in October 2011. The testing domain covers reading and mathematics for students in Grade 3 and reading, mathematics and science for students in Grade 8. In this context, 'green' refers to students' overall development and health. The Green Indicator System not only tests students' basic knowledge and skills but also their higher-order thinking skills, adapted for the demands of the twenty-first century, including capacity for information processing, problem-analyzing and solving, communication, team work and innovation.

In addition to assessing student performance, the 'Green Indicator System' aims to aid in improving all aspects of the education system, through monitoring school management and leadership and the professional quality of the teaching force.

Source: Shanghai, China Phase II case study.

Consistent with the earlier findings on the types of transversal competencies most valued, most of the case studies indicated that schools aimed to assess students' critical thinking, creativity, teamwork, collaboration, communication and self-reflection competencies. And the most common methods for assessing these competencies included presentations, oral assessments, group projects, group activities, targeted writing assignments, as well as general observations of student behaviour.

According to the school heads and teachers in **Malaysia**, assessment of students' transversal competencies is generally based on observations during classroom activities such as group assignments and presentations, which give teachers an opportunity to evaluate students' critical and innovative thinking skills and interpersonal skills.

In many cases, the teachers themselves have developed methods or tools to assess transversal competencies, and are using them along with formal assessment guidelines, if any. In **Viet Nam**, for example, teachers assess the critical and innovative thinking of learners through asking them to solve problems and complete writing tests. They assess global citizenship through music performances and student participation in community activities. Similarly, in **Australia** half of the teachers responded that no specific tools were available to assess transversal competencies, so they therefore devised their own. One of the interviewed teachers expressed this, saying that 'I've made up my own checklist using what is available in the Australian Curriculum General Capabilities section'. In **Japan**, the most common assessment method is written feedback, which enables teachers to see students' learning processes.

Some countries have developed innovative school and classroom-based methods to monitor the development of students' transversal competencies, rather than using examinations and summative evaluations. In **India**, for example, the CCE reform mandated a shift in focus from year-end examinations to continuous and comprehensive assessment, conducted throughout the year, of cognitive as well as transversal competencies. Similarly, in **Malaysia** teachers conduct school-based assessments through group activities and presentations, which provide a more comprehensive evaluation of student learning outcomes than tests because they give teachers an opportunity to evaluate students' understanding of content as well as their skills and attitudes.

While some schools and teachers are assessing transversal competencies in innovative ways, these are more often the exception rather than the rule. Most schools use traditional assessment criteria and guides (based on examinations and academic content) – and teachers are often left to their own devices to try and assess transversal competencies.

3.5.2 Educators views on the assessment of transversal competencies

Many teachers and schools mentioned the limitations in guidelines and tools for assessing transversal competencies, as well as the lack of clarity in the definitions. For example, in Australia there is a perception that the limitations of the assessment regime are a barrier to the incorporation of transversal competencies in teaching and learning. An Australian teacher expressed the frustration educators face, saying that the 'current teaching culture cannot see the transversal elements within the assessment achievement standards, therefore their value is not recognized, thus [they] are not assessed, hence are not valued, so are not taught'.

In India, many principals from both government and private schools feel that school-based and classroom assessments are important but transversal competencies are generally assessed through observations, for which teachers need more training (i.e. to know what to look for) as well as the

time to observe all students properly. With a content-heavy curriculum, it is unlikely that these challenges, lack of training and lack of time, can be overcome easily. These challenges are not unique to the Indian context.

In general, the participants in the **Malaysia** study felt that it is not easy to assess transversal competencies. The teachers expressed having difficulty in assessing something that is not tangible, indicating that the definitions of transversal competencies need to be more clearly determined. The following response from a teacher with 35 years of experience illustrates this perception: 'school assessments are done in a controlled situation and may not be able to measure something that is not tangible. These competencies are emergent and we actually see it in them after they leave school'.

The **Shanghai (China)** case study noted that the current assessment system, which is used for measuring academic scores, cannot adapt to the current demands of developing innovative skills. Only around half (46 per cent) of the teachers consider the existing assessment system as being appropriate 'to some extent' for measuring students' transversal competencies.

The study findings indicate that teachers view the lack of guidelines and tools for assessment as part of the frustration in trying to incorporate transversal competencies. The lack of clear assessment frameworks, guidelines and methods often forces teachers to spend time developing methods of their own. In addition, in many cases teachers faced challenges in incorporating the teaching of transversal competencies into lessons if such competencies are not reflected in examinations.

4. Trends and challenges

As noted earlier, the discussions presented here on trends and challenges, including the policy implications, are drawn from case studies based on small sample sizes and are therefore not representative of the participating countries or of the Asia-Pacific region in general. In addition, the data collection methods varied between the case studies and the analyses were not standardized, therefore strong general conclusions cannot be drawn. Nonetheless, the findings and examples provide valuable information and insights into how transversal competencies are successfully integrated into the sampled schools in various country contexts.

4.1 Trends

The findings of the case studies indicate that there is a clear desire by national and school level officials to incorporate transversal competencies into school practices.

Integration of transversal competencies is reflected in national guidelines, school policies and plans, and curricula. All of the countries/economies studied have included these competencies in their national and/or school policies, plans and curricula. In many cases (Japan, Thailand, Australia, Shanghai, China and Malaysia) national guidelines or policies have filtered down to the local level. Several case studies reported that local autonomy (school-autonomy and/or teacher-autonomy) plays a large part in the ability to incorporate these transversal skills and competencies into the classroom setting.

Educators exhibit awareness of the importance of student-centred practices and other methods for developing students' transversal competencies. Many of the teachers and schools surveyed in this study are supplementing more traditional approaches to delivering content with new approaches. For example, the 'volleyball style lesson' in Japan and the VNEN model in Viet Nam, and cases in which community activities are incorporated as part of lessons (Shanghai [China], Republic of Korea, Thailand, Viet Nam).

Most of the surveyed countries/economies emphasize extracurricular activities and utilize these as methods of developing transversal competencies. Many schools are using extracurricular activities – such as clubs for music and sport – to develop transversal competencies. Most of the case studies reported that the schools encouraged extracurricular activities and placed an emphasis on developing transversal competencies through these activities.

Reforms to integrate transversal competencies into education are resulting in positive outcomes. Several of the case studies reported positive changes among students (e.g. improvement in teamwork and communication skills) and teachers (e.g. teachers becoming more innovative in teaching practices) as a result of reforms to integrate transversal competencies into education.

There is a growing awareness among stakeholders of the importance of transversal competencies. There is widespread awareness of the importance of transversal competencies among both education policy-makers and the teachers and school leaders who are responsible for enabling students to develop these competencies. This is evident in the results of the questionnaire administered to schools in eight of the ten case studies. Principals, school leaders and teachers are crucial for the incorporation of these skills in the classroom, so greater awareness and knowledge of these competencies is a big achievement. They create the positive atmosphere in schools and reinforce the guiding principles and philosophies that schools want to instil in all learners.

A culture of collaboration exists among teachers to improve their methods of developing transversal competencies. In many cases, teachers lack the required training, materials and guidelines regarding how to incorporate transversal competencies into their lessons. However, there was evidence (e.g. in Australia, Japan, Republic of Korea and Viet Nam) that through collaboration and creativity, teachers have identified practical solutions and have developed methods to encourage students to be active learners, to think more critically, to be more creative, to collaborate and to learn through experience.

4.2 Challenges

The case studies also described the challenges that schools face in teaching transversal competencies.

Transversal competencies are not clearly defined in school guidelines and curricula. While many teachers are aware of the various skills that are encompassed by the term 'transversal competencies', the lack of clarity in national and school guidelines and frameworks creates confusion among educators and poses a problem for operationalization and integration in Shanghai [China], India, Mongolia, Philippines and Viet Nam, thus limiting the extent to which these skills can be developed in students.

Many countries/economies have an emphasis on academic examinations and content, so teachers continue to rely on lectures. Despite the proven equal importance of transversal competencies, many schools still place an emphasis on academic examinations and achievement (e.g. in India, Shanghai [China], Malaysia, Mongolia and Thailand). A focus on academic achievement and assessment has the result that teachers often do not have time to incorporate the activities required for developing students' transversal skills (i.e. teachers need to complete the curricula and prepare students for examinations). Accordingly, teachers tend to stick to lectures and other traditional teaching methods.

There is a mismatch between what are known to be effective teaching approaches for transversal competencies and actual teaching practices.

While the surveyed teachers are aware of the importance of transversal skills and the effectiveness of student-centred learning, and they understand that a teacher-centred approach provides limited opportunities for students to participate and express their opinions, the study found that lecture-based teaching continues to dominate in classrooms in Thailand, Shanghai [China], Malaysia, Viet Nam and Mongolia.

Lack of instructional materials and practical guidelines to implement transversal competencies in many schools.

Recognizing that the effectiveness of student-centred approaches in facilitating transversal competencies depends on factors such as teacher readiness, competence and the availability of instructional materials, the studies examined the prevalence of these factors. Half of the case studies (India, Mongolia, the Republic of Korea, Thailand and Viet Nam) reported that schools lacked the necessary instructional materials and ICT resources and that this affected the development of skills among students. Furthermore, school heads need to provide teachers with support and instructional leadership

Insufficient teacher capacity and teacher training opportunities for practical application of transversal competencies.

Most of the case studies (e.g. Republic of Korea, Thailand, Viet Nam, Philippines and India) identified the lack of capacity of teachers as a major bottleneck for the integration of transversal competencies into the classroom. This lack of capacity stems mainly from a lack of confidence in, and clear understanding of, these skills, due to insufficient training (the Republic of Korea, Thailand, Viet Nam) and from the emphasis on theory-based training, with few opportunities for practical application (India). While this study did not explore the reasons for the lack of training or why some teachers opt not to avail themselves of training opportunities, it is clear that training opportunities are of critical importance to facilitating the integration of transversal competencies. School heads need to provide teachers with support and instructional leadership. Further, some school heads and parents are sceptical of teachers' abilities to assess students' transversal competencies (e.g. in Malaysia).

Many education systems lack reliable mechanisms and guidelines to assess transversal competencies.

Another challenge cited by the case studies was the absence of reliable and objective assessment mechanisms and practical assessment guidelines or frameworks. Some case studies (e.g. India, Malaysia, Mongolia, Philippines, and the Republic of Korea) highlighted this as a main difficulty in effectively assessing transversal competencies in the classroom. Education systems need to have a clear definition of what skills are important, how they can be integrated in the classroom, and how they can be assessed.

5. Conclusions

The findings of this study indicate that there is indeed a growing trend in the surveyed countries/economies to integrate transversal competencies into education. The participants of this Phase II study have shown an awareness of these skills both at the macro level (policy) and a micro level (within the classroom). Indeed, the case studies show that efforts within schools are fostering commitment and determination among educators to develop transversal competencies in their students.

The case studies provided good examples of integrating and applying transversal competencies in schools and classrooms in the Asia-Pacific region. Some of the enablers for this integration are: a clear policy and curriculum; effective pedagogies and practices; strong leadership; passion and initiative among school leaders and teachers; effective teacher training and support; and overall understanding and awareness of transversal competencies among all stakeholders (policy-makers, educators, teachers, parents and the community).

The trends and challenges identified in this study suggest a number of policy implications for supporting integration of transversal competencies into classrooms.

5.1 Policy implications

A central priority should be the clear definition of the term ‘transversal competencies’ at the national level, and a common understanding and awareness of the term by policy makers, educators, teachers and parents. While countries may select and define the various competencies differently in accordance with their national goals and priorities, there need to be clear guidelines from the national policy level to the classrooms as to which competencies are important and exactly what they are. The issue is not just semantics, but also the need for agreement on which among these skills are the most valuable to students. Hence, there is a need for open discussions, forums and sharing of knowledge and experiences on the topic within and between countries.

A stronger alignment is needed between policies, curricula, teaching pedagogies, teacher training and assessment methods. While national education policies and curriculum frameworks often highlight the importance of the holistic development of learners and put equal emphasis on the development of cognitive and transversal competencies, at the school level there is a continued bias towards academic success, which is measured through examinations, with relatively little attention given to

other aspects of learning. This indicates that while teachers recognize the importance of developing transversal competencies, it is difficult to develop such competencies in students when lessons are focused on preparing students for exams. Given that teachers considered this to be one of the greatest challenges to developing students' transversal competencies, it is necessary to develop a feasible curriculum that puts equal importance on both academic and transversal competencies, and allows room for assessing student learning in varied ways. Moreover, it is critical to link policy, curricula, teaching pedagogies and assessment methods.

Non-academic subjects, extracurricular activities and programmes can be powerful vehicles for developing students' transversal competencies. Many of the case studies noted the importance of non-academic subjects, extracurricular activities and programmes in developing transversal competencies. While the surveyed countries and economies vary in terms of implementation, these activities are seen as important means for fostering transversal competencies.

It is important to invest in teachers with a focus on building their capacity to use pedagogies and assessment practices that facilitate the integration of transversal competencies. While the surveyed teachers and school leaders know that student-centred methods are most effective in developing transversal competencies, teachers do not always use these methods. This is partly due to a lack of teacher training and support for transversal competencies. Adequate investment in teachers' and leaders' professional development is essential to ensure the development of students' transversal competencies.

School-based assessment frameworks, tools and practical guidelines for teachers are necessary. A policy and assessment framework, guidelines and appropriate types of school-based assessment tools and methods are necessary to appropriately gauge the development of students' transversal competencies. Teachers also need training in how to use assessment tools and methods, and in how to develop their own assessment tools.

5.2 Future research

This Phase II study looked closely at how transversal competencies are interpreted, and at how teaching of these competencies is implemented at the school level, and it identified the challenges that are faced in this process.

The study found that to teach transversal competencies, such as communication skills and critical thinking skills, teachers must be not only the deliverers of knowledge but also facilitators who encourage students to actively engage in learning. The study also found, however, that teachers often lack the training, support and opportunities to do so successfully. Many school principals and teachers feel there is a lack of adequate support

(e.g. teacher trainings, instruction/education materials and information-sharing among teachers) and were not confident enough to change their teaching methods. These challenges indicate a need for further research into how teachers could better be prepared and supported.

The Phase II study also found that the lack of appropriate assessment frameworks may be hindering the teaching of transversal competencies. It is difficult to determine the effectiveness of current assessment practices, however, so this study recommends further investigation into assessment practices and tools that support and appropriately gauge the development of students' transversal competencies.

Taking the Phase II results into consideration, the ERI-Net executive meeting in 2015 agreed to further investigate the integration of transversal competencies, with a focus on how teachers are being supported and trained to develop these skills in schools. A Phase III study (2015) on transversal competencies has been launched, investigating how teachers are prepared and supported to facilitate the acquisition of transversal competencies while also examining the impact of globalization and regional integration on education reforms, especially in the areas related to transversal competencies. The study is expected to be completed in 2016.

In view of the findings regarding assessment, the Network on Education Quality Monitoring in the Asia-Pacific (NEQMAP), UNESCO Bangkok's platform for information sharing and collaborative effort to improve quality of learning, has launched a regional study to examine the current practices of assessing transversal competencies in the Asia-Pacific region, identify challenges and lessons learned, and provide recommendations for the development of such assessments to improve students' learning and holistic development. The study is also expected to be completed in 2016.

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Annex A: Case study summaries

Australia

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Overview

Phase I of the ERI-Net study found that Australia, one of the ten participants in the ERI-NET Study on Transversal Competencies, has incorporated transversal competencies into its curriculum. In 2008, Australia noted the importance of transversal competencies in the Melbourne Declaration on Educational Goals for Young Australians, while also promoting holistic approaches to learning through the Early Learning Years Framework and drafting the 'General Capabilities in the Australian Curriculum'. Phase II of the study sought to identify to what extent transversal competencies (in terms of the 'General Capabilities': literacy, numeracy, ICT capability, critical and creative thinking, personal and social capability, ethical understanding and intercultural understanding) are being taught in Australian classrooms.

Method

The researchers examined the use of transversal competencies in classrooms using a survey of educators and lesson observations. The research team surveyed 86 educators in South Australia: 57 teachers and 29 school leaders, and conducted 16 classroom observations in seven public schools. The observations comprised three stages: a pre-lesson conversation with the teacher, a lesson observation and a post lesson debrief. This enabled the researchers to understand how transversal competences are being integrated in practice and how students are adopting these competencies.

Key findings

The results of the survey indicated that, overall, both teachers and leaders value the teaching of transversal competencies in the classroom and believe them to be essential for the growth of students. The observations revealed that teachers and principals have instilled certain practices in the classroom and in training opportunities to further enhance transversal skills development among their peers and students alike. The observations also found that the 'General Capabilities' are evident within the classrooms. Critical thinking, communication skills, perseverance and reasoned decision-making are among the top transversal skills being developed.

School policies

Nationally, Australia has developed and implemented two national policies that reflect the transversal competencies: the Early Years Learning Framework (for learners aged 0–5) and the General Capabilities of the Australian Curriculum.

Pedagogies and practices

Teacher commitment is seen as critical to blending transversal skills into the curriculum and therefore into the daily behaviour of students. The teacher's role is pivotal for the integration of these skills, as teachers' leadership and pedagogical creativity can enhance students' abilities to understand and utilize the skills in the classroom setting. The teaching approaches deemed most useful in this regard include group projects and presentations, extracurricular activities and small group discussions. There was an overwhelming consensus among the surveyed school leaders that a variety of teaching approaches is necessary to ensure the development of transversal competencies.

The study found that most teachers (12 out of 16 observed teachers) successfully used relevant course material to create a real-life problem solving simulation for student learning and the study found that the teachers understood that both intellectual and emotional engagement are necessary for students to learn a new skill set. Furthermore, the study found that teachers successfully integrated thoughtful questions that required students to reflect and think critically.

Educators' perceptions of transversal competencies

Critical thinking and communication skills were perceived by both teachers and leaders to be the two most important competencies. In contrast, the teachers and leaders ranked content knowledge as the least important. This reveals the emphasis many educators are today placing on transversal competencies as a means of helping students advance in their careers. The study also found that Australian teachers and leaders have witnessed a general positive change in students' ability to collaborate, communicate and socialize since the integration of transversal competencies into the curriculum.

Teacher support and training

More than half of the teachers agreed that they received 'a great deal' or 'some extent' of training or professional development on methods of teaching transversal competencies in their classrooms. The survey found that teachers had received the most training through 'discussions with colleagues' and 'lectures by specialists'. According to the principals, however, the most common types of teacher training methods used for this topic were 'mentoring' and 'discussions with colleagues'. Of the options listed in the survey, teachers overwhelmingly felt that mentoring, model classrooms and discussions with colleagues were the best methods for learning how to teach transversal competencies effectively. One of the teachers noted

that teachers spend their own time doing professional development, through Massive Open Online Courses (MOOC) and through conversing with other teachers via social media.

Assessments

According to the survey results, teachers rely mostly on school-based classroom assessments to monitor and evaluate students' development of transversal competencies. In addition, classroom observations, by both internal and external stakeholders, are conducted for quality assurance. Student feedback is also considered in the assessment process, which allows for both student reflection and teacher comments.

While teachers are able to assess transversal skills to some degree, several teachers commented that a lack of clear guidance in the assessment standards, as well as a lack of tools to effectively evaluate students, makes it difficult to fully assess these skills.

Conclusions

Achievements

The findings of the Phase II study indicate that the participants in the survey have increased the integration of transversal competencies into the curriculum and that teachers are convinced of the value of these competencies for student success. The focus has mainly been on critical thinking, interpersonal and intrapersonal skills, however, so there is a need for a closer look at the other transversal competencies.

Challenges

The survey findings indicated a lack of confidence among teachers in developing students' transversal competencies and revealed that mentoring is not often provided, although it is widely desired. The findings also indicate that teachers want to use more diverse training methods to teach transversal competencies effectively in the classroom.

Shanghai (China)

Jinjie Xu of Shanghai Normal University and Jiaping Yan of Shanghai Academy of Educational Sciences

Overview

In Shanghai, while the term 'transversal competencies' is not commonly found in education guidelines, the spirit of this term is found in many curricula and in the mindset of school leaders and teachers, and there is certainly a movement towards further integration of the teaching of 'creativity, innovative spirit and critical thinking skills' into education. The Phase I study found both medium and long-term commitment to education reforms in Shanghai for the period 2010–2020. The reforms included the

promotion of a holistic approach to student growth and of 'national spirit education' and 'life education'. The reforms have led to skills related to presentation and analyzing data being integrated into the curricula. In these reforms, the transversal competencies given the most emphasis were critical thinking, interpersonal and intrapersonal skills.

Methods

In Phase II of the study, researchers used document reviews, class observations, the ERI-Net questionnaire and focus groups (of teachers) to gather data. The survey covered 11 schools (primary and lower secondary), reaching 133 teachers and 25 principals, while classroom observations were conducted at five schools. The schools varied in size, with student population numbers ranging from 800 to over 1000.

Key findings

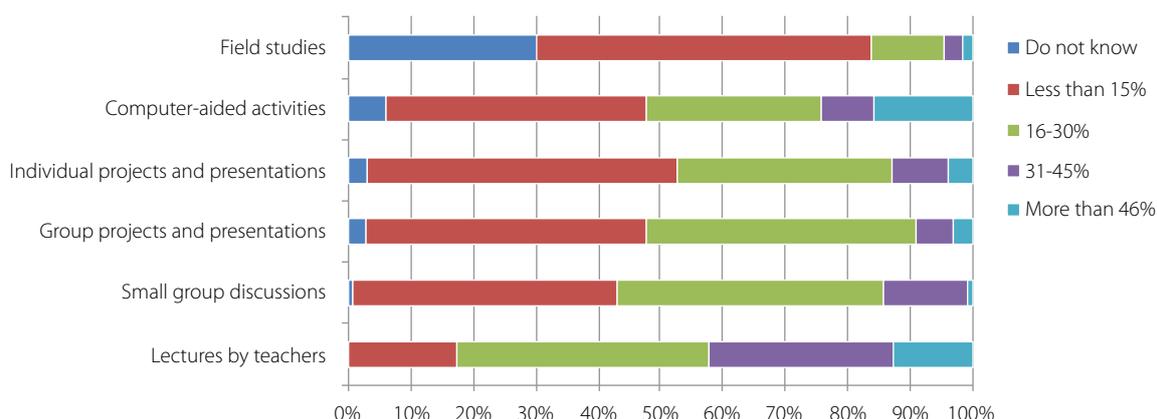
School policies

As noted in Phase I of the study, Shanghai is implementing a ten-year plan, Shanghai's Plan for Medium and Long-term Education Reform and Development 2010-2020, and has placed 'moral education' as a top priority, claiming it to be the best way to deliver non-cognitive skills. Various approaches are being used to develop the desired competencies. For example, in 2011 the Shanghai Municipal Education Commission initiated 'Happy Activity Day' for all primary schools as a way to foster social activities in learning. This endeavour promotes transversal skills in the learning environment at a very young age, and happiness is highly valued within this context. School mottos also reflect transversal competencies, though not explicitly. For example, Shanghai Lou Shan Secondary School's motto is 'All-round development, human wellbeing and exploring the truth bravely'.

Pedagogies and practices

According to the study findings, a significant proportion (over 40 per cent) of the surveyed teachers spend more than 30 per cent of their time using lecture-based teaching methods. About 85 per cent of teachers spend less than 30 per cent of their teaching time on small group discussions, group projects and presentations (Figure 4).

Figure 4: Pedagogies and practices in Shanghai (China)



Source: Shanghai, China Phase II case study.

* The colour-coded categories represent the amount of time teachers spend on a particular method/practice in their classes – e.g. 30% of teachers “do not know” how much time they spend on Field studies.

The study also found that while roughly 70 per cent of principals felt that transversal competencies were being integrated into classroom instruction, only 37 per cent of teachers felt that way. Therefore, there appears to be a gap between policies and day-to-day instruction in the classroom.

Educators’ perceptions of transversal competencies

When asked which skills they believed students should learn, the top three responses from teachers were: ‘presenting their opinions logically’, ‘understanding the content’ and ‘developing their own opinions’. When asked what the most important transversal competencies are, both teachers and principals listed ‘creativity’, ‘teamwork/collaboration’ and ‘perseverance’. Regarding the most effective teaching approaches for fostering transversal competencies in the classroom, the most common responses were ‘group projects and presentations’, ‘field studies’ and ‘extracurricular activities’. However, the responses to the questions about the types of methods teachers actually use indicate that the most effective methods are being used far less than their perceived effectiveness would warrant.

When asked whether schools should share the responsibility for teaching non-cognitive skills with parents and communities, there was an overwhelming consensus among educators that schools should share this responsibility. Around 50 per cent of school principals believe that families should play a primary role in teaching non-cognitive skills to children.

Teacher support and training

According to the responses to the questionnaire, both school principals and teachers feel they have not received enough training regarding transversal competencies. Nevertheless, around half of the school principals (52 per cent) and teachers (44 per cent) responded that they valued the training they had received on transversal competencies ‘to some extent’. In terms of the modes for training teachers to integrate transversal

competencies, the teachers listed model classrooms, mentoring and discussions with colleagues as the three most effective. Teachers perceived lectures by specialists, the distribution of guidelines/materials and online learning as being less effective modes.

Assessments

Teachers currently mainly use the official guidelines in the curriculum and standardized tests to assess students' transversal competencies. Only 46 per cent of the surveyed teachers in Shanghai felt that the current assessment system is appropriate for evaluating transversal competencies. These findings indicate a need for more appropriate, process-oriented monitoring and evaluation methods.

Conclusions

Achievements

The study findings suggest that transversal competencies, although not labelled as such, are integrated into the learning objectives and mindsets of teachers and school leaders in Shanghai. The curriculum reforms put a high value on the holistic development of students, and the school mottos support moral education. In addition, awareness of transversal competencies has also increased as a result of the reforms.

Challenges

The study found that the main obstacle to teaching transversal competencies in schools is the gap between policy and implementation. Implementation in the classroom is quite difficult because, according to teachers, schools place an 'emphasis on academic achievement' (i.e. examinations), which impedes teachers ability to teach transversal competencies. Other obstacles to developing students' transversal competencies are the lack of appropriate training and support for activity-based and student-centred teaching methods, combined with the lack of suitable assessment methods.

India

Anjlee Prakash and Deepika Sharma of Learning Links Foundation

Overview

In the Phase I study, India highlighted its 2005 National Curriculum Framework (NCF) and the Continuous and Comprehensive Evaluation (CCE) programme, which accompanied the Right to Education Act in 2009. These curriculum reforms integrated aspects of critical thinking skills and interpersonal and intrapersonal skills into learning. In Phase II of the study, India assessed the implementation of the revised education policies in schools. The study found that the surveyed schools, both government and private, support the notion of transversal competencies and have integrated them into their curricula. The schools have also seen positive changes in

their students' achievements since the reforms. The researchers observed a clear shift in teaching practices in both types of schools and found that teachers are more open to a student-centred learning approach and to providing extracurricular activities for their students than they were in the past.

Method

India's Phase II study covered government schools and private schools across six states in India. Each of the selected states have adopted the CCE programme and have piloted interventions and teacher training programmes with the aim of implementing the reforms. The researchers used a modified version of the ERI-Net questionnaire and surveyed 32 state government school principals, 14 private school principals, 32 private school teachers and 100 government school teachers. The researchers also conducted 48 classroom observations in six government schools.

Key findings

School policies

India's government schools and private schools have implemented various education reforms over the past decade. Both types of schools have placed a priority on developing transversal competencies but the policies related to these efforts use different tactics to implement the desired changes.

Government schools have implemented the 2005 National Curriculum Framework, which has encouraged student-centred learning, both inside and outside the classroom (in the community) and seeks to relieve the pressure that testing puts on students by integrating 'happy spaces' for students to learn in. In private schools and central government schools, the Central Board of Secondary Education implemented reforms in 2009, including the Continuous and Comprehensive Evaluation System, which includes year-round evaluations to measure the learning progress of students for both cognitive and non-cognitive skills.

Pedagogies and practices

The study found that the surveyed teachers (in both government and private schools) have begun to use new methods, including project-based learning, extracurricular activities and field studies. However, although the surveyed teachers in government schools value transversal competencies, these teachers spend less time on developing them (e.g. through collaboration, innovation and presenting opinions logically) compared to teachers in private schools.

Educators' perceptions of transversal competencies

When asked which competencies are the most important for student growth and learning, the surveyed teachers and principals at government schools, listed the most important as being 'environmental awareness' and

'teamwork and collaboration' followed by 'self-discipline'. The respondents in private schools rated 'content knowledge', 'application skills', 'self-discipline', 'perseverance', 'compassion', 'environmental awareness' and 'conflict resolution' as the most important. Educators from both private and public institutions felt there had been positive changes in student performance following the integration of transversal competencies. Very importantly, the study observed positive changes among teachers with regard to their motivation, pride, self-initiative, involvement and interactions with parents and the community since the integration of transversal competencies into schools.

Teacher support and training

With regard to training, while 31 per cent of teachers in private schools indicated that they felt very well prepared, only 18 per cent of teachers in government schools felt that way, in spite of government school teachers receiving just as many training opportunities as their private school counterparts.

The training offered to the teachers included a mix of modalities: lectures by specialists, mentoring, guidelines/materials, discussions with colleagues, online training and model classrooms. The latter method, model classrooms, was the least-used for the training of teachers from both private and government schools, despite this being viewed by teachers as the most effective method for learning how to teach transversal competencies.

Assessments

The CCE reform mandated a shift in focus from year-end examinations to a continuous and comprehensive assessment process conducted throughout the year, assessing both cognitive and transversal competencies. Transversal competencies are generally assessed through observation, for which teachers need more training (i.e. 'what to look for') as well as the time to observe all students. Despite the limitations, a significant number of principals in both government and private schools agree that school-based and classroom assessments are an important measure.

Conclusion

Achievements

The study concluded that education reforms regarding the inclusion of transversal competencies have been well received at the school and teacher levels. Teachers are adopting new methods of teaching and learning, such as project-based learning, extracurricular activities and field studies, as ways to introduce transversal competencies. The study also found that most teachers and principals have received some form of training on the subject. Teachers indicated that the teaching of transversal competencies is being given sufficient attention in schools.

Challenges

While both school leaders and teachers have positively received the notion of transversal competencies, some challenges impede proper implementation. Schools still emphasize examinations, and teachers in both private and government schools feel that they have insufficient time to research new teaching techniques and develop new materials, which constrains the extent to which transversal competencies can be taught in schools. Furthermore, the parents and communities have not been fully involved in the reform process, leading to some resistance to the 'holistic' development of students as against focusing on academic skills.

The greatest challenge faced by both private and government schools in integrating transversal competencies into education is the lack of appropriate materials and ICT facilities. Many teachers also feel that a lack of clarification on the holistic definition of transversal competencies means they have little practical guidance as to how to effectively develop these competencies.

Japan

Shinobu Yume Yamaguchi, Yukiko Yamamoto, Akina Ueno, Mihoko Kurokawa and Naoko Asano Enomoto of Tokyo Institute of Technology

Overview

Through a comprehensive analysis of Japan's policy documents and the latest national curriculum (2008 Courses of Study), Phase I of the ERI-Net regional study confirmed that the curriculum encouraged the fundamental principle endorsed by the Ministry of Education, Culture, Sports, Science and Technology (MEXT): 'Zest for Living'. Phase II was conducted to examine how transversal competencies are being incorporated into education in Japanese schools. The case study focused on schools in Akita Prefecture, where students have performed well in the National Achievement Examination in the past seven consecutive years, particularly in their application of knowledge.

Methods

Phase II of the ERI-Net study in Japan was conducted through a desk study, interviews with 13 school leaders, the ERI Net questionnaire (sent to 277 school teachers and leaders), and classroom observations in four primary schools and five secondary schools in Akita Prefecture. The desk study comprised a review of the local education policies, school education plans, annual development plans and lesson plans in the individual schools.

Key findings

According to the questionnaire responses, many of the teachers and school principals feel that students have developed transversal competencies since the introduction of the 2008 Courses of Study, especially in terms of interpersonal skills. The researchers also found that classes are designed to encourage interaction among students, such as stating one's opinion as well as appreciating others' opinions. They also observed that schools provide various learning opportunities inside and outside classrooms, such as small reading spaces and a library in a hallway.

School policies

Japan's education principle, called 'Zest for Living', is comprised of three components: solid academic prowess, a well-rounded character and a healthy body. Schools in Akita Prefecture have incorporated the framework for 'Zest for Living' (transversal competencies) into their education policies and have emphasized the need to include critical and innovative thinking skills in the curriculum and for teachers to encourage creativity in the classroom.

Pedagogies and practices

Schools in Akita Prefecture encourage teachers to design inquiry-based lessons that include opportunities for students to present opinions, engage in debates and dialogue and reflect on the conversations in class. The survey results indicate that teachers have made a shift in their teaching practices towards student-centred methods since the introduction of the 2008 New Course of Study curriculum. Furthermore, teachers feel that their lessons now encourage problem-solving skills. They also feel that the improved teaching methods encourage the use of transversal competencies such as communication, teamwork, sociability, ability to learn independently and conflict resolution.

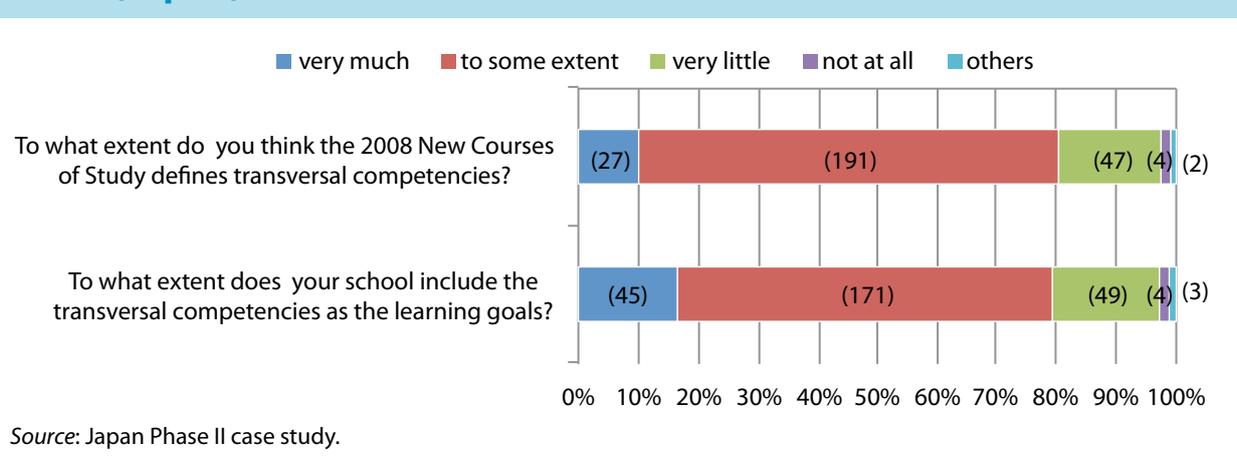
Lesson planning is designed via the 'introduction-development-reflection' model, which encourages teachers to engage students in both peer learning and self-reflection. Through effective use of the blackboard, all of the lesson objectives, development and reflection are visually available to students, enabling them to see their learning progress in each lesson. Through the use of 'volleyball style' question and answer sessions, students learn from one another as well as from the teacher, creating a collaborative learning environment for all students.

Akita Prefecture encourages students to participate in community activities and the student council, and these activities foster transversal competencies such as autonomy, democratic participation, self-awareness, sense of belonging and leadership skills.

Educators' perceptions of transversal competencies

The survey results indicate that the vast majority of principals and teachers feel that transversal competencies have been incorporated into curricula and plans 'to some extent', and some feel that these competencies have been incorporated 'very much', as illustrated in Figure 5.

Figure 5: Inclusion of Transversal Competencies into Curricula and Plans (Japan)



According to the survey results, teachers perceive the most effective tools to be group activities, individual work, presentations and field studies. While ICT was also noted as an effective teaching tool, the use of ICT was not extensive in the Akita Prefecture schools.

Teacher support and training

The 2008 Courses of Study curriculum required teachers to shift to more student-centred teaching approach. Teachers are being supported through both formal and informal training opportunities that encourage more collaborative teaching approaches so as to engage students in activities that develop their transversal competencies. Teachers are involved in school-based, city-wide and prefecture-wide trainings, where they receive teaching guidelines and educational materials to use in their classrooms. Indeed, the research team found that teacher training is a daily practice in schools in Akita. The teachers feel that the most effective type of training is the school-based one. Training includes informal sessions, such as small group discussions in the teachers' room. Teachers also perceive mentoring as a great means of transferring skills from experienced teachers to young teachers. Such informal teacher-training activities serve as not only pedagogical training but also as a philosophical and cultural knowledge transfer to new educators.

Assessments

There are few tools available to measure students' learning of transversal competencies. While many teachers believe that the evaluation criteria used for special activities can be used to measure the array of transversal competencies, the schools are trying to create an assessment technique that is specific to transversal competencies, based on the 2008 New Courses of Study.

Conclusions

Achievements

The Akita Bureau of Education has made great efforts to include transversal competencies in their curriculum since the introduction of the 2008 Courses of Study. At the school level, policies and practices reflect the importance of developing transversal competencies. Classroom observations and interviews with school principals and teachers indicate that they consider interpersonal and intrapersonal skills domains as being vital for students. The policies in place to include the 'Zest for Living' in all school-based activities stress the importance of developing students' transversal competencies and are dispersed throughout the curriculum, programme activities and extracurricular activities.

Challenges

The challenges identified in the Phase II study include: difficulty in executing ambiguous objectives, time constraints for teachers in implementing the new curriculum, multiple skills are required to become a good facilitator, difficulties for teachers in assessing transversal competencies, and schools are at different levels in terms of introducing ICT into education.

Korea, the Republic of

Bokyung Cho and Gunjoo Jang of Korea Institute of Curriculum and Evaluation (KICE)

Overview

This study examined how the Republic of Korea integrates transversal competencies in schools across the country. It followed on from the Phase I research, which took a macro perspective, focusing on identifying whether education policies and curriculum frameworks incorporate transversal competencies. This second phase takes a micro perspective, identifying the extent to which students' transversal competencies are being developed through education practices at the school level.

The Republic of Korea recognizes the importance of transversal competencies. The Republic of Korea has defined a number of 'key competencies', which are similar to the transversal competencies described in the ERI-Net framework. The 'key competencies' (see Table 11) cover cognitive abilities, character (attitudes) and skills. They are the basic abilities required for students to be effective in their work and life.

Table 11: ‘Key competencies’ of Character Education (Republic of Korea)

Aspect	Key competencies in Character Education	Definition (in the Republic of Korea)
Personal aspect	Self-respect	Form a positive self-identity and express oneself with confidence.
	Self-control	Control oneself and temper one’s words and actions, despite anger.
	Self-reflection	Employ introspection in pursuit of higher quality of life.
Inter-relational aspect	Respect for others	Use language with careful concern for others.
	Sympathy	Receive others’ thoughts and emotions with sensitivity, and consider issues from others’ perspectives.
	Mutual understanding	Take an open and permissive attitude, and try to resolve conflict through exchange of opinions.
Community aspect	Responsibility	Know one’s responsibilities as a member of society, obey social norms, and respect community values.
	Participation	Participate in decision-making and express one’s opinions.

Source: Republic of Korea Phase II case study.

Methods

The study had three components: a literature review, class observations in ten classes in nine schools and interviews with nine principals and 13 teachers.

The literature review was conducted to clarify the concepts and the definitions of the various skills and abilities encompassed by the term ‘transversal competencies’ and under the ‘Key Competencies’ in Character Education. The classroom observations aimed to determine the extent to which transversal/key competencies have been integrated. Table 12 lists the subjects of the observed classes, along with the dates and locations of the classroom observations.

Table 12: Classroom observations in the Republic of Korea

Subject	School Level	Location	Dates	Grade
Science	A Elementary	Seoul	Sep. 2014	6 th
English	J High School	Gyeonggi	Sep. 2014	10 th
English	Y Middle School	Daejeon	Sep. 2014	9 th
English	E Middle School	Pohang	Sep. 2014	8 th
Math	Y High School	Pohang	Sep. 2014	10 th
Social Science	SR Elementary	Goseong	Oct. 2014	6 th
Music and Arts	SR Elementary	Goseong	Oct. 2014	6 th
Music	H Middle School	Gyeonggi	Sep. 2014	8 th
Music	SS High School	Seoul	Sep. 2014	9 th
Music	SG High School	Seoul	Sep. 2014	9 th

Source: Republic of Korea Phase II case study.

As well as observing classes, the researchers interviewed the principal of each school and the teacher of each observed class. The purpose of the interviews was to establish the level of integration at the school policy and plan level, as well as the perceptions of the administrators and teachers on how transversal competencies are integrated into teaching and learning.

Key findings

School policies

According to the data collected through interviews, all of the nine principals recognize the importance of character education. Furthermore, the transversal/key competencies are reflected in school mottos, policies and practices. Most of the school mottos and philosophies seek to encourage creativity, global leadership and character development, as well as happy and peaceful school environments. Each school's philosophy and plans depended very much on the character and leadership of each principal, and how they envisioned the school's motto and character education.

Pedagogies and practices

Most classes had three stages: introduction, development and conclusion. During the introduction, teachers engaged in activities to motivate students, most often by asking questions, showing video clips, reviewing the previous lesson and introducing that day's class-work. Development sections aimed to enable students to solve their own problems through a variety of group

activities, gathering information using the internet or other ICT. The conclusion section of most classes involved students presenting their work, then teachers and students discussed the students' performances and outcomes, which helped the students to develop critical and innovative thinking skills.

Educators' perceptions of transversal competencies

All of the principals regard transversal competencies as important, and when developing the school curriculum and policy, the principals often ask teachers to include these competencies in their lesson plans. Teachers also view these competencies as important and, as seen during the classroom observations, the lessons usually conclude with reflection and discussion time to help students' develop these competencies, e.g. critical thinking skills.

Teacher support and training

Many of the schools incorporate support and training for transversal competencies in their school plans, philosophies and policies. The following examples illustrate how the schools support the integration of transversal competencies into teacher development:

- Teachers opened his/her class for colleagues to observe their lessons and then shared, collaborated and provided feedback on lesson plans.
- Schools held voluntary workshops in which the teachers help to design curricula.
- Teachers organized a book discussion club and it became the teachers' community.
- Teachers obtained the opinions of students and parents as to what would satisfy their individual interests and needs.
- Teachers used new teaching methods, such as Project Learning, which is similar to content- and task-based learning.
- Schools established curriculum committees to improve curricula, involving administrators, directors and teachers.

Assessments

Some of the schools perform class-based evaluations and assessments based on the transversal competencies criteria. According to the findings of the classroom observations and interviews, the methods of evaluation and assessment vary depending on the skills and competencies being assessed. For instance, to evaluate creative problem solving skills and communication skills, schools use methods such as multiple choice tests, essays, report writing, experimental activity assessment, oral assessment, portfolio assessment and observations.

Conclusions

Achievements

The study found that all of the surveyed schools showed an awareness of the 'key competencies' of Character Education. This was observed in the school philosophies and mottos, which aimed to encourage these competencies, and was reflected in the various student-centred teaching methods used at the school level, including by providing students' with the autonomy to form clubs and extracurricular groups, and to organize activities, as well as through the use of ICT in classroom activities. The study also found that teacher collaboration and involvement in the school curricula were instrumental in helping teachers devise appropriate facilitation techniques.

Challenges

While there is great awareness of the 'key competencies' and all the schools are integrating them into class activities, there is a need to improve and enhance teacher training, materials and assessment methods. A better understanding of the competencies is needed, along with better materials to develop these skills, and proper guidance for integrating the skills with appropriate methods. This is reflected in a comment by one of the teachers, who said, 'The biggest challenge I came across in this class is that I was trying to cover all of the five key competencies in one class period'.

Malaysia

Sheela Nair Gopala Nair of the Ministry of Education

Overview

The Phase I study found that transversal competencies are included in the key education policy documents in Malaysia. The National Education Philosophy, which expresses the fundamental principles of education in Malaysia, takes a balanced approach to education, seeking students' development in both academic and non-academic domains. This balanced approach is also evident in the national curriculum.

While transversal competencies are embedded in education policy and curricula in the country, there is no specific term used to refer to this set of skills and competencies. The term 'transversal competencies' has come to refer to elements such as fostering unity and racial harmony by learning to understand, accept and embrace differences; acquisition of leadership skills, including entrepreneurship, resilience, emotional intelligence and communication skills; strong universal values such as integrity, compassion, justice and altruism; and strong ethics and spirituality to enable people to face challenges, resolve conflicts peacefully, use sound judgment and become caring, value-driven members of society.

Methods

The study used three types of data collection methods: face-to-face interviews with 23 participants (nine administrators, seven teachers, and seven parents) using the ERI-Net guidelines; observations in 16 classrooms; and a review of school documents. Eight public schools (four primary and four secondary) from the states of Selangor and the Federal Territory of Kuala Lumpur participated in the study and were chosen based on their school performance band¹¹ and school type. The eight participating schools belong to Band 2 (7 schools) and Band 3 (1 school) categories. Table 13 lists the subjects and grades of the classroom observations.

Table 13: Classroom observations in Malaysia

School Level	School Type	Subject	Grade	No. of teacher observed	Teaching Experience (years)	Duration of lesson (minutes)
Primary	School 1 (national)	English Language	Year 5	1	25	60
		Mathematics	Year 5	1	17	60
	School 2 (Chinese)	Malay Language	Year 4	1	5	60
		English Language	Year 4	1	9	30
	School 3 (Tamil)	Tamil Language	Year 3	1	9	60
		Malay Language	Year 2	1	7	60
	School 4 (national)	English Language	Year 5	1	8	60
		Islamic Education	Year 5	1	19	60
Secondary	School 1 (day school with hostel)	English Language	Form 3	1	24	80
		Mathematics	Form 4	1	5	40
	School 2 (fully residential)	Music	Form 2	1	Trainee	60
		Music	Form 2	1	Trainee	60
	School 3 (day school)	Music	Form 3	1	17	30
		Music	Form 3	1	7	30
	School 4 (day school)	Economics	Form 4	1	2	80
		Accounting	Form 6	1	20	120

Source: Malaysia Phase II case study.

¹¹ Performance band is identified based on the combined school's grade point average from public examination (70%) and scores derived from Standard Quality Education in Malaysia (30%). Band 1 is the highest while Band 7 is the lowest.

Key findings

School policies

The findings of the interviews, the classroom observations and the review of school documents indicated that the surveyed schools are adhering to the National Education Philosophy in terms of integrating transversal competencies into their policies and into classroom practices. The schools and classrooms vary, however, in the degree to which they conform with the ministry's policies on inculcating the desired values and skills in children.

The desired values and skills are incorporated into the teachers' lesson plans as 'moral values' and 'thinking skills'. Some schools have very clearly defined policies, which are evident in their school mottos, while other schools promote these skills and competencies through various school programmes and activities. An example of a school motto that promotes the holistic development of students is 'moulding every student to become a scholar, a sports person and a gentleman (or lady)'. Examples of school programmes and activities that focus on developing moral values and skills is 'Patriotic Month', which is celebrated in conjunction with independence day and Malaysia Day; the '3S' programme (smile, greet, acknowledge); the public speaking (during school assemblies) activity; and prizes for non-academic achievements such as the 'Exemplary Student Award' and the 'Leadership Award'.

Pedagogies and practices

According to the head teachers and senior assistants, the most common activities relating to transversal competencies implemented by teachers are group activities and presentations by students. They felt that these activities provide a platform for students to develop transversal competencies.

The researchers noted in the classroom observations that the majority of the lessons in both primary and secondary schools utilized students' existing knowledge to engage them in discussions related to the topic being taught, although the level of success varied. Teachers used a combination of teacher-led and student-led activities. The activities were teacher-led when teachers explained the objectives of the lesson, read out short-text, gave instructions and asked questions (to stimulate interest and to check student understanding). The most commonly-observed student-led activities were group discussions, presentations and question and answer sessions.

The ideas and resources for the lessons were obtained mainly from the teacher's own collections, peers, the internet and workbooks. Some teachers had established networks with other schools to discuss ideas for lessons. The researchers deduced from the observations that the integration of transversal competencies took place in an indirect manner because most teachers were not making a conscious effort to refer to these competencies.

Educators' perceptions of transversal competencies

Some of the school heads who participated in the study felt that transversal competencies were already reflected in their school policies and curricula and were being integrated indirectly in the classroom. Some teachers and school heads perceived values and skills as distinct elements that need to be taught separately to the lessons given in the classroom. And many felt that these skills are inculcated more effectively during co-curricular activities outside the classroom. Some participants perceived that schools play a prominent role in fostering transversal competencies but that the responsibility has to be shared with parents. Several of the teachers and school heads felt that the real benefit of integrating transversal competencies into school education would only manifest itself through students' actions years after they leave school. Therefore, these participants felt that it was premature to measure the students' transversal competencies while they were still in school.

Teacher support and training

Some school heads expressed concern over teachers' lack of knowledge and competence regarding how to develop students' transversal competencies. Some teachers and school heads also felt that part of the problem faced by teachers was the lack of focus on transversal competencies during their training, and some teachers noted that these skills were not specifically mentioned during their training.

Assessments

Teachers expressed that since they had no specific tools for assessing transversal competencies, they needed to use different means to assess their students' non-academic attributes. Some schools had created their own system of assessment by incorporating components of transversal competencies into students' progress reports for individual subjects, where students are graded (A – D) in terms of their participation in class, attitude and interest in the subject, application skills and effort, with an overall remark based on the student's performance. Assessment of students is generally based on observations during classroom activities such as group assignments and presentations, which give teachers an opportunity to evaluate students' critical and innovative thinking skills and interpersonal skills.

Conclusions

Achievements

The surveyed teachers generally agreed that transversal competencies are a vital part of the education system and should be developed by teachers during their lessons. In the classroom, integration and development of values and skills takes place largely during classroom discussions and activities such as group work, group or individual projects, presentations and interactive sessions among students and between students and teachers. Some subjects and topics tend to provide more opportunities

than others for teachers to develop students' values and skills. In some subjects, teachers were able to use more overt approaches such as asking thought-provoking questions to stimulate students' interest, while at the same time inculcating values.

Generally, the inculcation and development of skills and values are evident in all of the student-centred lessons observed by researchers, regardless of students' ethnicities and genders. The researchers felt that every student was given equal opportunity to participate in classroom activities. The participants felt that the newly launched standard based curriculum for primary schools (the 'KSSR') provides better opportunities than the previous system for the development of values and skills, since it is more student-centred.

Challenges and recommendations

Most of the administrators were satisfied with the teachers' abilities to instil values and skills in students, but they felt there were challenges that limited the fostering of these values and skills, such as large class sizes, lack of creativity among teachers and the teachers' heavy administrative workloads. Teachers likewise cited the heavy administrative workload as an obstacle to developing transversal competencies and also pointed to the overloaded curriculum as a key concern. Other challenges noted by teachers as limiting the development of transversal competencies included the difficulty in striking a balance between the delivery of content knowledge and the development of values and skills in the classroom, and the absence of a reliable and objective mechanism to assess students' transversal skills.

Some school heads and parents were sceptical about the teachers' ability to assess transversal skills and argued that the current assessment tool is subjective and lacks transparency.

One of the recommendations put forth was to conduct in-service courses to expose teachers to the mechanics of assessing transversal competencies. Participants also called for a reduction in the number of subjects taught in schools, in order to have more class time for the integration of transversal competencies. There was also a call for schools and institutes to put more emphasis on students' achievements in non-academic areas, so as to encourage parents to pay more attention to the development of transversal competencies at home.

Mongolia

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Overview

The Phase I study found that there are no specific policies or plans that are specifically aimed at the promotion of transversal competencies in Mongolia. The study also found, however, that a number of policy documents (e.g. the 'Upright Mongolian Child' programme) include several of the transversal competencies that are listed in the ERI-Net framework. The Phase II study looked at the actual integration of transversal competencies into classroom practices.

Methods

The researchers issued the ERI-Net questionnaire to 28 school principals and 73 teachers, with equal representation from both rural and urban schools, and conducted a desk review of school documents along with follow-up interviews with some school administrators and teachers (as supplementary information sources). A modified questionnaire was administered to 15 policy-makers: officers from the Ministry of Education and Science of Mongolia (MOES), who are responsible for various aspects of primary and secondary education, as well as experts from the Institute of Educational Research.

Key findings

The study found that school curricula in Mongolia provide some space for nurturing transversal competencies, and the development of these skills is given a high priority in some school development plans. However, in general, the policies and programmes that sought to introduce transversal competencies in schools were not fully complied with. As a result, schools still emphasize cognitive skills and classrooms still feature teacher-centred practices, which are not favourable for developing transversal competencies.

School policies

Policy-makers indicated that the subjects titled 'citizen education' and 'project work' allow for the development of students' non-cognitive skills. The 'citizen education' course is taught in all grades in order to cultivate students' respect and care for national customs, traditions and values, as well as to enhance their collaborative and humanistic attitudes. In the same manner, other elective subjects can also be used to develop non-cognitive skills. The government programme, 'Upright Mongolian Child', reflects many transversal skills in its main objectives. In particular, its sub-programme, 'talent', requires teachers and schools to pay more attention to the development of individual specific talents, including many transversal competencies.

Three quarters (77 per cent) of principals and 86 per cent of teachers indicated that they have a school development plan and that the majority of teachers were involved to some extent in its preparation.

Pedagogies and practices

Transversal competencies are included to some extent in the reformed curriculum and through the 'Upright Mongolian Child' programme, and this has resulted in changes to how teachers implement the new curriculum. Some of the responses indicated that teachers now use more 'active' methods to encourage independent thinking, problem solving and creativity. Others indicated an increase in the use of ICT in lessons. Regarding ICT training, the respondents felt that appropriate guidelines had been developed and relevant training had been conducted for teachers and education managers so as to increase the use of ICT and group activities under the new curriculum.

Educators' perceptions of transversal competencies

The majority of principals and teachers felt that the learning of transversal competencies is an essential part of students' education and that it should be a formal part of the school policy. Both principals and teachers also felt that the school has the primary responsibility for developing students' transversal competencies and students have adequate opportunities to learn these competencies. The majority of the principals claimed that teachers are much better now in involving students in classroom activities than in the past.

The researchers found that teachers feel that collaboration between students, developing innovative ideas, constructive participation in discussions, logical presentations of their own opinions and building their own opinions are more important than other transversal competencies, such as critical analysis of information and understanding subject matter content.

The majority of teachers and principals felt that the recent reforms to integrate transversal competencies has resulted in positive changes among students. Principals saw positive changes in students' application skills and teamwork and collaboration skills, while teachers also observed improvements in students' self-motivation skills.

Teacher support and training

More than three-quarters (85 per cent) of teachers reported they had received training on transversal competencies, compared to only 65 per cent of principals. Teachers also reported receiving more comprehensive training than principals. Teachers identified 'discussions with colleagues' as the most effective teacher training method.

Regarding factors that positively influence the teaching of transversal competencies, school principals felt that support from the parents is the most influential factor, while teachers selected 'teachers' commitment'. Both principals and teachers felt that school leadership is the least influential factor.

Assessments

A majority (85 per cent) of teachers felt that the current system for assessing transversal competencies is appropriate, although teachers' views differed regarding the degree to which it is appropriate. Among the teachers who felt the system is appropriate, 61 per cent felt that it is 'appropriate to some extent' while 34 per cent felt it is 'slightly / a little appropriate'. Given that a large proportion of the teachers are not fully satisfied with the assessment system, there is a need to improve assessment practices.

Conclusions

Achievements

The study found that the school curriculum provides some space for nurturing transversal competencies in students. In particular, the respondents felt that subjects such as 'project work' and 'citizen education', which are organized at the local and school levels, can be used to develop non-cognitive skills. Moreover, a government programme called 'Upright Mongolian Child' places great emphasis on the promotion of many non-cognitive skills. The study also found that some schools emphasize the development of transversal competencies as their main mission and policy. Furthermore, the majority of schools have school development plans and teachers often participate in their development. School principals and teachers feel that their school development plans highly prioritize the development of competencies such as teamwork/ collaboration, communication, creativity, compassion and self-discipline.

Challenges and recommendations

The study identified a lack of awareness among parents and community members of the importance of transversal competencies as being a particular challenge to developing students' transversal competencies, along with the lack of practical guidelines and instructions on how to integrate and develop these competencies within the existing curricula and subjects. The materials related to transversal competencies are scarce and schools continue to emphasize academic achievement. Furthermore, the lack of clear definitions of these non-cognitive skills creates some confusion among educators and teachers.

To address these challenges, the researchers suggest that the ministry of education and policy makers urgently reach a consensus on the definitions of the various transversal competencies. In addition, the researchers recommend that educators develop indicators for measuring programme and policy objectives, so as to facilitate the integration of transversal competencies into the classroom. In addition the local education authorities should develop indicators relating to the integration of transversal competencies into education practice and organize regular training workshops on transversal competencies for teachers and school heads. The Mongolian State University of Education (MSUE), teacher training institutions and the Institute of Education could consider developing practical guidelines and instructions on how transversal competencies can be integrated into the teaching-learning process.

Philippines

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Overview

The findings of the Phase I study indicated that transversal skills are embedded in education policies and that the education system emphasizes the acquisition of transversal skills for the holistic development of learners. In addition, the study found that the government's direction regarding integration of transversal skills is clearly stated in both past and recent curricular reforms of the K to 12 curriculum. The Enhanced Basic Education Act of 2013 fully supports the integration of transversal competencies as it seeks to 'create a functional basic education system that will develop productive and responsible citizens equipped with the essential competencies, skills and values for both lifelong learning and employment.'

The Phase II study examined whether transversal competencies such as critical and innovative thinking, interpersonal and intrapersonal skills, global citizenship skills, ICT and media literacy, health skills and religious values are clearly articulated, expressed and developed in actual teaching practice at the school level.

Methods

The researchers used the ERI-Net questionnaire, which was administered to 73 randomly-selected teachers and 43 randomly-selected principals in 42 government and private schools in Manila and in selected provinces in southern and northern provinces and cities.

Key findings

School policies

The combined responses of teachers and principals indicate that transversal competencies are reflected in school policies. A slight difference can be observed, however, between teachers and principals regarding which transversal skills are most evident in school policies. Teachers selected media and information literacy skills as the skills that are most evident in school policies, while the principals identified interpersonal skills. Global citizenship skills were ranked as the least evident skills by both groups, which suggests a need to strengthen its articulation in school policies.

Pedagogies and practices

According to the survey respondents, teachers have become better at involving their students in lessons and take more initiative in classroom activities since the introduction of new school policies. Moreover, the researchers observed that teachers exhibited a sense of pride in being part of the school, were more motivated in performing their tasks and interacted more with parents and the community. These observations imply that teachers have decided to take the responsibility of modelling the competencies they teach.

Educators' perceptions of transversal competencies

The teachers perceive all seven teaching approaches (lectures by teachers, small group discussions, group projects and presentations, individual projects and presentations, computer-aided activities, field studies and extracurricular activities) as being effective to some extent. Group projects ranked first, followed by small group discussions and computer-aided activities, while field studies were ranked in the lowest position, which may be due to this method being time consuming and taxing for teachers. Group projects, small group discussions and computer-aided activities are viewed as being appealing to students because they allow group interaction, they bring creative ideas to the fore and they are engaging and pleasurable.

According to teachers, 'teachers' commitment', school leadership, students' interest and support from parents are the key enabling factors that very much influence the teaching of transversal competencies.

Teacher support and training

The majority of respondents from both groups (teachers and school heads) found teacher trainings inadequate, being given only one or two times per semester. Lectures by specialists and discussions with colleagues were listed as the most common modalities used in teacher training, while model classroom presentations and online learning were rarely used. The teachers felt a need for additional training to boost their competence in teaching transversal competencies and to increase their level of mastery on both the topic content and pedagogies.

Assessments

The majority of the respondents felt that the assessment instruments being used were appropriate 'to some extent' for measuring students' development of transversal competencies. Moreover, both standard instruments, such as personality tests, as well as informal assessment tools were available to measure students' transversal competencies. Generally, teachers were also provided with official and unofficial guidelines and standards to assess students.

Conclusions

Achievements

The Phase II Study found various levels of integration of transversal competencies into schools, depending on the subject. For instance, transversal competencies are regularly directly integrated into Edukasyong Pagpapakatao (values education) and Araling Panlipunan (social studies). Moreover, schools integrate transversal competencies through extracurricular activities designed to develop students' social skills, which are also a type of transversal competency.

Challenges

Some of the challenges that need to be addressed to ensure students' develop transversal skills effectively are the lack of clarity in the definitions of transversal competencies, resulting in a lack of a common understanding of the concept; a lack of specific transversal competencies for the particular country context (i.e. disaster risk reduction and conflict reduction) such as resiliency, creative decision-making, compassion, peaceful coexistence, spirituality and related values; lack of assessment tools and strategies to determine the extent and level of students' development of transversal competencies; and absence of a coherent framework for integrating all of the transversal competencies into the overall basic education framework and into education programmes and activities.

Recommendations

Although education policies in the Philippines accommodate transversal competencies, it is necessary to re-examine curriculum strategies so that appropriate interventions may be implemented to facilitate the integration of these competencies. Moreover, a larger budget may be required to facilitate this process. The researchers also recommend conducting further study on the transversal competencies that are currently ranked as having low significance (e.g. intrapersonal skills), and on assessment strategies and relevant pedagogies. It is also recommended that students' and parents' perceptions on the subject matter, as well as those of other stakeholders in the community, be sought to ensure future strategies for the integration of transversal competencies are effective.

Thailand

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Overview

The study investigated Thailand's integration of transversal competencies in six schools across the country. It examined the national policy and the policy of each school regarding the integration of transversal competencies, as well as the actual practice of teaching in six classrooms.

Thailand has three key elements related to transversal competencies in its national education policy. First, the aim to develop learners' life skills. Second, the emphasis on, and promotion of, lifelong learning. Third, the application of King Bhumiphol Adulyadej's Sufficiency Economy Philosophy.

In the Thai education context, the closest concept similar to 'transversal competencies' is what is known in Thai as 'Thaksa Cheewit' or 'Life Skills'. According to the Office of the Basic Education Commission, these skills have been integrated into the national curriculum and are categorized as follows:

1. Self-awareness, self-respect, and consideration
2. Critical thinking, decision-making, and creative problem solving
3. Emotion and stress management
4. Interpersonal relationships

In addition to life skills and lifelong learning, Thai education has designed its national curriculum around the principles of the Sufficiency Economy Philosophy, which has three pillars: 'moderation, prudence and social immunity'. This encourages people to use knowledge and virtue as guidelines in living. Educationally, it also places a high value on critical thinking skills, perseverance and compassion (Chaipattana Foundation, 2014).

Data from the six classroom observations revealed that transversal competencies are only integrated into classrooms at a low level. The main teaching approach is still teacher-centred, and students are given few opportunities to express their opinions. However, the researchers noted that transversal competencies are significantly manifested in extracurricular activities (outside the classroom), especially the implementation of 'life skills' and the applications of the sufficiency economy principles.

Methods

The study was conducted via six school visits. The six schools were selected based on the simple random sampling method, seeking to sample as many regions of the country as possible. The schools included both primary and secondary schools. Data was collected via four means: interviews with six school administrators; observations in six classrooms, ERI-Net questionnaires (distributed to teachers and school heads); and analysis of school documents. The researchers translated the questionnaires into Thai and modified some items to suit the Thai context. The data collection took place between July and August 2014.

Key findings

School policies

The study found that all of the six schools covered in the study had integrated transversal competencies into their policy and strategic documents. Furthermore, the study observed that the school mottos reflect the schools' aims to develop students' academic skills and their transversal competencies. The school mottos are listed in Table 14.

Table 14: School mottos (Thailand)

School	Motto
NOF Primary school	Virtue, Academics, Health
TTD Primary school	Friendliness (Smiles), Good Thinking, Virtue (Salam)
BOD Secondary school	Desirable Characters and Knowledge
CYP Secondary school	Academic Excellence, Excellence in Sports, Virtue
NSM Primary school	Discipline, Knowledge, Virtue
PHK Secondary school	Knowledge, Discipline, Sportsmanship, Heroic Sacrifice

Source: Thailand Phase II case study.

Pedagogies and practices

The classroom observations found that the traditional teacher-centred approach dominated. The teachers directed the class and provided little opportunity for discussion among students and few chances for them to reflect on ideas and formulate questions. Table 15 provides a summary of the observations in relation to the five domains of transversal competencies.

Table 15: Analysis of teaching practices in Thailand

Domains	Level of opportunity to develop this domain
Critical and innovative thinking	Low: Few opportunities to discuss and share ideas. Few 'why' questions, mostly teacher lectures.
Interpersonal skills	Low: Little intra-group and inter-group interaction.
Intrapersonal skills	Low: Few opportunities to develop these skills.
Global citizenship	Low: No teacher directly mentioned global citizenship behaviour.
Media and information literacy	Very low: No use of ICT in class.

Source: Thailand Phase II case study.

Educators' perceptions of transversal competencies

Administrators' perceptions

Most of the surveyed principals and administrators felt that teaching of transversal competencies should be a formal part of the school policy and that learning of transversal competencies is an essential part of student learning. School administrators rated the following competencies: environmental awareness, tolerance, conflict resolution and computer literacy as being essential for their students to learn. They felt that teaching of transversal competencies was given sufficient attention in their schools and that their students had adequate opportunities to learn these competencies at school.

Teachers' perceptions

Most teachers had seen positive changes in their students across the competencies as a result of the recent reforms to integrate transversal competencies into education. Three areas were significant: conflict resolution, self-discipline and perseverance.

Of the 29 teachers, 16 (55 per cent) felt that teaching of transversal competencies should be a formal part of the school policy and more than half of the respondents perceived that transversal competencies were an essential part of student learning. Most felt that the teaching of transversal competencies was given adequate attention in their schools. Nineteen respondents (90 per cent) felt that extracurricular activities were effective 'to some extent' or 'very' effective in helping students develop transversal competencies. Small group discussions were ranked as being more effective than lectures as a method for developing students' transversal competencies.

Teacher support and training

Almost half of the respondents reported that they had received very little training or no training at all in understanding what transversal competencies are. Only around one third (35 per cent) said that they had received training or support for integrating transversal competencies into education. More than half (58 per cent) of the teachers reported receiving very little to no training on

integrating transversal competencies. Those who had received training noted that the main methods for training were (in order of frequency): field studies, lectures by specialists, guides and materials, and discussions with colleagues.

Assessment

When asked about methods to assess transversal competencies, most teachers responded that the current assessment methods they used were fine. Over three-quarters (82 per cent) of the teachers reported that their schools had official guidelines and standards to assess the students' transversal competencies. Over one third (39 per cent) noted the availability of unofficial guidelines and standards to assess students' transversal competencies. The researchers' review of school documents and their discussions with administrators found, however, that criteria for assessing transversal competencies were not clearly stated in the schools' policy documents.

Conclusions

Achievements

Thailand has well-developed national-level policies that promote the development of 'life skills' (i.e. transversal competencies). The schools involved in the study spent a great deal of energy and effort on extracurricular activities as a means of developing the students' transversal competencies, including their moral qualities and social skills. The school administrators also emphasized the close cooperation between their schools and the local communities, which served to enhance students' life skills.

Challenges

The observations in the six schools found a large gap between policy and practice. None of the observed lessons and teaching methods indicated that transversal skills are being integrated into the curriculum. The researchers concluded that school administrators and teachers have not been adequately prepared to understand transversal competencies and the ways to integrate them into teaching and learning.

When teachers were asked what prevents them from effectively integrating these competencies into the classroom, the teachers cited the education system's emphasis on academic achievement. They also noted that the lack of clarity in the definition of transversal competencies was an obstacle.

The teachers and administrators felt that they needed more training opportunities, especially training on teaching methods for developing students' transversal competencies. They also felt there is a need to integrate these skills into the curriculum and to provide teachers with appropriate instructional materials.

Viet Nam

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Overview

Viet Nam did not participate in the Phase I study, and therefore the Phase II study served to investigate the degree to which transversal competencies are integrated into the national curriculum and education policy. Overall, this study investigated the integration of transversal competencies into schools across Viet Nam. It reviewed the national policy and the policy of each school as well as the actual practice of teaching in classes.

The researchers focused on two of the domains of the ERI-Net transversal competencies framework: 'critical and innovative thinking' and 'Global Citizenship Education', which reflect the needs and priorities of Vietnamese society today. As mentioned in a World Bank development report (2013), for future success it is imperative that the Viet Nam labour force be equipped with critical and innovative thinking skills. The researchers selected Global Citizenship Education because the Education for All goal 5 sought to ensure learners gain the knowledge, skills and values required for sustainable, peaceful societies through global citizenship education (GCED) and education for sustainable development (ESD).

Methods

The researchers conducted a desk study of national education policies, strategies and curricula, along with observations at four primary schools in various regions across the country. Two of the schools were Global Partnership for Education – Viet Nam Escuela Nueva (GPE-VNEN) project schools. The other two were not part of the VNEN model, but consciously chose to follow similar objectives. At each school, the researchers observed a classroom lesson and interviewed selected education managers, teachers and students. The teachers and students were also given a questionnaire. The questionnaire was a modified version of the ERI-Net questionnaire and was distributed to 113 teachers and 309 students at the four schools.

Key findings

The review of the documents found innovative objectives, curriculum content and teaching methods that focus on developing students' creative thinking. However, there was lack of clear definitions and these competencies are not emphasized in classrooms. The emergence of the GPE-VNEN project has encouraged reform in the pilot project schools and beyond, however. The project, which has expanded in recent years, has led to changes in content and in approaches to teacher training and assessment methods. Therefore, through this programme, transversal competencies are being taught or incorporated into classroom lessons to some extent.

National and school policies

At the policy level, Resolution No29-NQ/TW (2014) aims to 'educate Vietnamese in holistic development and promote the best potential creative abilities of each individual; to love one's family, love the motherland, love the people; and live healthily and productively'. The resolution seeks to bring about improvements in the quality of education by attaching importance to educating learners about character, ethics, lifestyles, law and civic consciousness; focusing on the basic values of Vietnamese culture and tradition, the 'cultural essence' of humanity; and emphasizing the use of ICT, practical skills and the capacity to apply knowledge in real life situations, while also developing creativity and self-learning skills and promoting lifelong learning.

Under the direction of the Viet Nam Ministry of Education, transversal competencies (critical and creative thinking, global citizenship education) have been implemented in various primary education strategies, including:

- Establishing a positive and friendly environment for teaching and learning.
- Developing and providing information resources to enhance transversal competencies in schools.

This is noted in the Ministry's recent 'Guidelines on the implementation of primary education mission of the school year 2014-2015', which seeks to develop 'friendly schools and active students', focusing on moral education, life skills and encouraging students to propose measures to promote clean, green and beautiful schools and classrooms; as well as learning about traditional culture and heritage at school.

The study found, however, that clear explanations of transversal competencies are yet to be fully developed in education policies. This is evident in the lack of unity, clarity and purpose regarding 'critical thinking' and 'global citizenship' in the curriculum. As a result, schools lack clear guidance and teaching methods to integrate these skills into teaching and learning.

Pedagogies and practices

While there are no specific documents related to 'critical thinking' or 'global citizenship', teachers' syllabi reflect some consideration for developing students' transversal competencies. The researchers examined the syllabi of the following subjects: science, Vietnamese, mathematics, English and ethics/lifestyles.

The teachers encouraged the development of transversal competencies through asking questions, requiring students to work in groups, and solving problems through role play. Furthermore, teachers combined teacher-centred presentations with student-centred activities, such as group teamwork, individual activities, self-study textbooks and question-answer sessions in which students were asked to answer questions using logic and asked to defend their views. In the GPE-VNEN model schools (see Box 3), the teachers often divided their classes

into groups and the students studies lessons in the groups while the teachers' provided active assistance. Students thus had many opportunities to work in groups, as well as individually, and to get assistance from the teachers when needed. Teachers are aware that if they organize many activities, using a variety of teaching methods, and make the activity or lesson applicable to real world situations, they can help students improve their transversal competencies and demonstrate their abilities.

Educators' perceptions of transversal competencies

Through the discussions with teachers and from the responses to the questionnaires, the researchers found that teachers are aware that transversal competencies are beneficial and that students' competencies can be developed through certain subjects. Most teachers felt that activities that encourage student curiosity or support students to present their ideas and discuss them in small groups are important for enhancing 'critical and innovative thinking competency' among students. In addition, most of the surveyed teachers felt that organizing activities within the community is important for enhancing global citizenship competency (i.e. awareness of global problems, respect for the environment and understanding of human rights).

Teacher support and training

None of the teachers who were interviewed or responded to the questionnaire reported having attended any professional or pedagogical skills-development training related to the two transversal competencies: critical and innovative thinking and global citizenship. In addition, the procedures for integrating transversal competencies into teaching and learning were not explicitly mentioned in any guidance documents the teachers had received. Nevertheless, the teachers have developed some activities to integrate these competencies into lessons, for example by providing diverse learning activities and by increasing the extracurricular activities. However, the teachers feel it is necessary to have specific guidance or directions for schools and teachers so as to develop students' transversal competencies effectively.

Assessment

As with the curriculum, no explicit method was noted for assessing transversal competencies. When asked how they normally evaluate and assess students with regard to critical thinking, many teachers responded that they ask learners to solve problems using written tests and then evaluate their written work. To assess global citizenship skills, they ask students to give music and singing performances, and they also evaluate students' participation in community activities.

Conclusions

Achievements

There is growing awareness at both the national and school levels of the importance of transversal skills. National policies and curricula are starting to reflect and include terms related to these competencies and to the strategies necessary for their development. Currently, however, these competencies are more implicit than clearly defined.

The responses to the questionnaires indicate that both teachers and students are aware of the importance of transversal skills. In addition, teachers, despite the lack of clear guidance in the curriculum or training, indicated that they are able to vary their lessons to develop students' critical thinking skills and global citizenship education to some extent. The VNEN model schools provide a good example of how to implement some of the teaching strategies involved in developing these competencies.

Challenges

A lack of clarity persists with regard to the definitions and methods of implementation of transversal competencies. While awareness is growing, clearer definitions are needed and strategies must be developed to reform the curriculum, policy and teaching practices. Such efforts should include further enhancing the awareness of managers, teachers, students, parents and the community about the value of transversal competencies. For teachers to be able to teach these competencies in practice, these competencies need to be clearly delineated in the curricula (objectives, programme content, teaching methods, student learning outcomes and assessment), for all levels. Teachers need to be trained to understand these concepts and to master the appropriate pedagogies so as to have the capacity to develop students' transversal competencies.

Annex B: Phase II research framework

1. Objectives of the research

Overall objective: Contribute to national education reforms for enhancing education policy and practice towards improved learning and holistic development of individuals.

Objectives of Phase II:

- Collect and analyze best practices of nurturing transversal competencies in schools from selected countries/economies in the region.
- Identify emerging trends, current practices and bottlenecks relating to integrating transversal competencies in teaching and learning.
- Facilitate experience-sharing and build a knowledge-base on the integration of transversal competencies into education to support evidence-based policy making and implementation.

2. Regional context and rationale for the research

Many countries in the Asia-Pacific region are increasingly emphasizing the importance of integrating the formation of transversal competencies into schools so as to help develop students in a more holistic manner. This issue is particularly relevant in the Asia-Pacific region where many education systems have focused on the acquisition of knowledge and academic skills. This bias towards knowledge and academic skills is expressed in the strong focus on high-stake exams and on performance in international academic assessments. It is within in this context that UNESCO Bangkok's ERI-Net launched a regional study on 'Integrating Non-cognitive/Transversal Skills in Education Policy and Practice' in 2012. The first phase of the study focused on generating a broad overview of how countries and economies in the Asia-Pacific region define transversal competencies and how they integrate them into their education policies and curriculum frameworks. Ten countries and economies¹² participated in Phase I of the study and preliminary findings were shared at 2013 ERI-Net annual meeting (17-19 October 2013).

The participants in the Phase I study agreed that although there is a considerable variation between the countries and economies, all of them viewed the integration of transversal competencies as critical in their recent education reforms. These reforms are driven by various factors, including economic (e.g. improving the employability of the students), social (e.g. reducing academic pressures) and humanitarian (e.g. improving character development).

¹² Japan, Malaysia, Mongolia, Republic of Korea, Hong Kong (SAR China), Shanghai (China), India, the Philippines, Australia and Thailand

At the 2013 ERI-Net annual meeting, the participants discussed the direction of Phase II of the research. In particular, the participants expressed the need to identify ‘what is happening in the classroom’, since many case studies in Phase I revealed a gap between education policies that promote integration of transversal competencies, and what is actually taking place in school. Exploring this research area was seen as important in building a solid knowledge base on this relatively ‘young’ topic, so as to inform international debate.

3. Expected outputs

- a) A compilation of best practices in integrating transversal competencies into education practices.
- b) A regional synthesis report documenting emerging trends, achievements and bottlenecks, and policy implications derived from analysis of the country/economy cases.

4. Revised conceptual framework of transversal competencies

The analysis of the Phase I studies confirmed that the conceptual framework of transversal competencies used in the study matched most of the skills, competencies, values and attitudes that are considered important in the participating countries and economies. On the other hand, most of the Phase I reports mentioned the importance of ICT, which was not included in the Phase I research framework. Thus, for Phase II one domain (ICT/media literacy) was added to the conceptual framework of the transversal competencies, as shown in the table presented here.

Domains of transversal competencies	
Domains	Examples of key skills, competencies, values and attitudes
Critical and innovative thinking	Creativity, entrepreneurship, resourcefulness, application skills, reflective thinking, reasoned decision-making
Interpersonal skills	Communication skills, organizational skills, teamwork, collaboration, sociability, collegiality, empathy, compassion
Intrapersonal skills	Self-discipline, ability to learn independently, flexibility and adaptability, self-awareness, perseverance, self-motivation, compassion, integrity, self-respect
Global citizenship	Awareness, tolerance, openness, responsibility, respect for diversity, ethical understanding, intercultural understanding, democratic participation, conflict resolution, respect for the environment, national identity, sense of belonging
Media and information literacy	Ability to obtain and analyze information through information and communication technology (ICT), ability to critically evaluate information and media content, ethical use of ICT
Others	Skills and competencies as defined by countries/economies

5. Research questions

Overarching questions

- a) What are some examples of integrating and applying transversal competencies in practice at the school level in the Asia-Pacific region?
- b) What are the enablers of integrating transversal competencies in schools?
- c) What are the lessons learned?

Country/economy case study questions (the proposed scope of this research is general school education, referring to primary and secondary education)

(For those who are participating from Phase II)

a) Policy review on transversal competencies in the education system

- What is the rationale behind integrating transversal competencies into education in your country/economy?
- What skills and competencies are considered important in education policies in your country/economy?
- Is the concept of transversal competencies clearly elaborated in the education policy (e.g. vision, mission, goal, and objective) of your country/economy? How so?
- What are the overall approaches and desired outcomes of such integration of transversal competencies into education, according to the policy documents?
- Are there specific policies, plans or projects on the integration of transversal competencies? If so, please describe.

b) Curriculum framework

- Has your country/economy had reforms aiming at integration of transversal competencies into curricula? If so, please describe.
- How do the curriculum frameworks of your country/economy define learning objectives in regard to the transversal competencies?
- Are there any specific subjects to nurture transversal competencies? Which domain(s) of transversal competencies are covered in the learning objectives of these subjects and what are the recommended pedagogical approaches (if any)?
- How are the transversal competencies integrated into regular subjects (e.g. mathematics, science, languages)? Which domain(s) of transversal competencies are covered by the learning objectives of these subjects and what are the recommended pedagogical approaches (if any)?
- Are there any directions/incentives or programmes that encourage teachers to develop transversal competencies in their students? If so, please provide details.
- What are other approaches or opportunities suggested in the curriculum (if any) to help students develop transversal competencies

(e.g. assemblies, special events and enrichment programmes)?
(For all researchers)

c) Roles of school in fostering transversal competencies

- What are the schools' expected roles in fostering transversal competencies?
- Who is considered most responsible for fostering transversal competencies in children? Who are the others? What are others' roles and responsibilities?

d) School policies and school practices

i) School policies

- Is the national policy on fostering transversal competencies reflected in school mottos, plans and policies? If so, how?
- To what extent are teachers participating in the school planning process in relation to integration of transversal competencies?

ii) Pedagogy (including time allocation, a pace of teaching and teaching foci)

- To what extent are teachers able to carry out the intended curriculum for teaching transversal competencies?
- How do teachers use/pace their course time for teaching transversal competencies?
- How are transversal competencies taught in the classrooms?
- What are teachers' foci when they teach transversal competencies?
- How do teachers utilize extra curricula/outside-classroom activities for teaching transversal competencies?

iii) Assessment

- What are the measures for assessing transversal competencies?
- What tools are available for teachers to assess students' transversal competencies?
- Are students' behaviours considered in the overall assessment of individual students?

e) Perception towards school practices

i) School principals and teachers

- How do school principals view teaching transversal competencies in

their schools? What concerns do they have?

- How do teachers view teaching transversal competencies in their classrooms? What concerns do they have?
- How do teachers view teaching transversal competencies outside of their classrooms (e.g. extracurricular activities)? What concerns do they have?
- Have there been particular changes in students in terms of their transversal competencies since the reforms? If so, please describe.
- Have there been particular changes in teachers' attitudes towards transversal competencies? If so, please describe.
- Have there been particular changes in your teaching philosophies? If so, please describe.
- How do school principals assess their teachers' performance in teaching transversal competencies?

ii) Parents and community members

- What do parents expect of schools with regard to nurturing transversal competencies in their children?
- Among the spectrum of transversal competencies (please refer to the list of skills and competencies articulated in your policy documents. If not available, please use the conceptual framework provided in this research), which are considered most important by parents and community members?

f) Teacher support/training

- Are there specific supports or trainings for teachers to learn how to teach transversal competencies? If so, please describe.
- How do school principals feel about the current supports/trainings for teachers to learn how to teach transversal competencies?
- How do teachers feel about the current supports/trainings for them to learn how to teach transversal competencies?
- Do the schools have any good practices of teacher training in relation to teaching transversal competencies? If so, please describe.

g) Achievements and challenges

- What are some successful/proven teaching approaches to help students develop transversal competencies?
- What are other successful factors for teaching transversal competencies at the school level?

- What are the potential bottlenecks in introducing transversal competencies at the school level?
- Are there 'gaps' between education policies/curriculum and practices at the school level? If so, please describe.
- What would you suggest to the government as means of strengthening the integration of transversal competencies into education? This could be in terms of policy, curriculum, pedagogy, assessment or other areas.

h) Additional areas

Countries/economies are encouraged, as they deem ready, to select additional area(s) that are pertinent to the country/economy context in which to further investigate the integration of transversal competencies into education policy and practice. These areas could include learning/teaching materials, detailed case studies of innovative schools and/or comparative analysis with the innovative schools and sampled general schools. Research questions will be at the discretion of the concerned country/economy.

6. Suggested outline of the country/economy case studies

- a) Policies and strategies on the integration of transversal competencies into education (3-5 pages: revisiting Phase 1)
- b) Analysis of national curricula in relation to integration of transversal competencies into education (3-5 pages: revisiting phase 1)
- c) Analysis of school related documents from the sampled schools in relation to teaching transversal competencies (5 pages)
- d) Analysis of classroom practices (15-20 pages)
- e) Additional areas (optional – 10 pages)
- f) Achievements, challenges and recommendations (5 pages)

7. Proposed data collection and analysis

For the research questions 1-2 (policy and curriculum review, for those participating from Phase II), the proposed data collection and analysis methods include: (1) review of policy documents (e.g. the constitution, national development plans, education sector plans, education laws and other policies), curriculum framework and related instruments; and (2) interviews with policy-makers.

For answering the rest of the questions, researchers are expected to use a case-study method. It may include: (1) review of the sampled schools' implementation/management related documents (e.g. annual development plans, timeslots, organization trees, evaluation system and other related documents); (2) classroom observations in sampled schools; (3) stakeholder interviews; (4) focus group discussions; and (5) survey questionnaires. Each

participating researcher is expected to select five to ten schools to demonstrate good practices of integration of transversal competencies at the school level. The selection process of the sampled schools should be documented in detail in the report.

8. Expected outcomes and timeline

- Finalization of the research framework (April 2014)
- Draft country/economy report (31 October 2014)
- ERI-Net meeting to share the research findings and identify areas for further research (24 November 2014 - tentative)
- Finalization of the country/economy reports (31 January 2015)
- Regional synthesis report (April 2015)

Annex C: Questionnaire for school principals

This questionnaire was developed to facilitate data collection for an Asia-Pacific regional study on 'Integrating Transversal Competencies into Education Policy and Practice' being conducted by ERI-Net in 2014.

The questionnaire asks for information including:

- School background (e.g. size, location, and level/grade)
- School policies and classroom practices
- Principals' perceptions of the integration of transversal competencies in the classroom
- Teacher support and assessment

This questionnaire should be completed by the principal or his/her designate. It should take approximately 30 minutes to complete. Please answer all questions. If you do not know the precise answer to a question, your best estimate will suffice. Please use additional sheets of paper if you have any additional comments.

The information collected through this questionnaire will be kept confidential and will be used solely for the purpose of the research.

Background

Many countries in the Asia-Pacific region are increasingly emphasizing the importance of integrating the formation of transversal competencies into schools in order to help develop students in a more holistic manner. This issue is particularly relevant in the Asia-Pacific region where many education systems have focused on the acquisition of knowledge and academic skills. This bias towards knowledge and academic skills is expressed in the strong focus on high-stake exams and the performance in international academic assessments. It is in this context that UNESCO Bangkok launched a regional study on 'Integrating Transversal Competencies in Education Policy and Practice' in 2012. The first phase of the study focused on generating a broad overview of how countries/economies in the Asia-Pacific region define the concept of transversal competencies and integrate them into their education policies and curriculum frameworks. The first phase of the research found that although there is a considerable variation between the countries/economies, all of them perceive the integration of transversal competencies as critical in their recent education reforms. At the same time, the study revealed a gap between education policies that promote the integration of transversal competencies, and what is actually taking place in schools.

This questionnaire is a part of the Phase II of the above-mentioned UNESCO Asia-Pacific regional study aiming at understanding how countries and economies in the region are implementing policies for nurturing transversal competencies at the school level. In this study, transversal competencies are defined using the ERI-Net working definition of transversal competencies.

Section 1: Background Information

Q1.1 What is your gender?

Please select one

- 1. Male
- 2. Female

Q1.2 How long have you been working as a teacher?

Please select one

- 1. Less than 5 years
- 2. 5-10 years
- 3. 11-15 years
- 4. 16-20 years
- 5. More than 21 years

Q1.3 How long have you been working as a principal?

Please select one

- 1. Less than a year
- 2. 1-3 years
- 3. 4-6 years
- 4. 7-10 years
- 5. More than 11 years

Q1.4 How long have you been working as a principal of the current school?

Please select one

- 1. Less than a year
- 2. 1-3 years
- 3. 4-6 years
- 4. 7-10 years
- 5. More than 11 years

Q1.5 Is your school a public or private school?

Please select one

- 1. Public ¹³
- 2. Semi-private ¹⁴
- 3. Fully private ¹⁵

¹³ A school is funded and managed by a government authority.

¹⁴ A school is funded by a government authority (fully or partially) but managed by a non-governmental organization, such as a religious group, a non-profit organization, and for-profit organization

¹⁵ A school is funded and managed by a non-governmental organization

Q1.6 Which of the below descriptions best suits the community where your school is located?

Please select one

- 1. Rural (less than 3,000 people)
- 2. A small town (3,000 to 15,000 people)
- 3. A town (15,001 to 100,000 people)
- 4. A medium-sized city (100,001 to 1,000,000 people)
- 5. A large city (more than 1,000,000 people)

Q1.7 What is the size of your school?

Please select one

- 1. Fewer than 100 students
- 2. 101-300 students
- 3. 301-500 students
- 4. 501-700 students
- 5. More than 701 students

Q1.8 How many full-time teachers do you have in your school?

Q1.9 What is the average class size in your school?

Section 2: School policies

Q2.1 Does your school have a school motto? If so, please write it in the space below.

Yes

The motto: _____

No

Do not know

Q2.2 Does your school have a school development plan? If the answer is "yes", please continue to Q2.3. If the answer is "no" or "do not know", please go to

Yes

No

Do not know

Q2.3 (If your answer to Q2.1 is yes) According to your school development plan, how important are the following competencies in teaching and learning?	Do not know	Not at all	Very little	To some extent	Very much
1. Content knowledge	<input type="checkbox"/>				
2. Creativity	<input type="checkbox"/>				
3. Critical thinking	<input type="checkbox"/>				
4. Application skills	<input type="checkbox"/>				
5. Reasoned decision-making	<input type="checkbox"/>				
6. Communication skills	<input type="checkbox"/>				
7. Teamwork/collaboration	<input type="checkbox"/>				
8. Sociability	<input type="checkbox"/>				
9. Self-discipline	<input type="checkbox"/>				
10. Perseverance	<input type="checkbox"/>				
11. Self-motivation	<input type="checkbox"/>				
12. Compassion	<input type="checkbox"/>				
13. Environmental awareness	<input type="checkbox"/>				
14. Tolerance	<input type="checkbox"/>				
15. Conflict resolution	<input type="checkbox"/>				
16. Computer literacy	<input type="checkbox"/>				
17. Others (please specify)					

Q2.4 To what extent are you using the following method(s) to monitor the quality of your school's education?	Do not know	Not at all	Very little	To some extent	Very much
1. Results of the standardized tests	<input type="checkbox"/>				
2. Results of the school-based and classroom assessments	<input type="checkbox"/>				
3. Results of academic activities and competitions (e.g. Math Olympics)	<input type="checkbox"/>				
4. Results of art and sport activities and competitions	<input type="checkbox"/>				
5. Observation of classes by inspectors or other external persons	<input type="checkbox"/>				
6. Peer-review by teachers	<input type="checkbox"/>				
7. Results of teacher assessments/appraisals	<input type="checkbox"/>				
8. Feedback from the community/parents	<input type="checkbox"/>				
9. Others (please specify)					

Section 3: School principals' perceptions of integration of transversal skills in school practice

Q3.1 In your country, has there been a reform to integrate transversal competencies into education (e.g. curriculum reform) recently? If the answer is "yes" please continue to Q3.2. If the answer is "no" or "do not know", please go to Q3.4.

Do not know No Yes

Q3.2 As a result of the recent reform to integrate transversal competencies into education, have you noticed any positive changes in your students in the following areas?

Negative changes No changes Positive changes

- | | | | |
|-----------------------------|--------------------------|--------------------------|--------------------------|
| 1. Content knowledge | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Creativity | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Critical thinking | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Application skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Reasoned decision-making | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Communication skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Teamwork/collaboration | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Sociability | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Self-discipline | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Perseverance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Self-motivation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Compassion | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Environmental awareness | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Tolerance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Conflict resolution | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Computer literacy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Others (please specify) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q3.3 As a result of the recent reform to integrate transversal competencies into education, have you noticed the following changes in your teachers?

	Do not know	Not at all	Very little	To some extent	Very much
1. Teachers are more motivated.	<input type="checkbox"/>				
2. Teachers take pride in this school.	<input type="checkbox"/>				
3. Teachers take more initiatives in classroom activities.	<input type="checkbox"/>				
4. Teachers are better involving the students in classroom activities.	<input type="checkbox"/>				
5. Teachers interact more with the parents and the community.	<input type="checkbox"/>				
6. Others (please specify).					

Q3.4 To what extent do you agree with the below statements?

	Do not know	Not at all	Very little	To some extent	Very much
1. Teaching of transversal competencies should be a formal part of the school policy.	<input type="checkbox"/>				
2. Teaching of transversal competencies is given sufficient attention in your school.	<input type="checkbox"/>				
3. Learning of transversal competencies is an essential part of student learning.	<input type="checkbox"/>				
4. Students have adequate opportunities to learn transversal competencies at school.	<input type="checkbox"/>				
5. Schools, rather than family, should have the primary responsibility for students learning transversal competencies.	<input type="checkbox"/>				

Q3.5 To what extent are the below teaching approaches effective to help students develop transversal competencies?

	Do not know	Not at all	Very little	To some extent	Very much
1. Lectures by teachers	<input type="checkbox"/>				
2. Small group discussions	<input type="checkbox"/>				
3. Group projects and presentations	<input type="checkbox"/>				
4. Individual projects and presentations (i.e. project-based learning)	<input type="checkbox"/>				
5. Computer-aided activities	<input type="checkbox"/>				
6. Field studies	<input type="checkbox"/>				
7. Extracurricular activities	<input type="checkbox"/>				
8. Others (please specify)					

Q3.6 To what extent are these other factors effective for teaching transversal competencies at your school?

	Do not know	Not at all	Very little	To some extent	Very much
1. School leadership	<input type="checkbox"/>				
2. Teachers' commitment	<input type="checkbox"/>				
3. Students' interest	<input type="checkbox"/>				
4. Support from the parents	<input type="checkbox"/>				
5. Support from the local business	<input type="checkbox"/>				
6. Others (please specify)					

Q3.7 Regarding the integration of transversal competencies into education, what are the challenges you face in your school?

	Do not know	Not at all	Very little	To some extent	Very much
1. Emphasis on academic achievement (exams)	<input type="checkbox"/>				
2. Lack of clarification of the definition of transversal competencies	<input type="checkbox"/>				
3. Lack of practical guidance	<input type="checkbox"/>				
4. Lack of materials	<input type="checkbox"/>				
5. Lack of IT facility	<input type="checkbox"/>				
6. Insufficient awareness of parents	<input type="checkbox"/>				
7. Insufficient awareness of community members	<input type="checkbox"/>				
8. Others (please specify)					

Section 4: Teacher support and training on the integration of transversal competencies

Q4.1 Did you receive any specific training on integrating transversal competencies into education?	Do not know	Not at all	Very little	To some extent	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q4.2 To what extent do you feel that you had received enough training for you to lead and guide your teachers?	Do not know	Not at all	Very little	To some extent	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q4.3 To what extent do you provide training opportunities for your teachers to improve their classroom management to integrate transversal competencies?	Do not know	Not at all	1-2 times per academic year	1-2 times per semester	More than 3 times per semester
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q4.4 What is the modality of the training you offered to your teachers?	Please select all that apply				
1. Lectures by specialists	<input type="checkbox"/>				
2. Model classroom	<input type="checkbox"/>				
3. Mentoring	<input type="checkbox"/>				
4. Discussions with colleagues	<input type="checkbox"/>				
5. Guidelines/materials distribution	<input type="checkbox"/>				
6. Online learning	<input type="checkbox"/>				
7. Others (please specify)	<input type="checkbox"/>				

THANK YOU VERY MUCH!

Annex D: Questionnaire for teachers

This questionnaire was developed to facilitate data collection for an Asia-Pacific regional study on 'Integrating Transversal Competencies in Education Policy and Practice' being conducted by ERI-Net in 2014.

The questionnaire asks for information including:

- Individual background (e.g. teaching subject/grade, gender, years of experience)
- Teachers' perceptions of school policies and plans
- Teachers' experiences in integrating transversal competencies in the classroom

This questionnaire should be completed by school teachers. It should take approximately 30 minutes to complete. Please answer all questions. If you do not know the precise answer to a question, your best estimate will suffice. Please use additional sheets of paper if you have any additional comments.

The information collected through this questionnaire will be kept confidential and will be used solely for the purpose of the research.

Background

Many countries in the Asia-Pacific region are increasingly emphasizing the importance of integrating the formation of transversal competencies into schools in order to help develop students in a more holistic manner. This issue is particularly relevant in the Asia-Pacific region where many education systems have focused on the acquisition of knowledge and academic skills. This bias towards knowledge and academic skills is expressed in the strong focus on high-stake exams and the performance in international academic assessments. It is in this context that UNESCO Bangkok launched a regional study on 'Integrating Transversal Competencies in Education Policy and Practice' in 2012. The first phase of the study focused on generating a broad overview of how countries/economies in the Asia-Pacific region define the concept of transversal competencies and integrate them into their education policies and curriculum frameworks. The first phase of the research found that although there is a considerable variation between the countries/economies, all of them perceive the integration of transversal competencies as critical in their recent education reforms. At the same time, the study revealed a gap between education policies that promote the integration of transversal competencies, and what is actually taking place in schools.

This questionnaire is a part of the Phase II of the above-mentioned UNESCO Asia-Pacific regional study aiming at understanding how countries and economies in the region are implementing policies for nurturing transversal competencies at the school level. In this study, transversal competencies are defined using the ERI-Net working definition of transversal competencies.

Section 1: Background information

Q1.1 What is your gender?

Please select one

1. Male
2. Female

Q1.2 How long have you been working as a teacher?

Please select one

1. Less than a year
2. 1-3 years
3. 4-6 years
4. 7-10 years
5. More than 11 years

Q1.3 How long have you been working in the current position?

Please select one

1. Less than a year
2. 1-3 years
3. 4-6 years
4. 7-10 years
5. More than 11 years

Q1.4 Which grade(s) and subject(s) do you teach? Please specify.

Q1.5 How many students do you have in your class (average if you are a subject teacher)?

Q1.6 How many sessions per week do you teach? If you teach more than one subject, please specify the number of sessions for each subject.

Q1.7 In addition to classroom teaching, how many hours per week do you spend on the below activities (average)?

1. Classroom preparation
 2. Classroom teaching
 3. Extracurricular activities
 4. Administrative tasks
 5. Professional development
 6. Peer support
 7. Others (please specify)
-

Section 2: School policies

Q2.1 Does your school have a school motto? If so, please write it in the space below.

Yes

School motto: _____

No

Do not know

Q2.2 Does your school have a school development plan? If the answer is “yes”, please continue to Q2.2. If the answer is “no” or “do not know”, please go to Section 3.

Yes

No

Do not know

Q2.3 (If your answer to Q2.2 is yes) According to your school development plan, how important are the following competencies?

Do not know

Not at all

Very little

To some extent

Very much

1. Content knowledge

2. Creativity

3. Critical thinking

4. Application skills

5. Reasoned decision-making

6. Communication skills

7. Teamwork/collaboration

8. Sociability

9. Self-discipline

10. Perseverance

11. Self-motivation

12. Compassion

13. Environmental awareness

14. Tolerance

15. Conflict resolution

16. Computer literacy

17. Others (please specify)

Q2.4 To what extent have you been involved in developing school development plans?

Do not know

Not at all

Very little

To some extent

Very much

Section 3: Pedagogy and classroom management

Q3.1 On average, how do you distribute your time in classroom activities on (the total should not exceed 100%):	Do not know	Less than 15%	16-30%	31-45%	More than 46%
1. Lectures by teachers	<input type="checkbox"/>				
2. Small group discussions	<input type="checkbox"/>				
3. Group projects and presentations	<input type="checkbox"/>				
4. Individual projects and presentations	<input type="checkbox"/>				
5. Computer-aided activities	<input type="checkbox"/>				
6. Field studies	<input type="checkbox"/>				
7. Others (please specify)	<input type="checkbox"/>				
Q3.2 In the classroom, to what extent are the students expected to develop skills and competencies in:	Do not know	Not at all	Very little	To some extent	Very much
1. Understanding the contents	<input type="checkbox"/>				
2. Critically analyzing the information	<input type="checkbox"/>				
3. Building their own opinions	<input type="checkbox"/>				
4. Participating in discussions constructively	<input type="checkbox"/>				
5. Presenting their opinions logically	<input type="checkbox"/>				
6. Collaborating with other students	<input type="checkbox"/>				
7. Developing innovative ideas	<input type="checkbox"/>				
8. Others (please specify)	<input type="checkbox"/>				
Q3.3 To what extent are you able to cover the curriculum content in the classroom as planned?	Do not know	Not at all	Very little	To some extent	Very much
	<input type="checkbox"/>				
Q3.4 If you feel you are not able to cover the curriculum content in the classroom, to what extent the below statements are true?	Do not know	Not at all	Very little	To some extent	Very much
1. Curriculum content is too much (quantity).	<input type="checkbox"/>				
2. Curriculum content is too difficult (level).	<input type="checkbox"/>				
3. Lack of teaching/learning materials.	<input type="checkbox"/>				
4. Students need more individual attention.	<input type="checkbox"/>				
5. Not enough time to prepare for the class.	<input type="checkbox"/>				

6. Not enough time for researching new teaching materials/techniques.
7. Others (please specify).

Q3.5 To what extent is the current assessment system appropriate for measuring students' transversal competencies?

Do not know	Not at all	Very little	To some extent	Very much
<input type="checkbox"/>				

Q3.6 What tools are available for you to assess students' development of transversal competencies?

Please select all that apply

1. Official guidelines and standards to assess students in transversal competencies.
 2. Unofficial guidelines and standards to assess students in transversal competencies.
 3. Standardized personality tests.
 4. Nothing specific for transversal competencies.
 5. Others (please specify).
-

Section 4: Teachers' perceptions of school practices

<p>Q4.1 In your country, has there been a reform to integrate transversal competencies into education (e.g. curriculum reform) recently? If the answer is 'yes' please continue to Q4.2. If the answer is 'no' or 'do not know', please go to Q4.4.</p>	<p>Do not know</p>	<p>No</p>	<p>Yes</p>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>Q4.2 Since the reform to integrate transversal competencies into education, have you noticed any changes in your students in the following areas?</p>	<p>Negative changes</p>	<p>No change</p>	<p>Positive changes</p>		
<p>1. Content knowledge</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>2. Creativity</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>3. Critical thinking</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>4. Application skills</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>5. Reasoned decision-making</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>6. Communication skills</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>7. Teamwork/collaboration</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>8. Sociability</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>9. Self-discipline</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>10. Perseverance</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>11. Self-motivation</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>12. Compassion</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>13. Environmental awareness</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>14. Tolerance</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>15. Conflict resolution</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>16. Computer literacy</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<p>17. Others (please specify)</p>					
<p>Q4.3 As a result of the recent reform to integrate transversal competencies into education, to what extent do you agree with the following statements?</p>	<p>Do not know</p>	<p>Not at all</p>	<p>Very little</p>	<p>To some extent</p>	<p>Very much</p>
<p>1. Teachers are more motivated.</p>	<input type="checkbox"/>				
<p>2. Teachers take pride in this school.</p>	<input type="checkbox"/>				
<p>3. Teachers take more initiative in classroom activities.</p>	<input type="checkbox"/>				
<p>4. Teachers are better connected to the parents and the community.</p>	<input type="checkbox"/>				
<p>5. Others (please specify).</p>					

Q4.4 To what extent are these teaching approaches effective in helping students develop transversal competencies?	Do not know	Not at all	Very little	To some extent	Very much
1. Lectures by teachers	<input type="checkbox"/>				
2. Small group discussions	<input type="checkbox"/>				
3. Group projects and presentations	<input type="checkbox"/>				
4. Individual projects and presentations	<input type="checkbox"/>				
5. Computer-aided activities	<input type="checkbox"/>				
6. Field studies	<input type="checkbox"/>				
7. Extracurricular activities	<input type="checkbox"/>				
8. Others (please specify)					

Q4.5 To what extent are these other factors influential in teaching transversal competencies at your school?	Do not know	Not at all	Very little	To some extent	Very much
1. School leadership	<input type="checkbox"/>				
2. Teachers' commitment	<input type="checkbox"/>				
3. Students' interest	<input type="checkbox"/>				
4. Support from the parents	<input type="checkbox"/>				
5. Support from the local business	<input type="checkbox"/>				
6. Others (please specify)					

Q4.6 To what extent are the following factors hindering the integration of transversal competencies in your classroom?	Do not know	Not at all	Very little	To some extent	Very much
1. Emphasis on academic achievement (exams).	<input type="checkbox"/>				
2. Lack of clarification of the definition of transversal competencies.	<input type="checkbox"/>				
3. Lack of practical guidance.	<input type="checkbox"/>				
4. Lack of materials.	<input type="checkbox"/>				
5. Lack of IT facilities.	<input type="checkbox"/>				
6. Insufficient awareness of parents.	<input type="checkbox"/>				
7. Insufficient awareness of community members.	<input type="checkbox"/>				
8. Others (please specify).					

Q4.7 To what extent do you agree with the below statements?	Do not know	Not at all	Very little	To some extent	Very much
1. Teaching of transversal competencies should be a formal part of the school policy.	<input type="checkbox"/>				
2. Teaching of transversal competencies is given sufficient attention in your school.	<input type="checkbox"/>				
3. Learning of transversal competencies is an essential part of student learning.	<input type="checkbox"/>				
4. Students have adequate opportunities to learn transversal competencies at school.	<input type="checkbox"/>				
5. Schools, rather than family, should have the primary responsibility for students learning transversal competencies.	<input type="checkbox"/>				

Section 5: Teacher support and training

<p>Q5.1 To what extent do you feel that you had received enough training for you to teach transversal competencies?</p>	<p>Do not know</p> <p><input type="checkbox"/></p>	<p>Not at all</p> <p><input type="checkbox"/></p>	<p>Very little</p> <p><input type="checkbox"/></p>	<p>To some extent</p> <p><input type="checkbox"/></p>	<p>Very much</p> <p><input type="checkbox"/></p>
<p>Q5.2 How often do you receive training to improve classroom management so as to integrate transversal competencies?</p>	<p>Do not know</p> <p><input type="checkbox"/></p>	<p>Not at all</p> <p><input type="checkbox"/></p>	<p>1-2 times per academic year</p> <p><input type="checkbox"/></p>	<p>1-2 times per semester</p> <p><input type="checkbox"/></p>	<p>More than 3 times per semester</p> <p><input type="checkbox"/></p>
<p>Q5.3 What is the modality of the training you have received?</p>	<p>Please select all that apply</p>				
<p>1. Lectures by specialists</p>	<p><input type="checkbox"/></p>				
<p>2. Model classroom</p>	<p><input type="checkbox"/></p>				
<p>3. Mentoring</p>	<p><input type="checkbox"/></p>				
<p>4. Discussions with colleagues</p>	<p><input type="checkbox"/></p>				
<p>5. Guidelines/materials distribution</p>	<p><input type="checkbox"/></p>				
<p>6. Online learning</p>	<p><input type="checkbox"/></p>				
<p>7. Others (please specify)</p>	<p><input type="checkbox"/></p>				
<p>Q5.3 To what extent do you think the below modalities of the training are effective?</p>	<p>Do not know</p>	<p>Not at all</p>	<p>Very little</p>	<p>To some extent</p>	<p>Very much</p>
<p>1. Lectures by specialists</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>2. Model classroom</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>3. Mentoring</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>4. Discussions with colleagues</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>5. Guidelines/materials distribution</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>6. Online learning</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>7. Others (please specify)</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>

THANK YOU VERY MUCH!

Annex E: Classroom observation guidelines

These guidelines were developed to support classroom observations for the 2014 ERI-Net regional study on 'Integrating Transversal Competencies in Education Policy and Practice' (Phase II). The researchers are encouraged to adopt the guidelines to reflect the country/economy context.

Principles of classroom observation

- Always thank the management-level teachers. The act of opening classrooms to external parties (apart from guardians and the education committee) is proof of confidence in the management of the school, teachers and students.
- Even if filming and photographs are allowed during the lesson, methods disruptive to students' concentration are strictly prohibited.
- Do not speak to the students during the lesson.
- Please thank the teacher after the class. It may be difficult to do so before the class starts in many cases, as the teacher may already be standing in front of the class.
- Even when multiple classes are open for observation simultaneously, you should only observe one class from the start to the end. This is so that you are able to observe all components of the lesson comprehensively, including the lesson flow, from the introduction to the conclusion, as well as the interconnectedness of activities and allocation of time to the learning activities.

Preparation for classroom observation

- Understand the learning objectives of the lesson observed.
- If possible, ask for the teacher's intended lesson plan.
- Ensure that the teachers understand that the purpose of the observation is not for evaluation, but for research.

Checklist during the classroom observation

The lessons can be observed using three main perspectives, as per below:

1. Appropriateness of teaching materials
 - a) With regard to content, is the level of difficulty suitable for the level of the class and individual students?

- b) Is the time allocated to each respective activity appropriate?
- c) Is the overall time allocation/management appropriate?
- d) How does the teacher link the lesson content to current and future learning objectives?
- e) Are the materials used stimulating the students' interest in learning?

2. Understanding of students

- a) Does the teacher take into consideration the level of his or her students' interest/passion/knowledge for learning?
- b) Does the lesson become too teacher-centred/teacher-focused? (Is there a balance between the amount of time that the teacher and students get to speak?)
- c) Is the lesson designed to allow opportunities for students to exchange opinions among themselves?
- d) Does the teacher know the level of students' understanding and, corresponding to their level, conduct effective learning activities?
- e) Does the teacher understand the learning progress of each individual student and offer individualized instruction?
- f) Does the teacher understand the individual character/personality of each student?

3. Appropriateness of instruction

- a) Are the voice volume, use of words and eye contact of the teacher appropriate?
- b) Does the teacher show respect for the students as individuals (e.g. show consideration towards students who give wrong answers, get students who are usually quiet involved in classroom participation)?
- c) Does the teacher consciously ask questions and give instructions in ways/language easily understood by students?
- d) Does the teacher ask questions that facilitate students' thinking, rather than recalling knowledge (e.g. asking 'why' and 'what should be done' in addition to 'what' 'when' and 'who' questions)?
- e) After posing a question, does the teacher give enough time for students to reflect and organize their opinions before being asked to answer?
- f) Does the teacher offer students opportunities to exchange opinions among themselves?
- g) Does the teacher use effective teaching materials and teaching tools/devices?
- h) How does the teacher involve students who have dissenting attitudes and desires towards learning during the lesson?

Follow-up questions

After the lesson observation, it is highly recommended that you organize a brief follow-up meeting with the teacher. The questions you may wish to ask include:

- Did the lesson go as you planned? If not, what are the reasons?
- How do you obtain ideas for lessons (e.g. websites, books, peers, etc)?
- What are the biggest challenges for you in conducting lessons?
- Do you want to improve your lessons? If so, in what areas?
- What kind of support do you need to improve your lessons?

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