

## Chapter 3

### Student assessment

*Since 2009, Luxembourg has strengthened focus on the importance of student assessment by legally defining both formative assessment (assessment for learning) and summative assessment (assessment of student learning), introducing centrally defined minimum competency levels to be achieved by students and requiring teachers to document students' learning progress. These reforms have mainly impacted fundamental schooling, but also secondary schooling. The chapter presents an overview of national assessments and describes the role that student assessment plays in student progression through the school system. Based on an analysis of strengths and challenges in the current approach, the chapter presents a set of recommendations to further develop student assessment in Luxembourg's schools, including building teachers' capacity to use assessment results to improve student learning and making summative assessment procedures more equitable.*

This chapter focuses on approaches to student assessment within the overall evaluation and assessment framework in Luxembourg. Student assessment refers to processes in which evidence of learning is collected in a planned and systematic way in order to make a judgement about student learning (EPPI, 2002). This chapter looks at both summative assessment (assessment *of* learning) and formative assessment (assessment *for* learning) of students.

## Context and features

### ***A reform to strengthen the focus on student outcomes with a key role for student assessment***

The OECD review visit and background documentation emphasised the integral role of student assessments in this centralised, highly stratified, multilingual and culturally diverse system (see Chapter 1). The latest educational reform in fundamental schools, which started in pilot schools (*i.e. écoles en mouvement*) in 2008, was triggered by changes to this context as well as the results from the international assessment of 15-year-old students (OECD’s Programme for International Student Assessment). It was designed under the concept of “equity of opportunities” and has three priorities related to student assessment (MENFP, 2011a). First, it proposes to establish ways for schools to deal with the increasing heterogeneity of the student population and reduce the impact of social and cultural background on student learning outcomes. Second, it intends to raise the overall level of educational attainment and rates of certification by minimising dropouts. Finally, it aims to add flexibility to a heavily structured system and redefines content to ensure the attainment of minimum competencies for all students.

Within this context of improving outcomes and accounting for diversity, an assortment of assessment tools exists that includes everything from teacher tests and observations to portfolios and national assessments. These tools are used by both teachers and the system to draw inferences about students’ learning for formative and summative purposes (see some examples in Table 3.1). The laws governing educational assessment from 6 July 2009 (MENFP, 2009c) define formative and summative assessments as follows:

- formative assessment takes place during the learning process and is intended to give students an opportunity to demonstrate what they are capable of by considering individual cognitive, linguistic, motor, emotional and social development;
- summative assessment occurs at the end of a cycle with certification purposes.

As the focus of testing moves from low stakes to high stakes, other aspects of the educational system will most likely also be impacted, including instructional decisions, breadth of the curriculum and content emphasis.

In December 2011, a first draft of a proposal to reform the secondary school in Luxembourg was published and is the basis for an ongoing nationwide consultation with all stakeholders<sup>1</sup>. This draft is the result of discussions and reflections between the MENFP and secondary school teachers on preparatory documentation that started in March 2010. The proposed reform would impact student summative assessment (*les critères de promotion*).

### ***Centrally defined minimum competency levels for student learning***

In 2009, the *Ministère de l'Éducation nationale et de la Formation professionnelle* (MENFP) defined in collaboration with teacher groups the essential competencies that students should attain by the end of each of the four cycles of fundamental education (*socles de compétences*<sup>2</sup>). The competency approach aims to place students at the centre of learning. The essential competencies should also guide teachers in their judgement on student progression through fundamental education, as students should attain the specified competencies at the end of a given cycle in order to be able to progress to the following cycle. The study plan (*plan d'études*<sup>3</sup>) includes guidance for teachers organised in three main sections: the essential competencies to be attained by students at the end of each learning cycle; performance descriptors to illustrate the attainment of each of the essential competencies, as well as recommended learning content; plus specifications for each cycle of the number of weekly and annual lessons during which specific competencies should be taught. Details are found in the education law of 26 August 2009 and are to be used to guide teaching (MENFP, 2009a). Collectively, these form the learning objectives against which student tests are designed and developed. Such “achievement standards” were introduced to secondary education in 2007 for languages and mathematics and are currently being extended to all subjects. The reform shifts from teacher-centred programmes towards student outcomes. It is centred on student learning, emphasising competencies and integrating formal and informal assessments as tools to monitor and improve learning. This approach considers learning as a continuous progression during fundamental education. The study plan also provides teachers with autonomy to adapt their teaching techniques to meet individual students’ needs (MENFP, 2009a). The study plan is accompanied by a detailed guide on how to interpret and use it (MENFP, 2009b).

### ***Documenting assessment of student learning progress***

#### ***Fundamental education***

With the introduction of competencies for Cycles 1 to 4 in fundamental education, there is a new system to document the assessment of student learning progress. The competencies serve as the basis for documenting and providing results to parents and others in report cards (*i.e. bilan des compétences*). Teachers will be expected to document student learning progress against the predefined end-of-cycle objectives in two ways:

- Formative reports at the end of each trimester (*bilan intermédiaire*): These reports are descriptive in nature (*i.e.* no test scores) and are designed to maintain students’ motivation and facilitate parents’ understanding of student progress against the predefined end-of-cycle objectives. This approach is supported by the assessment literature for less salient grading principles in elementary school (Shepard, 2006).
- Summative reports at the end of each two-year learning cycle (*bilan de fin de cycle*): These reports summarise students’ performance and determine their eligibility for promotion to the next learning cycle. These establish the performance level for each student using four levels: *i*) standards attained with reserve, *ii*) standards attained, *iii*) advance level, and *iv*) level of excellence.

Both formative and summative reports were introduced into the first two cycles of fundamental education as of 2009 and will be implemented in Cycles 3 and 4 by 2012 (ADQS, 2011). These two types of assessment are integrated to support the stratification processes – referred to as orientations – that occur at various points in the education system (see below). In the case that parents disagree with the performance level noted for their child in the summative report, they have 15 days to initiate an appeal with the *inspecteur* for the school (MENFP, 2011c).

### *Secondary education*

In secondary education, there is an established tradition of giving a report card to students at the end of each term, comprising individual scores in each subject. The academic year 2007/08 saw the piloting of a qualitative feedback sheet (*complément au bulletin*) to the students' summative report card. This aims to better document student learning progress, by giving feedback on their competency level (highly competent, competent, becoming competent, insufficient level of competency) in different skills (e.g. for French: writing texts; spelling/grammar; expression/vocabulary; comprehension of written text; comprehension of oral language; speaking, communicating and listening). This tool is being progressively introduced for all subjects. It is established in the tenth and eleventh years of compulsory education and was introduced in the ninth year (*i.e.* the first year of secondary education) in 2009/10. There are plans to further refine this tool by drawing up descriptors for different skills.

### *Main forms of student assessment*

#### *National standardised assessments*

Standardised assessments at the national level occur at various points in the system to identify whether students achieve the national learning objectives; they can be either low or high stakes (see Table 3.1).

In the fifth and eleventh years of compulsory education, these assessments are intended for summative purposes at the system level and are low stakes for students. Low-stakes standardised assessments are paper based in the fifth year of fundamental education and computer-based in the eleventh year of compulsory education (Grade 5 of general secondary and Grade 9 of technical secondary education). The University of Luxembourg develops these tests through a group led by an educational psychologist with psychometric background who works with volunteer teachers, *inspecteurs* and other researchers. These assessments do not contribute to the individual grades of students and the reporting is anonymous in relation to the students, but they provide detailed information at the classroom, school and national levels. The ADQS informs the OECD review team that feedback to individual students and their parents is planned as of 2012. The content of these tests is confidential and not publicly released in order to allow comparison of results over time. However, the ADQS reports that due to increasing demand from teachers, there are plans to publicly release a few of the student test items annually, so that teachers can use these as test examples in classroom practice. An overall national report presenting an overview of average results is published (see Chapter 6).

A different type of standardised assessment is administered in the eighth year of compulsory education. Here the stakes are high for students and although all students sit tests with the same content, the content is not standardised over time and may give emphasis to different content (e.g. production or comprehension skills) in each subject

from year to year. Further, the difficulty level of the tests may vary from year to year. The content of the assessments is set by a working group including representatives from the MENFP, teachers and *inspecteurs*. These assessments examine French, German, and mathematics and are summative and high stakes at the student level because they are used as the basis for the orientation process at the end of fundamental education. For this reason, these are also known as *épreuves passage primaire-post-primaire (PPP)*, meaning the tests for transition from fundamental to secondary education.

### *National non-standardised assessments*

Non-standardised tests, also known as *épreuves communes*, are administered in French and German, also in the eleventh year of compulsory education. The ADQS informs the OECD review team that subsequent to its visit non-standardised tests in natural sciences are also being piloted in selected schools. These assessments are called “common” because they cover the full population of students attending these courses in all schools and relate to the specific content of the courses. Teachers develop these tests using the national learning objectives. They are low stakes for the teachers and students, although students’ results in these tests do contribute to their trimester average score. Student test performance is scored by teachers and the results are analysed by the ADQS (see Chapter 6).

**Table 3.1 Major student tests in Luxembourg**

Year of compulsory schooling	Subject	Standardised	Summative function	Formative function
Year 5 (first trimester of Cycle 3)	German Mathematics	Yes and comparable over time	System (student knowledge end of Cycle 2)	School Class <sup>1</sup>
Year 8 (end of Cycle 4)	German Mathematics French	Yes, but content and difficulty vary annually	Student (one of the criteria for orientation to secondary education)	
Year 11 (Grade 5 general secondary; Grade 9 technical secondary)	German Mathematics French	Yes and comparable over time	System (student knowledge end of Cycle 5)	School Class <sup>1</sup>
	French German	No	Student (contributes to the trimester average score)	System <sup>2</sup> School Class Student
Year 15 (Grade 1 general secondary; Grade 13 technical secondary)	All subjects	No	Student (contributes to score on the secondary school certificate)	

Notes: 1) Anonymous feedback of individual student results allows comparison of class results to school and national averages.

2) Results are collected by the Ministry, aggregated, analysed and fed back to schools.

The ADQS reports that the MENFP intends to administer the *épreuves communes* at the end of the tenth year of compulsory education (Grade 6 of general secondary and Grade 8 of technical secondary education). This will seek to align these tests with the set of nationally defined competencies that students are expected to achieve at the end of the first two years of secondary education. As such, this will provide additional evidence to inform the class council’s decision of students’ competency level.

### *Classroom-based assessments*

Classroom-based assessments are also an integral part of the education system. In fundamental education they include alternative approaches such as portfolios and observations. At the secondary level, these comprise mostly assessments that follow a more traditional approach with scores of up to 60 points, with 30 or above considered passing (MENFP, 2006). These occur throughout the school year with summary grades provided each trimester. The annual score is an average of the trimester grades, but a unique aspect is that decisions on the student's progress to the next stage of schooling are not made at the subject level but across subjects – that is, low performance in one subject can be compensated by high performance in another subject. This system emphasises promotion and is recognised to be only a snapshot of students' performance rather than an account of their progress. One of its advantages is that the approach is very familiar to parents and students. The procedure in secondary education is currently under review as part of the proposed reform in secondary education.

### *The role of student assessment in their orientation*

#### *Transition from fundamental to secondary education*

The first stratification (*i.e.* orientation) happens at the end of Cycle 4 (the eighth year of compulsory education) and is known as *passage primaire post-primaire (PPP)*, where students proceed to two main streams in secondary education: general (7ES) and technical (7ST or 7MO). Documentation about this process conveys the idea of a holistic approach that involves multiple parties in the School Orientation Council (*conseil d'orientation*), that is the *inspecteur* for the school, class teacher, and two teachers from general and technical secondary schools, and uses information from multiple sources (school reports; standardised assessments for French, German and mathematics; teachers' evaluation of the student's learning; and parents' views). Parents can also request the presence of a psychologist from the School Psychology and Orientation Service (*Centre de psychologie et d'orientation scolaires, CPOS*), although such professionals can only have an advisory role. Parents are informed of the School Orientation Council's decision and can appeal. In 2009/10, 11% of students were oriented to a less demanding type of secondary education than their parents had expected, and the reverse was the case for only 1% of students (MENFP, 2011c).

In cases of disagreement, after appeal, if students are oriented to secondary technical education but parents would like them to attend secondary general education, students will take another admission test (*examen d'admission*) during a whole day, that includes three parts: *i*) a 45-minute assessment of mathematics; *ii*) a 2-hour, 15-minute assessment of German with dictation, reading comprehension and essay; and *iii*) a 2-hour, 15-minute assessment of French with dictation, reading comprehension and essay (MENFP, 2011b). No further tests are necessary in cases of disagreement when students are oriented towards secondary modular education (referred to as 7MO) but parents would like them to attend secondary technical education (referred to as 7ST). In 2009/10, 3% of students finishing Cycle 4 sat the admission test, of which 12.5% passed and were admitted to general secondary education (MENFP, 2011c).

In the academic year 2012/13 revised procedures will come into force (Grand Duchy Decree 7 February 2012)<sup>4</sup>. These are designed to better align to the new competency approach with its assessment tools for regular feedback to parents via the formative reports (*bilan intermédiaire*) and summative reports at the end of each cycle (*bilan de fin*

*de cycle*). The decision will still draw on multiple sources of information, but with a few changes:

- The class teacher’s judgement as based on the assessment of student competencies documented in the *bilan intermédiaire* and the *bilan de fin de cycle* (instead of student test scores). Specifically (Article 2 of the Decree):
  - level of competency attained by the student in the different competency domains of German, French and mathematics and documented in the *bilan de fin de cycle*;
  - evaluation of cross-cutting competencies documented in the *bilan intermédiaire* of Cycle 4.
- Student results in the national *épreuves communes* measuring student attainment of the national standards defined for the end of fundamental education (instead of results in the national standardised tests)
- Student school work that demonstrates their learning, interest and aspirations.

Consideration of the parents’ view will remain important information in making the orientation decision and the new procedures will reinforce parents’ access to information in forming their view. Article 4 of the Decree specifies that parents should have information on the school results documented in the *bilan de fin de cycle* and *bilan intermédiaire*, as well as their child’s results in the *épreuves communes*. Importantly, parents must benefit from earlier feedback from the class teacher on their child’s progress with specific reference to his or her possible pathway in secondary education (in individual discussions from the first term of the second year of Cycle 4). Similarly, parental involvement will increase in procedures for students who have not attained the competencies in Cycle 4 and who leave fundamental education at the end of Cycle 3 or before completion of Cycle 4. This concerns students who are 12 years old and who leave fundamental education to enrol in Grade 7 of the modular stream of technical secondary education (7MO). The student and his/her parent will receive a report of competencies attained in the different competency domains.

### *Progression through secondary education*

A July 2005 law stipulates the criteria for student assessment and promotion in secondary education. Performance in German and French as well as mathematics remains the focus of the orientations at secondary level, which occur at the end of the fourth year in the secondary general track (4ES) or at the end of the third year in secondary technical (9TE, 9PO, 9PR or 9MO). For secondary general education, this orientation will guide students towards one of the seven sectors in the specialisation cycle, with access to each of these sections based on a combination of factors that includes interest and performance. For example, Section A emphasises languages, with access granted to students who passed all courses in Grade 4ES and scored an average of 38 points or higher in the yearly grades for languages, while Section B emphasises mathematics-data processing, with access granted to students who passed all courses in Grade 4ES and scored an average of 38 points or higher in mathematics, and so forth (MENFP, 2007). This orientation assumes that students are active participants in their learning process regarding their interests and future goals. The procedure for student assessment and promotion in secondary education is currently under review as part of the proposed reform in secondary education.

## Strengths

### ***Clear communication to a wider public on how recent changes affect student assessment***

Educational reform takes time – time for development and implementation, time for users such as policy makers, teachers and students to become familiar with the new approach, and time for positive results to emerge. The process used by Luxembourg seems headed in the right direction. The MENFP site ([www.men.public.lu/](http://www.men.public.lu/)) represents a good source of information as it allows users access to all descriptive information, publications and reports, which is useful in a centralised system such as Luxembourg. To accommodate the country’s multilingualism, the majority of information is offered in both French and German and in many cases also in Portuguese, which ensures access to a wider range of audiences. These are all very positive steps that should be linked to ensure the efficacy of the system in its ability to meet students’ needs and to result in positive outcomes. Indeed, there is a specific website dedicated to the current public consultation regarding the secondary school reform ([www.reformelycee.lu/](http://www.reformelycee.lu/)). This includes an open blog for the public to comment on the proposed reforms.

### ***Good initiatives to use student assessment to monitor and promote equity and support learning***

The intention of using assessments as tools to monitor progress and support learning is clear and well disseminated – this is reassuring and should continue. The emphases seem to be on improving equity, increasing flexibility of educational provision and developing ways to better integrate and support foreign and lower-performing students as they enter the school system. These initiatives seem well considered and carefully documented through publications, websites and training. While the implementation of these initiatives is at an early stage, the OECD review team saw some good examples of teachers working to embed the competency approach in their instruction.

In particular, the introduction of standardised testing at the end of Cycle 4 in fundamental education is an important step in making the decision process for student transition from fundamental to secondary education more equitable. Student results in these tests are one of the criteria considered when deciding on the type of secondary education they will follow. Research highlights the importance of considering many different types of evidence that may range from a sample of students’ work to observational measures, when making an important summative assessment of students (National Research Council, 2001; Koretz & Hamilton, 2006). The use of multiple sources of evidence about students’ learning avoids errors from a single measure leading to incorrect decisions about a student. Second, a single test will often be considered incomplete regarding the type of educational objectives that the system is interested in considering which are often broader and go beyond the scope of traditional tests. According to Koretz and Hamilton (2006) “incorporating other sources of information could both improve the quality of information about performance and reduce the likelihood of undesirable behavioural responses”.

The commitment to feed back results from national tests to schools and classes is also commendable. In theory, these provide useful evidence for *directeurs*, *inspecteurs* and teachers to feed into analysis of their instructional approaches in key areas of mathematics and languages and can lead to impact on teacher approaches to student assessment and follow up. In particular, Luxembourg is also starting to capitalise on new



technologies for student assessment: the use of computer-based tests in the eleventh year of compulsory education allows the possibility for a more rapid feedback of results to schools and teachers. This holds strong potential for their diagnostic use by teachers. Although, so far teachers have not received results for individual students, the ADQS informs the OECD review team that there are plans to feed back results to teachers for the first time in April 2012.

### ***The shift to competencies has great potential to strengthen formative assessment practices***

The recent reform places the student at the centre by shifting the focus to a competency-based approach that emphasises the formative aspect of assessments through frequent timely feedback while also providing the appropriate tools for improvement. In particular, the regular reports on student learning progress (*bilan intermédiaire*) in fundamental schools are being used to compare students' performance with the predefined end-of-cycle objectives at the end of each trimester (MENFP, 2009a). The expectation is that a more integrated use of formative assessment will lead to improvements in teaching and learning as well as outcomes (Black and William, 1998; Shepard, 2006). Article 3 of the laws governing educational assessments from 2009 consider formative assessments as an essential factor in students' motivation, self-confidence and progress as they inform students and their parents about their progress and difficulties while allowing teachers to identify weak areas and choose the best didactic approach to reach the intended educational goals (MENFP, 2009c). However, this intended purpose needs to be fully integrated into a coherent system of assessment and teaching/planning, as will be discussed later in this report.

During the OECD review, interviews with parents and students indicated high levels of motivation towards the competency approach, particularly among younger children, because they get more frequent feedback in ways that are easier to understand. Parents, in particular, felt that the competency-based approach increased motivation while minimising pressure and competition among students.

### ***Professional development support for teachers on student assessment***

Synchronisation between professional development programmes for teachers and the new approaches to teach and assess students is essential for the long-term goals of any educational reform. Teachers must understand how students learn and how to better assess each set of content. Thus, theories of learning and cognition should be integrated into professional development. In addition to addressing theory, professional development must also ensure a practical aspect that offers hands-on experience to future teachers. Teachers play a fundamental role in this context as they are responsible for implementing the required curriculum by deciding how to teach, how to assess learning and how to interpret results.

Within this context, there seem to be many initiatives to support teachers through a variety of training on how to use the competencies and how to adapt teaching methods and report results. Professional development of teachers in Luxembourg is outsourced to the University of Luxembourg following identification of priority areas by the MENFP, primarily for fundamental education, which was the focus of the latest educational reform. Additionally, the MENFP, through the Department for the Co-ordination of Research in Pedagogical and Technological Innovation (SCRIPT), offers over 1 200 professional development workshops that range from a few hours to a few days. These

are optional courses that teachers can voluntarily enrol to attend. Their topics are often developed in co-operation with *directeurs*, *inspecteurs* and teachers, but the demand for topics is often higher than can be accommodated by the programme.

This professional development support is essential because a shift to system accountability and student performance often leads to a discussion on quality instruction and increased focus on assessment outcomes. Assessments, particularly when perceived as high stakes by educators, are likely to influence instruction and student learning in unknown ways, so teachers must be deeply involved in the assessment initiatives through a sense of ownership.

### ***Efforts to engage teachers and promote new student assessment development and use***

The MENFP has various approaches to promote teacher engagement with new assessments. This includes via the development of the national standardised tests, the piloting of innovative projects in certain schools and the provision of assessment tools on line to all schools via a web-based browser.<sup>5</sup>

Outsourcing the development of assessment initiatives to involve a wider range of groups is positive. The development of the standardised assessments involves teachers, national researchers and education specialists from both within and outside of the MENFP, including the University of Luxembourg (ADQS, 2011). This ensures a wider understanding of the assessments' purposes, gives a better sense of ownership to those who participated and, most importantly, plays a professional development role, serving as training in these areas.

Further, the MENFP oversees different innovation projects which have either direct or indirect influence over the development of new student assessment approaches. Notably, the piloting of a student portfolio assessment approach and the pilot of extended school days offering additional opportunities for formative assessment and learning support to students.

The MENFP also provides an online assessment tool on its "My School" website. All schools can access this via a basic web-based browser. It provides an item-bank of different assessment questions and allows teachers to develop and create their own assessment questions and add these to the shared online resources.

## **Challenges**

### ***Lack of clarity on the purpose of different student assessment initiatives***

It is apparent that Luxembourg invests in testing and centres important decisions on its outcomes. However, rather than an integrated assessment system that coherently links the purpose of each assessment to what is assessed, how it is assessed, what is reported and what decisions are made on the basis of the results, the many student assessment initiatives seem to play independent roles. The different student assessment initiatives are not linked in an integrated framework and do not involve all stakeholders.

Overall, the system lacks synchronisation regarding the purposes of the various assessments, the role of their results, and the way their information is integrated into the teaching-learning process and interpreted by the various parties. This is particularly pertinent regarding the introduction of the standardised assessments in Cycle 3 and Grade 5ES and 9EST. For example, it is difficult for teachers to accept the types of feedback

reports from the standardised assessments (*i.e.* results for student groups versus individual students) when they do not really understand the purpose of the assessment used to generate these reports. This gap will most likely impact their levels of acceptance for the results of these tests and the extent to which they are integrated into decision-making processes. According to the National Research Council (2001) in the United States, the agreement between curriculum, instruction and assessment is “a crucial one because educational assessment does not exist in isolation, but must be aligned with curriculum and instruction if it is to support learning”.

A coherent assessment framework needs also to focus on a complete dissemination strategy that ensures access of information to the most appropriate parties within a proper time frame – particularly if formative information is part of the expected output. Although in theory and in documentation the various standardised assessments have good intentions and have been thought through, it seems that teachers and students are not fully informed of their purposes and therefore do not fully consider them in their planning or decision-making processes. For example, teachers seem to disagree with the student anonymity reporting approach of the standardised assessment and would prefer to receive feedback on individual student performance.

### ***Little evidence of systematic use of formative assessments***

The latest educational reform as well as the educational laws incorporated the concept of formative assessment (MENFP, 2009c). The characteristics of formative assessments have been mentioned throughout this chapter, and overall, the initiative is very positive. However, the OECD review revealed at this early stage of implementation several areas where the intended formative function of new initiatives is not currently understood and/or effectively implemented. For example, there was little evidence of the extent to which results from the interim student formative reports are used in a systematic way to guide teaching and improve learning.

Further, although some of the standardised assessments carry a formative purpose, results are not immediately available to teachers given the scoring and processing time. By the time teachers receive feedback, they may have already moved on to other parts of the curriculum, or it may be too late to provide individual remediation for students. Although of course these results could still be used by teacher groups to reflect on instructional strategies for different year groups and to make necessary adjustments for subsequent year groups, a significant delay in feedback to teachers reduces their diagnostic use for the students tested. Further, a key barrier to the optimal use of results from standardised tests by teachers is the lack of feedback on individual student performance. The anonymity aspect of the reporting scheme of standardised assessments is a barrier to the intended formative use of these results that would provide teachers with additional information to individualise instruction.

There also seems to be a need for many teachers to see formative assessment as an integrated part of their teaching and not as an additional burden. During the OECD review, conversations with teachers indicated that teachers do not feel they have enough time to interact with students on an individual basis to address these needs as there are few opportunities for a clear dialogue regarding learning. Indeed, although the concept of monitoring learning includes at its core a higher level of communication between teachers and students (*e.g.* more frequent feedback and interaction about the learning process and more opportunities for students to engage in their own learning), the OECD review team formed the impression that this aspect was not transparent in Luxembourg’s schools. In

particular, the examination of documents and interviews with students in secondary education revealed that this was not the case.

### ***National assessments signal major differences between the intended curriculum and the implemented curriculum***

Documentation and interviews indicated that the education system is currently working with multiple sets of curriculum and that the intended curriculum defined by the MENFP (2009a) may differ from the implemented curriculum that teachers are emphasising in the classrooms. It seems that while the national curriculum is used to develop the standardised assessments, an alternative curriculum is used for the non-standardised assessments developed by teachers. This inconsistency adds confusion and uncertainty to the complex role and purposes of these assessments.

The primary focus of the competencies approach is on individual results that automatically encompass individual interactions and extra individual supporting time – this may be challenging in large classroom settings with limited instructional time. During the OECD review, teachers reported that the competencies were developed without considering the implemented curriculum, challenging their ability to adapt and modify their teaching methods.

According to Shepard (2006), “the content of tests – what gets tested and how it is tested – and the content of assignments that are evaluated for a grade communicate the goals of instruction to students and focus their attention and effort”. The real goals of learning can only be accomplished when the content is clear and carried across from classroom activities to assessment. Curriculum cannot be viewed as an external tool and must be adopted by all constituencies of the community and implemented consistently throughout the system.

### ***Lack of transparency on methodological practices to develop and validate student assessments***

A first observation is that it was difficult for the OECD review team to access documentation on the design and methodology for the various major student assessments currently used in Luxembourg (*i.e.* the standardised assessments, the non-standardised national tests [*épreuves communes*] and the student tests at the end of secondary education).

Although the standard assessments are referred to in different publications and known across the system, methodological details about their characteristics and development process are not easily accessible. This information is essential for teachers and researchers to understand details about these assessments, such as their rationale, framework and test development processes, what and how they assess, what will be reported, and most importantly, how they can be used to assist teaching and learning. If their purpose is formative, teachers need to receive the necessary support and be allowed enough time to intervene. If these are high-stakes tests, teachers, parents and students must fully understand their characteristics and possible consequences.

The same holds true regarding guidelines for the development of non-standardised tests and student summative assessment in secondary education and approaches to ensure the validity of teacher scoring practices (see below).

Further, the OECD review revealed limited information regarding adaptation of assessment materials to students with physical or mental disabilities. Therefore, the extent to which assessment instruments are modified to meet the needs of some core groups of students with special educational needs was not apparent to the review team.

***Weight of languages in student summative assessment disproportionately impacts some student groups***

Throughout compulsory education in Luxembourg, languages occupy a central role, as one might expect given the overall situation in Luxembourg and the philosophy of the education system. However, due to the social characteristics of the system, this heavy emphasis on multiple languages seems to increase, rather than minimise, social inequality. Most students are not equally fluent in multiple languages, or in many cases do not speak any of these languages at home. The impact of languages is particularly challenging in summative assessments that are used for decision making, such as the first orientation before secondary education, which gives two-thirds weight to student performance in French and German. As a high-stakes decision being made to decide the student's future, this has increased inequality in access to the various tracks of secondary education (see Chapter 1). Despite the fact that two-thirds of the students will follow the technical path, during the OECD review, interviews with students and parents indicated a negative view towards technical education, with students reporting their perceptions that only low-performing and problematic students go to technical education. None indicated a desire to choose the technical path, which is surprising given the wide spectrum of offerings in secondary education. In addition to languages, it is intriguing that the only other domain emphasised is mathematics – other subjects, such as social or natural sciences, have no role in this system.

While documentation conveys the impression that student orientation at the end of fundamental education follows a holistic approach and involves multiple parties, the OECD review team formed the impression that the actual process seems to lack transparency and, in reality, seems guided primarily by students' performance in French, German and mathematics, with little input from parents. Further, although parents are allowed to appeal, there is limited flexibility because any revised decisions are based on additional student testing on the same domains of French, German and mathematics. This high emphasis on performance, primarily in languages, results in unequal access rates by social and cultural groups (see Chapter 1).

The central importance of student performance in languages in their orientation and progress through compulsory education heightens the need for teachers to be able to regularly assess individual student progress and adapt their instruction accordingly. However, there were indications during the OECD review that teachers were struggling with this challenge. For example, early education teachers (Cycle 1), whose classes included large percentages of non-Luxembourgish children, expressed frustration due to difficulties in adapting their teaching tools and methodologies to meet the needs of children who did not speak Luxembourgish.

***Grading criteria are excessively prescribed by the Ministry***

The MENFP stipulates the classroom grading process, leaving little room for teachers' adaptation or innovation. The latest educational reform has shifted fundamental education from a numeric grading system towards broader competencies. However, numeric grades remain the base for assessment in secondary education and are clearly

dictated by the MENFP. For example, the first two articles of the law governing the promotion of students in secondary education from 2006 clearly specify the role of the tests, the grading scale and the way to calculate trimester and yearly averages as well as which information is to be included in a report card (MENFP, 2006). While there are advantages to this detailed approach, it is also important to allow teachers some flexibility regarding how non-traditional student work such as portfolios, extracurricular activities or projects is considered in summarising an assessment of their overall performance.

### ***Reliability of grading: a strong criterion in the decision-making process***

Validity and accuracy of results should be the priority of any assessment system. Some of the national assessments (the *épreuves communes*) are scored by the classroom teacher following predetermined scoring rules. Importantly, the high-stakes tests for students – the examinations and final grades in secondary education – are scored by teachers. Reliable scoring is a necessity for high validity and comparability of results and in the absence of adequate moderation procedures implies a significant challenge to the equity of final outcomes for students. However, the OECD review team formed the impression that there is a lack of processes in place to ensure the validity of teacher grading. This is despite the fact that the importance of grading is emphasised by the laws governing education from 14 July 2005 by describing details about grading, report card, promotion, and remediation processes for secondary level (MENFP, 2006).

### ***The key role of student self-assessment is overlooked***

During the OECD review, student self-assessment opportunities were not transparent through the interviews or documentation. The OECD review team formed the impression that assessment activities were implemented from a top-down approach, without interaction or communication between teachers and students. Students did not appear to have opportunities to participate in their learning process by critiquing their own work. However, such activities are likely to contribute cognitively and motivationally to student learning and to shift student focus away from grades to the criteria and feedback used in the evaluation process (Shepard, 2006). The OECD review team saw little evidence of students setting their own learning goals, assessing their progress and planning how they will make further progress. However, without the communication and involvement of students during the planning, implementation and review of assessment activities, these may not be effectively integrated into the daily processes of teaching and learning. Indeed, since the OECD review, the results of an evaluation of the pilot project “PORTINNO” to use portfolios for student (self-) assessment highlighted the importance of the teacher approach in promoting the effective use of portfolios by students in their self-assessment, including the teacher putting the student at the centre of the learning process and being open to learning more about his/her own instructional approach (Université du Luxembourg/MENFP, 2011).

## Policy recommendations

The overall initiatives of the Ministry to promote the use of assessment tools to monitor student learning, to specify learning objectives through competencies, and to ensure teacher training within the scope of the educational reforms are very reassuring aspects which are likely to result in a positive impact to student learning outcomes. The cyclic relationship created by the highly stratified educational system, the multilingual context of the country, and the high percentage of immigrants, on the other hand, seem to continue to interact to create more social inequality and unequal access to educational opportunities. With time and the involvement and efforts from all administrators, parents, and teachers, the steps taken within the latest educational reform should result in positive outcomes that better cater to all children in Luxembourg. To build on these positive steps and to ensure their successful implementation, the OECD review team recommends the following:

- establish a coherent framework for student assessment
- improve teachers' ability to effectively use student assessment results
- strengthen oversight of the development of national student assessments
- prioritise strategies to reduce the influence of languages in summative student assessment
- develop processes to increase consistency of grading in student assessments
- ensure students are actively engaged with and proficient in assessment
- ensure the necessary adaptations of standardised tests for students with special educational needs

### *Establish a coherent framework for student assessment*

To improve stakeholder understanding and acceptance of the various student assessment initiatives, the OECD review team recommends establishing a coherent framework for current student assessments detailing:

- how the various assessment initiatives are linked
- the rationale, purpose and goals for each assessment
- the technical methodology for each assessment
- the reporting scheme and intended use of results for each assessment

Student assessment plays a fundamental role in education. It should be designed in ways that enhance and complement teaching and learning, and it can occur in two different contexts. Classroom assessments represent the most common type. They are traditionally developed by teachers primarily to support their instruction and students' learning (*i.e.* formative purposes) as well as to provide summative grading over time. The focus of classroom assessments is on the student and results are strongly related to activities inside the classroom. Their effectiveness depends on how well they are connected with instruction and curriculum. As such, they are frequently individualised, with their interpretation narrow and often limited to the classroom. Large-scale or standardised assessments, on the other hand, are used most often for accountability purposes to evaluate programmes and develop educational policies, but they are also used

as external summative assessments to re-emphasise general learning goals. These are based on a broader sample of the domain (*e.g.* mathematics) and, as a result, are less contextualised. Their results and inferences are general and more efficiently communicated at a system level over time. Because of these differences, one type of assessment will most likely not meet both of these requirements, but taken together, both are important in a comprehensive education system with the primary purpose of improving learning.

In designing a coherent framework, it is essential to emphasise the improvement dimension of student assessment. The primary aim of assessments should be “to educate and improve student performance, not merely to audit it” (Wiggins, 1998), with an emphasis on “assessment for learning” rather than “assessment of learning” (Stiggins, 2005).

It is worth noting that the information and methodologies surrounding the major student tests were not fully transparent during the OECD review visit or background documents and were not found in public documents. Therefore, a key recommendation would be to provide users with background technical information to add transparency on these initiatives. A thorough explanation and clarification of the purposes of each type of assessment and the type of inferences that can be made from the results of these will help all stakeholders to understand and work with these constructively.

### ***Improve teachers’ ability to effectively use student assessment results***

The OECD review team sees considerable room to improve teachers’ use of student results to better account for students’ individual needs. The OECD review team commends the efforts to implement a competency-based approach. This serves as a facilitating tool that teachers can use to implement student self-assessment initiatives and create individualised development plans to accommodate each student’s individual needs. Documenting individual progress and achievement while associating these with a plan to achieve well-established goals provides background for teachers and facilitates their adapting instruction to individual student needs.

In further promoting teachers’ use of student assessment results, the OECD review team recommends a two-fold approach. First, there is scope to more effectively feed back the results from standardised tests to teachers. Notably, consideration should be given to providing results to teachers for their individual students. This can be done in a way that only the teachers concerned see the individual results, but it can be useful diagnostic information for them in further planning instruction for the different students in their class. Technology offers possible solutions to the confidential feedback of results to different stakeholders (teachers, school *directeurs/inspecteurs*). Further, providing analytical software packages for teachers so that they can easily compare results to national, school, class averages or for particular groups of students can strongly promote teacher use of the results. The feedback of results from national tests in Denmark provides an interesting example (see Box 3.1).

Second, there is room to provide targeted professional development to teachers on how to integrate assessment into their teaching within the competency approach. This can include how to use the results from the national assessments, how to communicate them to students and how to adapt their teaching methods accordingly. Further, this should also promote the use of centrally provided assessment tools on “My School” and, importantly, help stimulate the expanded use of formative assessment across the system. The ADQS informs the OECD review team that it intends to offer schools support in the interpretation and use of national test results in 2012. This offers a good opportunity to tailor such support to teacher needs and not only the interpretation of results at the school level.



### Box 3.1 Denmark: Feedback of student results on national computer-based tests

The day after students sit the national tests, their teachers receive a confidential access code to view their students' results on line (the school principal can also view these results). Results are presented in different formats:

- Overview for teacher: an overview of the available results for the teacher's classes and student groups. Results appear as an overall score for each class within each profile area as well as an overall score – an assessment across the profile areas.
- All students: a summary of results and status for each student's scores in each profile area and a comprehensive assessment of each student.
- Individual students: information for individual students on their response (right/wrong/not answered/length of time taken to answer the task) on the test tasks in each profile area. For each task, general information is given on: task difficulty (on a scale of 1 to 5, with 5 being the hardest); topic area (core academic content); typical time students take to answer this task; where the task fits on the overall assessment scale (scale scores from 1 to 100).
- Teacher-specified groups: teachers can specify particular groups of students and see an overview of their results, *e.g.* for boys and girls, or for students following a particular teaching strategy/programme.

Such information allows teachers to confirm their professional assessment of students by identifying students who are consistently above or below average across profile areas or who have challenges or strengths in particular profile areas or topics. Such information can feed into teacher plans to tailor instruction to sufficiently stimulate or support further student learning. The teacher-specified groups function also opens up the possibility to track the effectiveness of different teaching strategies, particularly given the possibility for teachers to re-administer the test to students at up to two later periods.

Further, there is an option for teachers to print out a summary sheet for parents describing student performance on the test overall and by profile area. This aids communication of results to students' parents.

*Source:* Shewbridge *et al.* (2011), based on information on <http://evaluating.uvm.dk>.

### ***Strengthen oversight of the development of national student assessments***

In Luxembourg, national assessment initiatives have involved outsourcing the development of assessment to nationally recognised universities, most notably the University of Luxembourg. These projects have also involved volunteer groups of teachers and external researchers. The OECD review team commends this approach, as it is likely to increase the level of acceptance of these initiatives and provide a sense of ownership among the participating stakeholders. Essentially, stakeholder involvement can contribute to professional development as these activities will emphasise best practices regarding test development and the development of specific test questions (item writing) and add transparency to learning objectives while emphasising accuracy of content. While external involvement brings positive outcomes to the system, it is essential for the Ministry of Education to maintain full control over this process. The ADQS reports that it works in close collaboration with the University of Luxembourg and seeks to engage international expertise to contribute to the work of the teacher working groups. However, the OECD review team sees room to further strengthen oversight of national test

development. This means the co-ordination of any assessment activities, primarily regarding their overall direction, the assessment content and the most appropriate reporting methods. This will contribute to the level of accountability. It is of equal importance to ensure the systematic involvement of a balanced and representative range of other key stakeholders in the development of assessments and to avoid an approach that may be perceived as *ad hoc*. This may involve establishing an independent body with authority to advise on this and various other strategic and test development issues. For example, in the United States, the National Assessment of Educational Progress (NAEP) is the largest nationally representative group-score assessment and it examines subject matter achievement, instructional experiences, and school environment for populations of students. Although the United States Department of Education carries overall responsibility for the NAEP project and is involved in every aspect of its development, it also involves various stakeholders in the decision making and for contracting the test implementation. In particular, there is an appointed governing board that is independent from the Department of Education and sets the assessment policies, including developing the assessment framework and test specifications.<sup>6</sup>

### ***Prioritise strategies to reduce the influence of languages in summative student assessment***

Language skills in French and German are considered as key outcomes of Luxembourg's education system. A clear challenge in improving student outcomes in Luxembourg overall is to improve the opportunities for students who may not master French or German during fundamental education to access general secondary education. System interventions at an early age may help to compensate language deficiencies and provide better educational opportunities to students who do not speak French or German at home. Assessment plays a key role in this context: there is heightened importance for the regular diagnostic and formative assessment of student progress in French and German languages. As it stands, the impact of languages in high-stakes decisions is strong and is having a negative impact on non-Luxembourgish children or children who enter the education system late.

Accepting the strong role of languages may indicate that second language teaching and assessment should become part of the educational discussion. Although, second language learners are those that “reside in the country where the target language is spoken, meaning that they have ready access to communicative interactions in the target language in everyday life” (Chalhoub-Deville & Deville, 2006), they have different educational needs in their language development. Luxembourg should consider ways to better integrate second language learners by adapting teaching methods and the approach to assess them, but also allowing them some flexibility in choosing the teaching language, primarily for students who recently entered the education system.

Professional training and support are essential in integrating these young children into the multilingual system. It is also important to consider how ability is defined when assessing second language learning. Second language ability may extend beyond the traditional cognitive skills emphasised by reading, writing, listening and speaking. It may encompass a dynamic integrated set of competencies better demonstrated through alternative types of assessments, which may include performance-based or authentic tasks. Finally, formative assessments, continuous feedback and opportunities for self-assessments play increasing roles in second language learning as students need to be informed of their progress in order to take control of their learning process (Chalhoub-Deville & Deville, 2006; Shepard, 2006; Looney, 2011).

### *Develop processes to increase consistency of grading in student assessments*

The OECD review team underlines the need to develop processes to increase consistency of grading in student assessments, particularly where these have high stakes for students. Consistent and reliable grading from a standardised scoring approach is essential for the validity and comparability of results. This is particularly important in Luxembourg as assessment results are being used to guide high-stakes decisions on students' access to different educational opportunities. Research supports some aspects of the current approach by Luxembourg to grading student summative assessment at the secondary level, namely the provision of detailed scoring guides (*e.g.* Harlen, 2004; Frederiksen and White, 2004). Further, with the introduction of standardised assessments, research also supports the involvement of teachers in setting scoring criteria (*e.g.* Frederiksen and White, 2004). However, what is underlined in much literature is the importance of adequate professional development opportunities and the encouragement of teacher collaboration in scoring student assessments. The latter is a major approach in Sweden, where the systematic scoring of student summative assessments is encouraged among teacher groups within a school, and also among school groups to share reciprocal scoring practices (Nusche *et al.*, 2011).

The implementation of national standardised tests and the complementary non-standardised tests (*épreuves communes*) provides an opportunity for professional development for teachers in the assessment against the national learning objectives. When scoring large-scale assessments, the traditional approach is to centralise the scoring. That is, scorers spend time together in a central location where they are trained by the same trainers and continue on to scoring all materials. In this context, the process includes detailed training on how to score each task in the assessment including its characteristics and what it measures, a full review of its scoring rubric and criteria, and illustrative exercises using sample student assessment papers to provide a benchmark for scoring. This approach results in all student assessment papers being scored by the same group of scorers.

A less conventional approach involves decentralisation or local scoring. In this alternative approach, the scoring process involves a number of local scoring centres and consequently several trainers and groups of scorers and thus, raises questions of comparability of scores coming from the various locations. This approach requires detailed evidence to indicate that the scoring procedures are comparable across locations – that is, the process must ensure and provide evidence that every scorer, independent of the location and source of training, is interpreting the scoring rules in a comparable way. A common way of collecting such evidence is through the central rescoring of a sample of student assessment papers. The purposes for rescoring are to document the degree to which the same scores are given to the same responses, regardless of the scorer and to identify where there is low consistency of scoring by different individuals on different test questions. Low consistency in scoring is referred to as “low inter-rater agreement”. To ensure consistency, a rescoring operation must achieve, for example, an inter-rater agreement of at least 95%.

Within both approaches, the quality of training provided to scorers remains an essential aspect. Using only scoring rubrics will most often lead to comparability issues of the final results (Lane and Stone, 2006). The OECD review team formed the understanding that Luxembourg was applying a variation of the latter approach – decentralised scoring – where teachers scored students' responses in their own school. The OECD review team understood that detailed scoring rubrics were available to

teachers for use during scoring, but saw no evidence of specific training for scorers or any other procedures to ensure the reliability of scoring among teachers. It was also not clear whether teachers were scoring responses from their own students, or random students. As noted above, the systematic collaboration of teachers in grading student assessment is strongly recommended.

### ***Ensure students are actively engaged with and proficient in assessment***

The purpose of the formative assessments is to provide an understanding of where students are in their learning process and provide tools for improvement by “actively engaging students in their own learning processes” (Looney, 2011). In addition to assessing their level of understanding, formative assessments are important to provide students with opportunities to take responsibility for their own learning through informative and continuous feedback that are related to the learning process and offer suggestions for improvement. Formative assessments, when “effectively implemented, can do as much or more to improve student assessment than any of the most powerful instructional interventions, intensive reading instruction, one-on-one tutoring, and the like” (Shepard, 2006). In simple terms, the framework for an effective learning-assessment process should focus on where students are at a certain point as far as attaining the instructional goal in relation to where they should be, focusing on what can be done to get them there.

As the educational reform emphasises monitoring learning and providing more constant feedback, student self-assessment as well as peer-assessment activities help in integrating assessment in instruction and should be made part of the classroom activities. Additionally, this type of activity fits well within the competency-based approach that clearly identifies what is expected of each student, but these must also be part of teachers’ professional development.

Integral to an assessment approach that considers formative information is the need for students and teachers to have a common understanding of the criteria and desired level of improvement needed for the student to succeed. To accomplish that, students should be given opportunities to self-monitor and criticise their work. This process contributes to the motivational and cognitive aspects of learning, increases levels of responsibility over their own learning, and creates a more co-operative teacher-student relationship (Looney, 2011; Shepard, 2006; Gipps, 1994). Self-assessment activities help in shifting students’ attention from grades towards the criteria used for grading and the feedback they receive about the learning process, giving them ownership over the evaluation process.

The student must be an integral part of the learning process. As such, there must be opportunities for the student to ask questions and communicate with teachers on a one-on-one basis. It is essential for teachers to offer extra opportunities, such as during breaks or after school, for students to seek assistance and ask questions. Another way for students and teachers to interact in the teaching and learning processes is through the scoring approach for assessment tasks that involve human subjectivity – that is, questions that require students to openly develop an answer (constructed response items or performance tasks). There are two main approaches for scoring: holistically and analytically (Lane and Stone, 2006). The holistic approach of scoring summarises all aspects of the task in a single score and most often, provides summative information about student performance. The analytic approach is based on a detailed point system or checklist that assigns points to each aspect of the task. This approach plays a formative

role as it provides teachers with detailed descriptions of which area needs improvement and provides students with a clear identification of their strengths and weaknesses. The analytic approach also provides teachers with task-level information that can be used for planning future lessons or developing tasks for individual students.

In this context, the OECD review team commends recent research efforts on innovative assessment practices, as well as the pilot approaches to extend school days (e.g. the “PORTINNO” project and the “Eis schoul”). The OECD review team recommends the continued support for such research and, importantly, that the results are sufficiently discussed by stakeholders and fed into considerations for promoting innovation assessment practices throughout the system (see Chapter 6).

### ***Ensure the necessary adaptations of standardised tests for students with special educational needs***

The population of students with special educational needs represents an important sector of society that the education system needs to accommodate by making materials and information appropriate to their needs. In the case of assessments, the extent to which modifications or accommodations are implemented and the consequences of this are not always transparent to test developers or users. Within this context, Hollenbeck (2002) differentiates a modification – defined as “a test alteration that changes the construct being assessed” – from an accommodation – defined as a test alteration that does not change the construct by providing “students with better access to demonstrate what they know”. Accommodations apply exclusively to factors extraneous to the intended measurement and can occur at the stimulus level, at the response mode level, or in most cases in both, and can range from layout to administration (Phillips & Camara, 2006). Layout accommodations may include visually modifying the instruments to facilitate understanding with enlarged font sizes or modified colours. Modifications to administration may include verbal or signed instructions or modifications to the length of testing session, but it is imperative that these are considered in the context of what is actually being assessed. For example, a reading assessment cannot be modified for vision impaired students by reading aloud the materials to students – this would change the nature of what is actually being assessed (the “construct”) from a reading comprehension test to a listening comprehension test. The essential validity aspect to be considered is that any inferences made from accommodated tests must carry the same meaning as those made from standard tests (Hollenbeck, 2002).

Adaptations of assessment materials are not simple and may impact the level of inference and the way these results are comparable across populations. While it will still be possible to draw inferences regarding the students’ knowledge and skills, it is important to recognise that these will deviate from the standardised approach to assessment, but that such deviation may be necessary in order to obtain accurate and valid information for all students.

## Notes

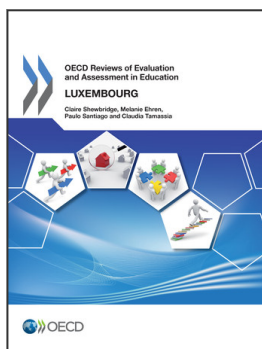
1. See: [www.men.public.lu/priorites/111205\\_reforme\\_secondaire/index.html](http://www.men.public.lu/priorites/111205_reforme_secondaire/index.html).
2. See:  
[www.men.public.lu/priorites/ens\\_fondamental/090723\\_bibliotheque/111130\\_levels\\_of\\_competence\\_1\\_4.pdf](http://www.men.public.lu/priorites/ens_fondamental/090723_bibliotheque/111130_levels_of_competence_1_4.pdf).
3. See:  
[www.men.public.lu/priorites/ens\\_fondamental/090723\\_bibliotheque/110906\\_plan\\_etudes.pdf](http://www.men.public.lu/priorites/ens_fondamental/090723_bibliotheque/110906_plan_etudes.pdf).
4. See the Grand Duchy decree of 7 February 2012:  
[www.men.public.lu/actualites/2012/02/120207\\_ppp\\_procedure\\_12\\_13/120207\\_rgd\\_nouveau\\_ppp.pdf](http://www.men.public.lu/actualites/2012/02/120207_ppp_procedure_12_13/120207_rgd_nouveau_ppp.pdf).
5. For more information, readers can see: [www.myschool.lu/home/mS/gyana.asp](http://www.myschool.lu/home/mS/gyana.asp).
6. The Secretary of Education appoints the 26 members of the NAEP Governing Board, comprising governors, state legislators, local and state school officials, educators, business representatives, and members of the general public. Legal responsibility for conducting the NAEP project lies within the U.S. Department of Education (the Commissioner of Education Statistics). For further details see <http://nces.ed.gov/nationsreportcard/about/>.

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