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"Moving forward with secondary education reform:
issues, challenges and proposals'

by Renato Opertti and Jayne Brady

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Abstract

This document begins by considering the key role and relevance of secondary education within education systems and the Education For All agenda. It then outlines the state of secondary education, highlighting the main issues and challenges, in terms of enrolment, modes and methods. It compares this with the lessons learned from international studies and stresses the need for new strategic directions and a change in perspective, which considers curricula challenges within a strategy of inclusive education reform. Bearing this in mind, the document outlines basic criterion for designing competency-based curricular reform in higher secondary education. The document concludes with some key points, with a view to facilitating further discussion.

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[1] This document builds upon a presentation at the Regional Expert Meeting on Reform of Secondary Education in the Arab Region (Muscat, Oman, 26-28 April 2009) organized by the Ministry of Education/National Commission for UNESCO in Oman and UNESCO Cluster Office (Beirut, Doha, Cairo and Rabat).

I. Secondary education: democratizing access and outcomes

I.1. Role of secondary education

The key role and relevance of providing secondary education is underlined in the Millennium Development Goals (MDG), the third goal of the Education For All Dakar Framework, and the Convention on the Rights of the Child. Secondary education may have mainly been perceived in the past as a bridge to tertiary education i.e. "a hybrid status", but today it is considered a cornerstone of the entire education system i.e. " a pivotal status".

At least three elements should be considered for an understanding of the current role of secondary education:

(1) Secondary education – including general, technical and vocation education - plays a key role as an economic and social policy to foster equity, development and competitiveness. Along these lines, secondary education is a strong financial investment. A recent DFID report (2006) has shown that spending in primary education is most effective to reduce poverty if students can continue to secondary and tertiary levels. It also suggests that secondary education may increase wage employment benefits for learners.

(2) Alongside and complementary to primary education, secondary education allows for the further development of the learner in terms of core life and citizenship competencies, i.e. developing their values,

attitudes, and learning resources to address real-life situations. Comprehensive citizenship education at the secondary level encompasses cultural, political, economic and social aspects which enlarge and refine the basic education level. This can better enable learners to succeed as citizens in a competitive, global and technological knowledge-based society. The development of technical competencies is a key, cross-cutting dimension of citizenship education, in particular. According to DFID (2008), the development of technical competencies and skills are at the centre of the challenge of sustaining, accelerating and sharing the signs of economic growth across many parts of the developing world.

(3) Along these lines, secondary education can also contribute to a reduction in societal problems, including civil conflict (Collier and Hoeffer, 2001). Learning to live together is a key competency, which can be further developed through the promotion of a culture of peace and respect in secondary education.

Secondary education curricular provisions should therefore be guided by considering the role of secondary education as an economic and social policy, as fostering comprehensive citizenship education and as a powerful tool to promote peaceful societies.

I.2. Trends

In terms of the institutional and curricular design of secondary education, two basic models have historically emerged (Benavot, 2006). On the one

hand, secondary educational provision has traditionally divided learners into separate and different schools or tracks, which emphasizes various disciplines of knowledge i.e. academic disciplines have been separated from practical disciplines of technical and vocational education and training (TVET). On the other hand, all-encompassing comprehensive high schools have also developed, which have provided a core set of curricula options together with substantial elective subjects.

Taking Western Europe as a regional focus, one can also see three sub-types of secondary education systems which have evolved within these two basic models (Green, Wolf and Leney, 1999). Firstly, in Sweden, Finland and Denmark, the Scandinavian comprehensive school model has joined primary and middle schools in a nine-year basic and compulsory programme of primary and lower secondary education. Meanwhile, in Great Britain, France and Italy, mixed systems have developed, with specific equivalents to academic schools. This has effectively meant that the compulsory education of all pupils is limited to one type of basic school (i.e. typically the academic branch of secondary education). Finally, a tripartite system has emerged in Austria, Belgium, the Netherlands, most German länder and Swiss cantons. Such systems are composed of separate schools catering to distinct curricula tracks, for example classical, modern and technical secondary schools.

Across several regions, we also see that the vast majority of countries have established two relatively distinct levels of secondary education within these basic models, namely upper and lower secondary education (Benavot, 2006). Lower secondary mainly serves as a prolongation of primary education and

the final section of compulsory schooling. Upper secondary education has generally been divided into multi-tracks of specialized programmes of study, such as academic or technical and vocational disciplines.

New trends are also emerging in relation to the two basic models of secondary education of separated and comprehensive high schools. According to Benavot (2006), an increasing amount of countries are moving away from separated institutions and discipline tracks at the secondary level and rather towards comprehensive school models. This is particularly the case in Sub-Saharan Africa countries, South Asian countries and the more industrialized countries, but less so in the Middle East and North Africa.

Where reform is taking place, comprehensive school models are being implementing at the upper secondary education in particular. A comprehensive school model has strong implications for secondary education curricula, with a broader range of subjects (i.e. areas of knowledge), less specialization around content and more integrated themes available. In addition, the modes of instruction at the secondary education level have changed in accordance with this comprehensive school model. For instance, there has been an increasing emphasis on competency-based approaches[2] through project work, cooperative learning, tutorial guidance and alternative assessment methods (Sahlberg, 2006). In these countries, secondary education curricula increasingly resemble curricula traditionally associated with primary school classrooms.

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[2] Competency-based approaches refer to the mobilization and integration of different types of resources by a person or a group of persons in order to address real-life situations, see further below.

I.3. Global picture and policy issues

From the statistics relating to secondary education access, an on-going expansion of secondary of education is certainly evident. In 2006, there were 513 million students enrolled in secondary schools worldwide, which represents an increase of 76 million students since 1999 (EFA GMR, 2009). Nevertheless, the statistics and trends also suggest great differences in terms of the scope, content and impact of the secondary education which is accessible, creating strong barriers to the democratization of learning opportunities. The following points should be considered in this regard:

(a) While developed countries have achieved near-universal secondary education, the situation in developing regions remains strongly uneven and far – i.e. gross enrolment rates represent 34% in sub-Saharan Africa, 65% in the Arab States and 90% in Latin America (EFA GMR, 2010).

(b) In 2006, the average gross enrolment rate for secondary education was 58%; 78% in lower secondary education and 53% in upper secondary. The transition point from lower to upper secondary was noted as a key dropout point, especially in East Asia, Latin America and the Caribbean, the Arab States and sub-Saharan Africa (EFA GMR, 2009).

(c) Nearly 71 million adolescents of lower secondary school age were out of school in 2007 - almost one in five of the total age group - of which 54 % were girls. (EFA GMR, 2010). Many children had not completed primary school or were unable to make the transition to

lower secondary schooling. This clearly suggests gaps in the institutional, social, curricular and pedagogical secondary provisions, both in terms of responding to adolescents' needs, and in supporting the move from primary to secondary education.

(d) Strong inequalities of access, across both lower and upper levels, remain. These inequalities exist not only *between* countries but also *within* countries, due to factors such as income and language. In the majority of developing countries, students from the lower socio-economic strata do not complete secondary education (EFA GMR, 2009). The increasingly wide gaps between learners' achievement between and within countries are also a major issue. National disparities exist at different levels (between regions, communities, schools and classrooms) and they are particularly huge in countries with high levels of poverty (EFA GMR, 2009). Likewise, there are glaring differences between the learning outcomes achieved at the secondary level in developing and developed countries (OECD, 2001, 2003, 2006).

(e) The number of secondary education students who are involved in some kind of technical and vocational education and training has remained relatively stable since 1999, at a level of around 10%, with most students enrolling at the upper secondary level. From 2007, the rates of enrolment in technical and vocational education have tended to be higher in developed countries compared to developing countries, at 16% and 9% respectively (EFA GMR, 2010).

(f) There is an increasing recognition of the relevance of technical and vocational education to the attainment of more equitable and developed societies in national policy agendas. The global economic crisis has increased the need for technical skills in most countries. Particularly in the Middle East - a region marked by high youth unemployment and high rates of dropouts in secondary education (EFA GMR, 2010) - governments are trying to prioritize the development of technical and vocational education within the framework of restructuring secondary education (e.g. UNESCO Draft Strategy on TVET, 2009).

Overall, the global picture presents a situation of entrenched barriers and deep complexities undermining the attainment of a high-quality equitable education for all, and therefore an incomplete democratization of secondary education. At the same time, there is an increasing consensus and prioritisation amongst countries on the importance of reform in the provision of technical and vocational education.

The World Bank has suggested several interrelated factors which explain why twinning high-quality and relevant education with increased access remains a major issue in all countries (2005). Firstly, the World Bank strongly blames an excessively academic and subject-oriented curricula structure, objectives and content which are disconnected from economic and social realities. Many secondary education systems continue to follow rigid curricula based on traditional discipline, even when it is increasingly clear that "in today's knowledge based-societies what you know is less important than what you are able to learn" (EFA GMR 2010).

A strong hierarchical separation between primary and secondary education, between lower and secondary education, and between general and TVET disciplines has also been linked to many of the problems suffered in secondary education systems today (UNESCO, 2006). Separated and in many cases segregated institutional, curricular and pedagogical provisions create interruptions in learning, leading to inequalities of access and achievement, as well as student drop-out (OECD, 2001, 2003, 2006).

These factors also combine with numerous other challenges. For example, in most regions, TVET currently suffers from "poor government coordination, meagre budget resources, a lack of qualified teachers, curricula bearing little relation to the skills sought by employers and a lack of uniform standards" (EFA GMR, 2010). As a result, TVET is generally perceived by society as a "second-class" education, mainly targeting disadvantaged populations. At the same time, some societies visualise secondary education's role as a spring-board to university studies and have excessively oriented secondary education objectives towards academic university demands.

II. Reform of secondary education from a curricular perspective

II.1. Strategic directions

It is clearly essential that comprehensive educational reform for secondary education is nurtured in many countries, to achieve quality education for all. This reform must visualize the concepts of equity and quality as going hand in hand, and secondary education as a key component in the provision of life-long learning opportunities. This is particularly pertinent in light of increasing diversity and changing societal contexts to promote sustainable and equitable development through secondary education.

 Bearing in mind there is no one "successful" international model but many visions, experiences and strategies to share and build upon, UNESCO's 2010–2011 Plan "From early childhood to adult years: building effective education systems" aims to assist in the identification and dissemination of good practices, strengthening countries' capacities to revise secondary educational policies and plans, monitor achievements and assessment of secondary reform and explore new reform strategies.

One such reform strategy is to rethink the challenges of secondary education from a curricular perspective. A comprehensive vision of curriculum refers to learning outcomes, pedagogical and the didactic strategies, curricula supports and disciplinary content, as well as the evaluation of learning outcomes and the management of the curriculum.

Global education reform is increasingly curriculum-based and the complex, feedback relationships between curriculum objectives, curriculum structures and the achievement of both equity and quality have been clearly identified. (Moreno, 2008). The curriculum framework is closely linked to the role of education in society[3]; it provides a basis for citizenship education and balanced personal development, the improvement of the well-being of society at large, and the identification and implementation of key economic and social policy goals (combating poverty and marginality; fostering development and the equitable distribution of opportunities etc.).

As a result, the curricula should be aligned to the role of education in society and societal expectations and demands. The curriculum is both a political and technical issue involving multiple stakeholders from inside and outside the education system, as well as a continuous and dynamic development of processes and outcomes. From this perspective, the role of the teachers is particularly relevant; they are deeply involved in the processes of the curriculum and, as such, are also its co-developers. The curriculum has been defined "as a dense and flexible contract between politics/society and teachers" (Braslavsky, 2002). Teachers' role in implementing reform should certainly not be underestimated, especially at the secondary education level, where teachers hold a strong disciplinary ethos which may hinder coordination with colleagues from other disciplines. Teachers must be seen as professionals and policy-makers at the classroom level, whose confidence, competencies, knowledge and positive attitudes can invaluably reinforce educational reform curricula.

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[3] A curriculum framework is understood to be both a technical tool which establish parameters for the development of other curriculum documents, such as subject syllabuses, and as an agreed social document which defines and expresses national priorities for education and aspirations for the future of the nation

Two basic approaches can be adopted in relation to secondary education reform from a curricular perspective. Firstly, there is the piecemeal approach, which entails accommodating specific aspects of the educational system towards the expansion and democratization of secondary education and changing societal contexts. Alternatively, the transformative approach involves changing the educational system under a holistic and global perspective to effectively face the challenges of democratizing education and society. Depending on the selection of a piecemeal or transformative approach, there are diverse types of initiatives which differ in their process and implication, i.e. an increase in the years of compulsory schooling; an increase in the investment in physical facilities and equipment; changes in the curricular structure and syllabus; implementation of competency-based approaches in the curricula; opening out the school to communities at large.

Based on the nature of the current problems in secondary education around the world, it is suggested here that a transformative strategy based on a broadened concept of inclusive education would support the process of secondary education reform in many countries. Indeed, a broadened concept of inclusive education, with its broader notion of all and a greater appreciation of difference, is considered as a strong supporting a comprehensive understanding of how the concepts of equality, equity and quality interact (Acedo, 2008; Ainscow & Miles, 2008). Inclusive education "can be can be viewed as a general guiding principle to strengthen education for sustainable development, lifelong learning for all and equal access of all levels of society to learning opportunities" (ICE Conclusions and Recommendations, 2008).

Inclusive education is defined as a process of addressing and responding to the diverse needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision that covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children (UNESCO, 2009).

This definition essentially implies an education system to address all learners' needs effectively, supporting the unified design and implementation of education policies and programmes at different dimensions in terms of access, processes and learning outcomes, at different levels providing lifelong learning opportunities across formal and non-formal settings, and at different units, e.g. the macro unit of national frameworks, the medium unit of school-based curricula, the micro unit of classrooms, and the individual unit of the learner (Opertti et al, 2009).

Crucially, "the key element of inclusion is not the individualization but the diversification of the educational provision and the personalization of common learning experiences ... This implies advancing towards universal design, where the teaching-learning process and the curriculum consider from the very beginning the diversity of needs of all students, instead of planning on the basis of an "average" student and then carry out individualized actions to respond to the needs of specific students or groups who were not taken into consideration by an education proposal based on a logic of homogeneity instead of diversity." (Blanco, 2008). Thus, by

implementing an inclusive education approach, countries face the challenge of removing institutional, curricular and pedagogical barriers across secondary education levels and disciplines through the establishment of a common and flexible curricular framework aiming at core life competencies (Schleicher, 2008).

In particular, this would entail expanding basic education to include the traditional branch of lower secondary education level, ensuring continuity in learning and enabling a closer integration of academic and technical-vocational education. The Nordic countries present an example of a comprehensive school model involving nine years of basic education allows for flexibility, so that "it is not the curriculum that defines the school model but the school model that allows for flexibility in the curriculum" (ICE Info. Doc. 3, 2008).

At the upper secondary education level, an inclusive education approach would imply a move away from separate schools or tracks to a comprehensive system providing diverse and flexible avenues between academic disciplines and TVET. The education system should lead smoothly from early childhood education into tertiary studies and other attractive learning possibilities as well e.g. technical university degrees. Second chances to benefit from the education system should also be offered, and systematic help to those who fall behind and reduce year repetition should be provided (Schleicher, 2008).

In addition, the timing of institutional and/or programmatic articulation and differentiation between secondary and TVET education should preferably

take place only at the level of higher secondary education. Indeed, the EFA GMR 2010 recommends "avoiding separating vocational education from general education by rigid tracking into vocational streams, especially at an early age", as does the OECD (OECD, 2001, 2003, 2006). Indeed, this can have long-term negative effects if tracks are not sufficiently inter-related to facilitate mobility and navigability.

There should also be sustainable expectations for universalizing completion rates, and focusing on engaging teachers and students. An inclusive curriculum framework must be developed. In particular, the following aspects should be considered: the capacity of the syllabus (the choice and the content of the subjects taught) to respond to changing societal contexts (e.g. knowledge and innovative-based societies); the on-going postponement of occupation specialization at later stages; and the need for a comprehensive curricular vision with competency-based exit students' profiles.

In terms of syllabus content, it can be said that inclusive curricula aims for the "optimal combination of contexts and content" to engage learners (Cox, 2008). The objectives of secondary education should be relevant and responsive to learners' needs and expectations, developing a select number of core competencies linked to real-life situations in terms of content, approaches and assessment. Indeed, assessment forms, standards and qualifications must be adapted to suit and support flexible curriculum content in order to maintain learners' engagement and motivation. Similarly, a national qualification and standard framework which is common to both academic and vocational curricula should be available, this is the case in England, for instance.

In terms of curriculum development, one possible approach is to provide more freedom for the school to co-design and implement the syllabus, providing for more elective subjects that allow for a better understanding and response to students' interests and abilities. This would recognize the school as a principal driving force for change and empower schools to complement the global, national and local content of curricula. Along these lines, schools should facilitate and create opportunities for collaboration and support among supervisors, school principals, teachers, students, parents and communities. Institutional and curricular flexibility is a key factor in this process, while giving schools discretion in the use of time, space and resources. e.g. the Nordic countries agree upon keeping a school-based curricula and individual workplans. Individual learner work plans are concrete ways of supporting the development of tutorial guidance, and also increasingly implemented, for example, South Africa and Scotland (Qualifications and Curriculum Development Agency, 2009).

As curricular development and implementation responsibilities are shared amongst various stakeholders in the education system, so too should the sense of responsibility for the final learners' outcomes. Schools and teachers should not feel solely accountable for results. As Savolainen puts out, "schools may be responsible for the results, but education authorities are responsible for providing the conditions to make the results possible i.e. the concept of intellectual accountability (Savolainen, 2009).

At the same time, governments often only refer to school and assessment outcomes, when deciding if curricular frameworks are applied successfully.

The adoption of exam approaches in secondary education, especially at the higher level, has not necessarily proved ensure high-quality education, however. Exams can be useful as one way of assessing students but shouldn't be idolatrized as the "sole and legitimate truth". It may be more relevant to place a greater emphasis on diversifying learning processes and formative assessment to ensure good outcomes. It may also be important to consider other indicators of successful secondary education reform, e.g. student drop-out and well-being; "instead of valuing what we can measure, we should measure what we value" (48th ICE Reference Document, 2008.)

Lastly, all stakeholders must also be trained and supported to participate effectively in curricula development, implementation, and evaluation, in order for participatory processes to be truly effective (Lindeberg, 2009). For example, the empowerment of teachers to select curricular content based on local/individual needs requires sustainable capacity development so that all stakeholders welcome this role and perform it effectively. Progress in the process of secondary education reform must be performed in a supportive way. Finnish curriculum developers have noted that "When work is based on trust and confidence, with high expectations and supportive structures and procedures, people respond by trying to do their best. That is the key to success in education…" (Halinen and Jarvinen, 2008).

Combining all these components, the experience of Finnish high schools offers a comprehensive insight into how to combine both equity and quality at the secondary education level (Halinen and Jarvinen, 2008). The principle of equitable opportunity is emphasised in Finland, as based on a universal view of how secondary education plays a key role in society. This is

reflected in the provision of a free, non-selective comprehensive model of nine years basic compulsory schooling. Flexible administration strongly supports the high schools, as does the confidence and trust in the schools on the part of the principals, the teachers and the students.

The Finnish system also provides interactive forms of work, individualised support and counselling centred on the learning and the well-being of the students (i.e. the personalization of education) and incorporates the influence of local communities. The means for evaluation are tailored to encourage the student's development and individual study plans, which means that there are no rankings nor formal examinations until the end of upper secondary education. Students do not have to repeat grades and are not promoted, as there are also early intervention systems and flexible paths available. This is also supported by highly qualified and autonomous teachers following quality teacher education programmes.

I1.2. Developing competency-based reforms in higher secondary education

In line with inclusive education reform, we have seen that integrating competency-based approaches into existing disciplines and learning structures could strongly support secondary education curriculum development. Competency-based approaches can be conceptualized as the cross-cutting dimension of curriculum design and implementation, encompassing the finalities and objectives, the curricular structure, the syllabus, the learning process and the students' outcomes. They can also

encourage learners to develop adaptable skills relevant to their life and the employment markets.

Competency-based curricula should not be conceived as only suitable for secondary education, but rather as advancing a common curriculum framework with shared finalities, objectives, learning strategies and students' exit profile with the technical education. This common structure facilitates the navigability between the different branches and prepares learners both for citizenship and tertiary studies. It also aims to democratize opportunities breaking up with the stratification and social stigma of a second class technical education.

This section now seeks to provide some examples of basic criterion to face the challenge of designing competency-based curricula, focusing on higher secondary education as one example.

a. Roles, conceptualization and identification in higher secondary education

Globally, we can visualize competency-based approaches as ways of developing and integrating three logics: i. life situations (people's actions); ii. curricular (resources required in order to be competent in dealing with situations); and iii. learning (ways of learning of students and modes of instruction) The situations are the basis and criterion for competencies (Jonnaert, 2007).

Competencies should be related to the objectives pursued through the higher secondary education curricula, while being conceptualized and defined in the light of the expectations and needs of learners. In this context, four types of basic objectives can be referred to: (i) the individual and social development of the person by means of an on-going process from childhood onwards; (ii) the ethical and civic formation of a responsible citizen in a democratic society; (iii) the role of young people as active actors with the capacity to transform reality and (iv) the appreciation of work as a human means of personal and collective development.

In order to attain these four objectives, a preliminary list of five general competencies can be put forward e.g.: (i) personal: related to ethic and emotional aspects; (ii) social: linked to communication, cooperation, working group, solidarity, democratic participation, creativity and innovation; (iii) technical: related to the capacity of organizing and applying scientific and technological knowledge, as well as generating and using math ideas and resources for problem-solving; (iv) methodological: which implies the gathering, processing and critical analysis of information; the organization and presentation of ideas through various methodological techniques and technological resources, and proposing and resolving problems, and (v) cognitive: related to self-evaluation, self-control and self-knowledge.

These types of competencies can be easily found under general international frameworks mainly related to the design and evaluation of competencies, and do not imply a significant innovation in the conceptualization process

(Tiana, 2004).[4] The innovative aspect lies on emphasizing these competencies as common to both upper secondary and technical education, questioning the assumption that technical competencies are clearly differentiated from the most general competencies, due to the apparent specificities of the labour market.

b. Competencies as the axis of the curriculum structure

One core challenge of a competency-based approach is to link the general competencies to the key concepts across the different levels of the curricular structure. The sharing of common curriculum concepts by all subjects is understood as a necessary step in order to attain a robust and coherent curriculum design. Indeed, competencies must be incorporated into the curricular structure for their development at the subject level. It would be risky to set up general competencies without orientating their development in each subject, both in conceptual and operational terms, e.g. for teachers. "Those working on the development of new curricula are faced with the challenge of building a new structure with nothing but outdated tools at their disposal" (Jonnaert et al, 2006)

However, at present there is still a strong tradition and practice of subject programmes being principally designed and structured around a series of generic objectives and a list of content. However, the progressive change of this tradition would imply, among other significant aspects, that the concept

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[4] Alejandro Tiana mentions different international proposals for selecting key competencies: DESECO/OECD (Definition and selection of competencies: theoretical and conceptual foundations), IALS (International Adult Literacy Survey) and ALL (Adult Literacy and Lifeskills Survey), PISA (Programme for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in reading Literacy Study) and CIVED (Civic Education Study).

of competency, its role and content should be a cross-cutting dimension of the curricular structure, that supervisors can orientate and follow-up classroom practices in a predominantly pedagogical way, that principals have a strong institutional and pedagogical vision of the school and that teachers are firmly supported on the classroom so as to be effective co-developers of the curriculum.

To do this, the curricular structure could be made up of pathways and spaces that are visualized as facilitators of the development of competencies. The pathways can be defined as curricular routes aimed at developing competencies through the different fields of knowledge. The curriculum spaces, meanwhile, develop different types of competencies through disciplinary contents organized by areas of knowledge or subjects. Tables 1 and 2 show possible relationships between pathways, spaces and competencies.

Table 1: Proposed pathways and competencies in the Higher Secondary Curriculum (grades 10-12).

Pathways	*Competencies*
Arts and Communication	Communicative and expressive competencies
Natural Sciences and Mathematics	Scientific-technological competencies
Social Sciences and Philosophy	Philosophical and societal competencies

Table 2: Proposed curricular spaces and competencies in the Higher Secondary Curriculum (grades 10-12).

Curriculum spaces	*Competencies*
Space of equivalence	Core competencies: common to all secondary branches and orientations (General, Technical and Vocational).
Specific space	Specific competencies: related to the fields of knowledge under the different branches and orientations of General, Technical and Vocational Education.
Optional or exploratory space	Vocational competencies: abilities that allow young people to take decisions regarding their project of personal development.
Decentralized space (school-based curricula)	Extensive competencies: these ones, selected by the school, responding to youth and community interests, complementing the development of other competencies.

Based on this curricular structure, the subjects can be selected bearing in mind that their content should develop the competencies of each pathway. The logic of curricular design implies going from the competencies selected and defined towards the specification of the subject objectives and contents required to contribute to their attainment.

It is possible to relate traditional subjects to competencies to illustrate the relationships between pathway, subjects and competencies. For example, curriculum specialists and developers may then consider the following pathway "Arts and Communication" pathway competencies: (i) recognition, comprehension, transformation and construction of cultural meanings (symbolic, multimedia, textual, musicals and visual discourses); (ii) development of the ethical and aesthetic sensibility; (iii) development of the creativity (original and peculiar responses) through the resolution of problems, of heuristic and meta-cognitive processes and of divergent and metaphoric thinking; (iv) development of the critical judgment through the application of strategies for classifying, interpreting and prioritizing the world of words, sounds and images; (v) handling of different codes of expression and communication in an autonomous way; and (vi) widening the capacity of factual and symbolic coordination and manipulation through acquiring and improving motor behaviors. This pathway can be made by the subjects of English, English Literature, Art and Visual Communication, Physical Education, and Sports and Recreation.

c. The incorporation of competencies in the subject programs

A competency-based approach does not aim to set aside knowledge and disciplines. Instead, a common curriculum structure for all subjects based on competencies could be the source and the criteria for strengthening existing subject proposals. One core aim of the curricula reform process is to work out a complementary relationship between knowledge and

competencies, bearing in mind that the transmission of facts and knowledge will still play a significant role, due to the strong disciplinary tradition and to the ideological and corporative resistance towards a competency-based approach.

At present, the prevailing vision is the exclusive application of knowledge to situations. Yet this is far from Jonnaert's idea that being competent "also involves organizing one's activity in order to adapt to the characteristics of the situation" (Jonnaert et al, 2006). It is questionable whether one can really master situations by solely contextualizing knowledge to realities. Instead, learners should also learn to search and find out the role of knowledge among other learning resources for understanding and addressing situations.

In this regard, one interesting experience is that presented by a survey which took place in Canada in the context of general basic adult education (Jonnaert et al, 2006). The goal of the survey was to reduce the gap between what was prescribed in programs of study and what really happened in the classroom. By introducing the notion of "competent action", researchers showed how a competency-based approach could be applied to identify the contents of programs of study, highlighting the idea of contextualization.

They analyzed the actions of students in context, as well as the resources they used to perform such actions. The researchers called this process a "competent action in situation". As a first step, they built a bank of real-life situations by means of a survey of the target population (those who would be affected by the adult education reform). People identified relevant situations that were not included in traditional programs of studies, revealing that "a

significant gap between the learning content traditionally specified in the programs of study and the situations for which the target population wished to develop competencies". Researchers came to the conclusion that the resources needed by people to address everyday problems were not those traditionally associated with school subjects.

At the same time, the research highlighted that the bank of situations could not remain static and should be continuously updated because people's needs and demands are continuously changing. This idea of time was also an important factor to take into consideration. If students were trained within present concrete situations, their education might be obsolete by the time they graduate. Yet, teachers were restricted to what was written in the programs, working on "virtual competencies".

Consequently, as a second step, researchers grouped situations into classes and then identified pertinent activities which allowed to work on such situations and on resources to be developed. Finally, they identified the competencies involved. From them on, students were expected to develop competent actions in different classes of situations. This proved to be a good example of how programs can be designed according to a situated perspective.

d. Challenges in developing competency-based approaches

Competency-based approaches clearly imply a substantial change in the methodology that subject programs are designed and taught, e.g. moving towards a student-centered education. Taking this into account, there are at least five main challenges to bear in mind in developing competency-based approaches:

i) The need for a profound, serious and frank policy discussion about the various competency-based approaches, their status and role. Such discussion need not avoid ideological considerations but is best supported by information and evidence and contribute to the clarification of concepts and alternatives.

ii) Understanding the complementarity and enrichment of the competency-based approach as a critical orientation for both the development of subject programmes, as well as the renewal of school and classroom visions and practices. The competency-based approach is also an important reference point for conceptualizing and defining macro objectives and components of the curriculum structure.

iii) Understanding the conceptualization of learning situations as both a strategy and an instrument for truly implementing a competency-based approach. Until now, the tendency has been to apply resources in isolation, in order to resolve situations, or what are often called "situational problems". Instead, diverse methodological proposals can provide criteria and tools to develop and implement families of real-life situations in a structured way, while clearly focusing on the classroom practices.

iv)   The need to clarify the relationships between resources and situations, as well as their compatibility and integration within a learning sequence. The centrality of students' expectations and needs in the conceptualization and definition of situations is a key component to motivate and engage students, to develop relevant contents linked to real-life situations and to assess students according to just and formative criteria. Students should not be seen as learning targets but as learning actors.

v)   The need for competency-based reforms of secondary education to consider, from the very beginning of the planning process, the changes that are deemed necessary in teachers' profiles and roles, as well as in their pre-service training and professional development, in order to sustain the process of educational reform.

III. Key questions

This discussion raises several key questions, which could be addressed to all stakeholders of secondary education, in order to achieve quality and equitable secondary education for all.

Do stakeholders agree on the need for developing a common conceptual curriculum framework from childhood to tertiary studies, based on a perspective of education as a human right and a pillar of personal, economic and social development? Are stakeholders willing to re-consider the identity, objectives and scope of secondary education?

Do stakeholders agree on the need for developing a unified curriculum structure of secondary and technical education that addresses curricula gaps, establishes common core competencies, facilitates the navigability between the different tracks and promotes diverse strategies and options for students' learning? What are the incentives to do so in terms of access, retention and achievement?

Are the conventional subjects of secondary school curricula relevant to the competencies that young people should develop today? How should secondary education face future cultural, social and economic challenges and opportunities, such as citizenship education and education for sustainable development?

How far do policy-makers, supervisors and teachers disengage from the objective-based tradition and how close they get to a competency-based approach? Can they establish bridges and links between both approaches?

Are stakeholders ready to consider in more depth how teachers and students position themselves, and how they respond to processes of curricula reform?

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