

4 Consolidating Lithuania's upper secondary certification to meet learners' diverse needs and promote higher-order, complex learning

Lithuania's upper secondary certification – the Matura – transformed teaching and learning when it was introduced, by providing a trusted, reliable and objective measure of student achievement. A decade later, while the Matura continues to be a respected national institution, the country is reviewing its design so that it consistently promotes higher-order skills for all students. This chapter considers three key issues in the Matura – item development and analysis; assessing a broader range of skills in reliable and valid ways; and providing greater flexibility to be responsive to learners' personalised pathways. Each issue is presented first in terms of the wider context that influences the issue, followed by options that provide recommendations for the country to consider.

Introduction

The Matura is a respected and highly valued national certification in Lithuania. Its introduction over a decade ago radically changed young people's experiences at the end of upper secondary education by introducing a single examination for upper secondary certification and tertiary entry, promoting fairness and reliability. Today however, there are national concerns that the Matura items are predictable, tend to assess knowledge reproduction over competencies and are not particularly engaging or stimulating. These challenges are particularly acute as the country has started to implement a new curriculum which is explicitly oriented towards competency development. Evidence and experience from countries internationally consistently highlights that aligning certification and assessment with the curriculum is essential if the curriculum on paper is to become the curriculum that students learn in classrooms (OECD, 2013^[1]). This concern is especially prevalent in upper secondary education, where the stakes attached to upper secondary certification mean that assessment at this level invariably influences to a large extent where and how teachers and students focus their time and energy in the final phase of schooling.

This chapter presents three issues and related policy options to help Lithuania create a more engaging certification that effectively assesses the competencies that young people need for future success in post-secondary education and employment. It discusses how Lithuania can encourage the development of high-quality assessment items as well as medium to longer term processes to consolidate national assessment expertise and promote a Matura that remains fit for purpose over the long term. Issue 2 focuses on alternative types of assessment in the Matura such as projects, performances, investigations and extended essays. It discusses how the reliability and take-up of the existing project within the Matura could be supported as well as suggesting other types of alternative assessments that could be introduced in the future to promote a broader range of competency acquisition. Finally, Issue 3 discusses how the Matura can promote greater flexibility and options so that it is responsive to a broad range of prior learning – candidates may have studied different content such as general or vocational and different subjects – and supports student access and selection to a diverse range of future pathways.

Issue 1. Supporting continual improvement and high-quality assessment

When the Matura was introduced in 1998, it was a major step change in certification of upper secondary education and tertiary selection in Lithuania. It introduced a common examination for all young people seeking to enter tertiary education, ensuring objectivity and fairness for selection into tertiary education and ending the variability in entrance requirements across different tertiary institutions that had existed previously (OECD, 2017^[2]). Stakeholders reported to the OECD team that when the state Matura examinations were first introduced, they were perceived to be innovative, engaging and assessing higher-order, complex skills.

In 2022, at the time of the OECD team's visit to Lithuania, stakeholders expressed several challenges related to the Matura examinations. In 2022, there was a dramatic and unexpected fall in the results for the state Matura in mathematics, with 35% of candidates failing the examination (Nacionalinė švietimo agentūra, 2022^[3]). This created challenges for managing entry to tertiary education since passing the state Matura in mathematics is a requirement for tertiary selection. In the OECD's workshops with teachers and students in 2022, both groups expressed the view that the Matura was not assessing what learners could do and was dominated by the assessment of knowledge recall (see Chapter 1). Students also shared the perception that the Matura items are predictable and rarely engaging.

The country is planning to implement wide-ranging reforms to the Matura (see Chapter 1). This issue considers how Lithuania can develop a clear, nationally relevant vision for the Matura so that the planned reforms are able to effectively address some of current challenges that are associated with it.

The current context: design, development and analysis of Matura items

Design and specification

Item developers for Lithuania's Matura examinations are currently guided by syllabus documents for subject courses when developing items. However, there is no document or guidance that specifies the expected relationship between the curriculum and the Matura such as an examination specification. Clear specification of what the examination is designed to assess provides important guidance to guide item developers towards identifying and creating the most appropriate type of item to assess the competencies to be assessed. It also sets the expectations to drive analysis and evaluation of the Matura results so that the examination agency can assess how far the examination fulfilled its agreed purposes. With the implementation of the new curriculum in 2022, national experts in the examination team in the National Agency for Education are working with the country's curriculum officials to develop examination specifications for future versions of the Matura.

Item development

The Matura's items are developed by national experts that are contracted by the National Agency every year. Experts developing the items tend to be subject, rather than assessment, experts. The experts are typically from the school network or tertiary institutions although Lithuania does not currently have any institutions that provide courses or programmes on assessment specifically. Once the new items have been developed, a separate group of experts reviews the tasks.

Tasks

All the tasks on the state Matura examinations are pen and paper-based, aside from oral examinations in foreign languages (see Issue 2). Items tend to include a combination of selected-answer multiple-choice questions, short-answer closed responses and some open-ended questions, such as essay writing on the Lithuania language and literature paper. Currently, digital technologies are only used for marking scripts. Under the planned reforms to the Matura, the intermediate examinations that students take at the end of Grade 11 will be delivered digitally.

Results

Students taking the state Matura receive one of four grades: fail (15 marks and below); satisfactory (16-35 marks); basic (36-85 marks) and advanced (86-100 marks). In Lithuania, the marks required to pass the examination and the cut-off marks between the grade boundaries are the same every year and are set out in the examination programme. This means that every year candidates need 16 marks for a pass mark and 35 marks for a basic grade in all subjects. The grade thresholds are set out in the new examination specifications.

Over the past five years, the results in most subjects have tended to be stable (Table 4.1) with the exception of mathematics. Results in mathematics fell dramatically in 2020 in the context of the COVID-19 pandemic. Results also fell significantly in 2022. The causes of the 2022 fall in results as well as the consequences for the education system and the Matura were the subject of significant national discussion at the time of the OECD team's visit to Lithuania in October 2022. Further back, there has been a general decline in mathematics results since 2016, when tertiary institutions made the state Matura examination in mathematics a compulsory requirement for tertiary entry.

Table 4.1. State Matura examination results, 2018-2022

	2022		2021		2020		2019		2018	
	Entries	Pass Rate	Entries	Pass Rate	Entries	Pass Rate	Entries	Pass Rate	Entries	Pass Rate
Mathematics	14 418	64.6%	15 149	84.8%	15 241	67.6%	16 487	82.1%	17 043	87.2%
Lithuanian Language and Literature	16 822	92.2%	16 660	91.4%	17 243	89.3%	17 904	90.8%	18 602	91.3%
English Language	17 622	98.37%	18 107	97.92%	18 022	99.0%	19 155	97.9%	20 633	99.1%
History	7 533	99.2%	8 490	98.7%	8 458	99.8%	8 510	98.8%	10 023	95.3%
Geography	3 842	99.2%	3 346	98.0%	3 203	99.0%	2 727	96.2%	3 849	96.2%
Biology	5 752	96.2%	5 582	97.2%	5 404	97.7%	5 786	97.6%	6 344	98.7%
Physics	1 898	97.2%	1 951	97.0%	2 050	94.7%	2 371	96.8%	2 506	97.7%
Chemistry	915	96.4%	996	94.6%	1 069	97.4%	1 263	97.8%	1 385	98.5%

Source: Nacionalinė švietimo agentūra (2022^[3]), Rezultatų analizės, <https://www.nsa.smm.lt/egzaminai-ir-pasiekimu-patikrinimai/brandos-egzaminai/rezultatai/> (accessed on 28 February 2023).

Analysis of results

Each year, the examination team in the National Agency for Education produces a range of analysis on the Matura results by subjects. The analysis includes:

- Matura entries disaggregated by gender, type of school, school location, minority language, etc.
- Matura results disaggregated by gender, type of school, school location, minority language, etc.
- Distribution of student marks.
- Analysis of individual item including the mean, standard deviation, facility index and discrimination index, intended and achieved weighting.

The analysis is shared with item developers. Schools also receive a report on the performance of their school compared with the national and regional averages.

Policy options for supporting continual improvement and high-quality assessment

The section below discusses three options for Lithuania to consider creating a national system that promotes independent assessment expertise and drive a Matura that is based on high-quality assessment. The options also suggest steps for Lithuania to put in place processes that will encourage continual improvement of assessment practice and the Matura over time.

Option 1.a. Supporting the developers of the Matura to produce high-quality items that fulfil their purpose

This option considers how the development of the Matura can be designed and supported so that the system is able to produce quality items that reflect the new demands set out in the country's curriculum. It discusses the support and guidance that is provided at the start of the item development process and how the system can be supported to exploit assessment research and analysis to drive continual improvements.

Developing clear specifications to guide item development and teaching and learning

Specifications for certifications such as the Matura are essential to set out for item writers what should be included in an assessment. In conjunction with other documents, they help to guide an assessment's

development to help ensure that it is a valid assessment of what is set out in the curriculum. Specifications also have important functions for other stakeholders. For teachers, they set out what they need to know about a certification including what the assessment will cover. For students and parents, they help them to understand what a certification covers.

The new specifications that Lithuania is developing for its new Matura examinations will serve a critical function to help item developers, teachers and students develop a common understanding of what the revised examinations will be based on, in line with the implementation of the new curriculum. Given the role of the new specifications and the different audiences that they will serve some important features of examination specifications include:

- A common template across subjects – so that teachers and learners can identify commonalities in the assessment across different subjects.
- Readability - written in plain language, formatted so that they are easy to read and navigate, with a combination of summary sections and details.
- A clear and succinct summary upfront if possible – which is easily understandable by students and their parents.
- All the necessary detail that teachers need to be able to teach the course and explain to students how it will be assessed.

Lithuania's new specifications for the Matura subjects seem to fulfil many of these features. They will be based on the curriculum and will describe the nature of an item task (e.g. closed answer item), the skills to be assessed, number of marks, the time that candidates will have to complete the task, cognitive areas being assessed, distribution of points by level of achievement and how and by whom the candidates performance will be assessed (National Agency of Education, 2022^[41]). However, while the new specifications are useful, item writers and teachers will need to know more about the level of skill to be demonstrated at different levels e.g. basic, general and advanced, the types of command words (e.g. analyse or evaluate) that will be used for different levels, and some indication of what would distinguish an appropriate level of response at each level. Currently in the specification, the breakdown of how items will cover knowledge and understanding, application and higher thinking skills in the Writing task is the same for both the General and the Advanced Level. For example, in the Writing task from the Lithuanian language and literature specification, the specification does not provide guidance around how to interpret command words like “analyse” and “discuss” or the level of skill to be demonstrated at the General level compared with the Advanced Level (National Agency of Education, 2022^[41]). Greater explanation of the broader learning aims and objectives (either within the specifications or in an accompanying document) could support teachers as they implement the new curriculum. Providing this broader articulation of learning objectives in the specification is important to help avoid narrow teaching focused on examination content.

It also should be noted that specifications are usually complemented by a suite of support and guidance documents, and training events for teachers. For item writers specifically, as well as specifications they are normally supported by more detailed documents to guide them in the development of items. These documents direct the team of item writers to ensure that all course content is sampled over time, without becoming predictable. This more detailed specification or blueprint of the assessment might include broad parameters for each item including the specification / syllabus content to be assessed; the predicted level of demand; the type of question to be used; and the skills to be assessed. Lithuania could consider developing documents, resources and training for the specifications that provide greater detail on the requirements and levels of skill to be demonstrated across different levels of achievement, and separately, more information on the broader learning objectives that the Matura is assessing.

Supporting the examinations team in the National Agency of Education as custodians of the national standards set out in the specifications

A challenge in many countries in the development of items is effectively managing the output of the subject specialists who develop the items. Subject specialists developing items often are and should be, nationally respected experts in their subject. However, this can make it difficult for examination bodies to raise questions about items if there are concerns that they do not accurately reflect the specification. Examination and qualifications bodies might use governance arrangements as well as their policies and procedures to clearly state their responsibilities for maintaining the quality and standards of items and papers.

It is important the examinations team in the National Agency has and exercises its powers to ensure that the national specifications are appropriately implemented in each assessment event and across subjects – to ensure that item developers respect the national specifications rather than individual ideas about what should be assessed – and more fundamentally to maintain standards. These responsibilities and processes might be set out in national law or a policy document. For example, the Welsh qualifications body, WJEC, clearly sets out that the WJEC strategic management team and Board of Directors are responsible for putting in place appropriate procedures to ensure that standards are maintained in each subject examined from year to year (WJEC, 2018^[5]).

Examination bodies might also use a collective review procedure to scrutinise and approve items from each subject to ensure that they reflect what is in the specification and to maintain standards. This body might include both subject specialists and representatives from the National Agency for Education to ensure that its policies and practices are respected. As part of the item and paper development process, the Welsh qualifications body, WJEC forms a committee that includes the chief examiners and WJEC staff. The committee is responsible for reviewing papers to ensure that the challenge and level of demand are maintained over years and that papers meet the requirements of the assessment criteria as set out in the specification and that they are of consistently high-quality (WJEC, 2018^[5]).

Ensuring that the results of technical analysis are used to drive improvements

The most immediate and regular stage of review and evaluation in an assessment system is the on-going technical review of how an assessment functions at each assessment event. In the case of Lithuania, this refers to the technical analysis of items and results after students have taken the state Matura each year. This kind of review aims to assess how far an assessment is fulfilling its purposes and how far individual assessments across each subject are doing what is set out in the specification.

Typically, examination agencies will develop technical analysis across all subjects every year or following each assessment series to see how far the assessment performed its intended functions. This tends to include analysis of overall papers and analysis of individual items in the papers. Analysis generally tends to cover the following categories:

- Data on entries and across a range of student categories - such as gender, type of school, subject.
- Distribution of student marks- including mean mark and mark distributions by both item and paper.
- Analysis of individual item including mean, standard deviation, facility index and discrimination index, intended and achieved weighting.
- Bespoke analysis of items and papers - such as MCQ distractor analysis.
- A report by subject on each examination.

Lithuania already produces much of this analysis. In the future, the examinations teams in the National Agency for Education could consider what other sources of data it has access to, perhaps from other government bodies, and might be able to integrate into its analysis, either systematically or as ad-hoc research (see Option 1.b. Developing continuous review, research and evaluation to ensure that the

Matura remains fit for purpose). In some countries for example, examination bodies might use proxy indicators of socio-economic background that are collected by other government bodies or other information about students from national databases.

More immediately however, the examinations team in the National Agency might consider more supports for stakeholders to use the results from their existing analysis. Items writers and those working on examination development need support and guidance to be able to interpret results and use data from technical analysis so that it feeds into the development of future papers. For example, guidance might include information about how to interpret each category of data. This might set out what the information compiled in national reports means, and how it can be interpreted including what a low or a high value signifies for an item, paper or examination. This kind of information is likely to be particularly important for item writers who are not statisticians or even necessarily familiar with statistical analysis.

Introducing adjustments to promote consistent standards from year to year

Internationally, most examination systems aim to maintain standards over time, so that an “A” or “20/20” grade awarded one year, equates to approximately the same standards the following year. This helps an education system to monitor standards over time and is essential for the credibility of an examination and its associated qualification (Baird et al., 2018^[6]).

In Lithuania, the cut or boundary marks to achieve a given grade – pass, basic, general or advanced - remain the same each year. This approach makes it challenging to maintain standards over time because while item developers predict the level of demand or difficulty of a particular item when it is developed, in reality, candidates might find the item harder or easier than expected. Cumulatively, across a paper this means that examinations vary in terms of difficulty over years. At present, Lithuania does not seem to have a system to manage this variation. It might be one of the factors that led to the dramatic decline in mathematics results in 2022 – the paper may have been significantly more difficult than in previous years. In other subjects in Lithuania, the results seem fairly consistent over years (Table 4.1). Since this kind of stability is very difficult to achieve without any kind of adjustment process, this might reflect that the examinations in other subjects are highly predictable. The high predictability of the examinations was one of the concerns that students and teachers reported to the OECD Review team.

In order to avoid a situation where examination items are either highly predictable or there are dramatic changes in results between years, many examination systems use specific procedures to maintain standards over time (Baird et al., 2018^[6]). These different approaches tend use qualitative information, like reviewing scripts from different candidates across the ability range and over previous years and quantitative information, such as statistics on the grade distribution from current and previous years. Some systems such as Ireland and England (United Kingdom) combine both quantitative and qualitative information:

- Ireland’s Leaving Certificate uses a similar approach to Lithuania whereby each grade corresponds to a pre-determined percentage rank of marks obtained (e.g. a Grade 4 is always related to a mark between 60-69%). Since it is impossible to ensure that the examination questions in a given year will be identical in demand compared to a previous year, Ireland has embedded a standard-setting process in the marking process. As marking is being undertaken, the distribution of results are compared with statistics from previous years’ results. If marking indicates that a distribution considered inappropriate in comparison with previous results is being observed, adjustments are made to the marking scheme to achieve changes in the distribution of raw marks and subsequent grades (Baird et al., 2018^[6]).
- In contrast in England, for the two sets of main upper secondary examinations – GCSEs and A-Levels – the boundary or cut marks are adjusted for each examination event, in a process known as awarding. After the examination scripts have been marked, an Awarding committee that includes the main examiners for the specific subject meet to scrutinise scripts and recommend

grade boundaries for specific grades, often those at the top and bottom. The Awarding committee draws on their professional judgement of the quality of the current students' work in this year's scripts compared to previous years, accounting for changes in demand in the paper, and statistical data showing how the marks awarded in the current examination compare with those awarded in previous years (AQA, n.d.^[7]).

Lithuania might draw on these models as well as those of other countries to develop its own model for adjusting the natural variance of examination papers' difficulty over years. A specific challenge in Lithuania of introducing a new approach is that schools and students may feel that, in contrast to the current system, any new system that introduces adjustments to marking or cut scores after candidates have completed their examinations might make it less clear what a candidate must demonstrate to achieve a given mark. This makes the suggestions in Option 1.a. around providing greater clarity about what is required to achieve different performance marks in the examination specifications even more important (see Option 1.a. Supporting the developers of the Matura to produce high-quality items that fulfil their purpose).

Using the technical review process, as well as continuous review, to develop engaging items that assess competencies

Lithuania can use the process of technical review as well as continuous review to identify where there is scope to introduce new types of items and improve existing items. Lithuania might also consider developing national research on items, perhaps by sampling items across all subjects to review them against a series of nationally agreed research questions. Leading this work from the National Examination Centre would also contribute to its reputation as a centre of excellence and expertise in assessment. These questions might include:

- How far are current questions assessing a good mix of skills, including both knowledge recall and higher-order, more complex skills as set out in the curriculum and subject specifications? Lithuania might start with this question in preparation for the introduction of the new curriculum to review how far the current Matura items are assessing the competencies in the new curriculum. This review would enable the examinations team in the National Agency for Education to identify if there is a need to progressively introduce more items that explicitly aim to assess complex skills and competencies.
- Ensuring consistency in terms of the type and mix of skills that are assessed across different subject papers. Stakeholders reported a perception to the OECD team that papers in some subjects such as foreign languages and English tend to focus more on complex skills than others, such as history where there is greater emphasis on knowledge recall by testing facts and dates.
- How far do items and sources use up-to-date materials that reflect young people's experiences and which are interesting and engaging? Stakeholders, in particular students, reported to the OECD team that the items in the Matura tended not to be especially interesting and stimulating. Reviewing items with this question in mind could help to identify opportunities to use more modern questions and source materials that are engaging for young people.
- Analysing the achievement of different groups of students on the Matura to explore equity. Researching the performance of different groups of students such as those in rural and urban schools, in gymnasia (general school) and vocational schools, potentially requesting proxy data on socio-economic background and analysing the achievement across different groups.

Option 1.b. Developing continuous review, research and evaluation to ensure that the Matura remains fit for purpose

Like many upper secondary systems internationally, the Matura in Lithuania is the subject of significant national debate in society and at the political level. This context puts considerable pressure on the Matura

system to respond to several challenges – notably the dramatic fall in mathematics results in 2022 and the examination’s perceived emphasis on knowledge recall rather than higher-order skills – and to introduce wide-ranging reforms. In this context, developing the independence of the Matura as an assessment instrument – and the body that is responsible for it, the examinations team in the National Agency - is critical so that reforms are based on objective evidence and analysis. This section considers how Lithuania can use the opportunity of the introduction of a new curriculum to engage in more research, independent review and evaluation to develop an independent assessment culture and ultimately to drive high-quality assessment.

Undertaking reforms as part of an established review and evaluation cycle

A qualifications and assessment system should reflect the needs and the context in which it operates. Within a national or federal system, and more broadly across jurisdictions and nations, social, cultural, economic, technological and policy contexts will change. It would be unreasonable, for example, to expect a certification designed 30 years ago to remain fit for purpose for today’s context. On the other hand, introducing significant changes to high stakes school certifications and assessments can be costly in terms of people and financial resources, can be difficult for education systems to implement, and often requires fairly major programmes of awareness-raising and engagement with stakeholders, including certification users like employers and higher education.

To take account of this, a national examination and assessment system may have a broadly agreed review cycle, perhaps lasting five to 10 years. This cycle is often used flexibly, either shortening or lengthening it in response to government priorities, available budget or other factors. The important thing is that there is a review cycle and that every so often, students, teachers, the public, and stakeholders such as employers and receiving institutions know that time will be taken for a significant programme of review, and potentially revision or reform, of the certifications and their assessments. Less frequently than individual certification or certificate review will be whole system review; these will often be conducted in response to perceived issues with the existing system that suggest a more major overhaul may be needed. Often, such reviews result in significant changes, or what we might call reforms, to the certifications and assessment system, such as the introduction (or abolition) of alternative types of assessment, changes to the grading scale, reduction (or increase) in the number of subjects available, or even changes to the name of the certification, perhaps intended to signal a paradigm shift in approach. Given the cost and difficulty of implementing such significant changes, such system reforms often happen only in response to a perceived crisis in the certifications system.

Lithuania appears to be at such a point in the certifications lifecycle with its Matura. There are many individual changes that are planned to be introduced to the certification and examination (see Chapter 1). To help ensure that these changes achieve their intended impact, and that individual changes work together coherently by supporting each other it is important that there is some conceptualisation and planning of these changes as part of a broader and deeper look at the design of the certifications and assessment system. In the future, changes might be planned for as part of an overall review and reform programme that is co-ordinated across stakeholders including the National Agency of Education, the Ministry, teachers and schools. This approach is also important to promote the technical independence of the examinations team in the National Agency and the Matura so that reforms are based on evidence and technical review.

Developing a process for continuous review, research and evaluation

As part of creating a regular review process, internationally examination agencies or Education Ministries tend to have a mid- to long-term programme of certifications and assessment evaluation. This is a planned programme that constitutes part of a longer term process of gathering evidence into issues such as the

quality of marking, incidences of malpractice, or use of reasonable adjustments or special arrangements. The findings from this evaluation programme can be fed into the next certifications reform cycle.

A programme of mid- to long-term research may include drawing on a broad range of different sources of information and activities, such as:

- Student, school and stakeholder surveys to gather national evidence on the perceptions and confidence in national examinations and certifications. In England (United Kingdom) for example, over the past 20 years, Ofqual, the qualifications regulator, has commissioned and published the results of an annual survey of perceptions of upper secondary qualifications (A levels and GCSEs) and other qualifications. The survey seeks the views from a wide range of national stakeholders including school leaders, teachers, the general public, parents, students, employers and higher education institutions in England. The survey asks for stakeholders' general perceptions and their confidence in national qualifications and the examination system. The results are made available on the national government website (YouGov, 2022^[8]).
- National or regional benchmarking or comparability studies. Studies of this nature review might review the comparability of a qualification over time, or between subjects.
- Benchmarking against international standards. Countries may have the opportunity to engage in international studies that compare qualifications across different countries or that benchmark qualifications against international frameworks such as the European Qualifications Framework. However, these opportunities can be more difficult for countries to fit into their own programme of planning since they depend on the involvement of other entities and countries.

Lithuania might consider establishing a programme of review activities for the Matura that enables the examinations team in the National Agency for Education to undertake research across several issues of technical and public interest. This might include reviewing how far Matura papers effectively assess competencies as set out in the national curriculum, comparability across subjects, introducing more alternative forms of assessment (see Issue 2. Introducing alternative types of assessment) and ensuring that the Matura meets the needs and fairly reflects the skills of vocation upper secondary students (see Issue 3. Providing more flexible choices and options within the Matura). For example, inter-subject comparability was a particular concern for Ofqual, the qualifications regulator in England (United Kingdom) around 2015 and an extensive programme of benchmarking activities was carried out, included comprehensive literature gathering and reviews, research based on gathering and analysing data, and implementation of an international comparability study in which other countries were invited to take part (Ofqual, 2019^[9]).

At the same time as using this kind of information to investigate specific issues of concern, the examinations team in the National Agency should ensure that at least some of this evidence about how individual certifications such as the Matura and the overall assessment and certifications system is continually gathered so that there is an existing evidence base to inform any initial conversations about potential reforms. This would help to ensure that reforms are rooted in assessment evidence and help to strengthen the examinations team in the National Agency as an institute for technical assessment expertise.

Developing the examinations team in the National Agency as an independent centre of assessment expertise

In a project looking at standing setting in national or regional certifications across 20 systems, it was found that national examinations are commonly run by an arm's length body set up by a government education ministry (Baird et al., 2018^[10]). This governance arrangement helps to promote decisions that are based on evidence and technical expertise about a certification and encourage the independence of national or regional bodies responsible for national assessment and certifications systems. It also helps certifications

and examination bodies to be national centres of technical assessment research and evidence and crucially, to be widely perceived as such across the education system so that they are central actors in any assessment and certifications reform.

In Lithuania, the institutional arrangements – with the examinations team in the National Agency for Education constituted as a separate body from the Ministry – support its independence. Yet, the examinations team does not seem to be in the driving seat of the current set of proposed Matura reforms. More broadly, discussions with stakeholders across Lithuania suggested that the examinations team in the National Agency is not currently perceived as the national and leading centre of assessment and certifications expertise. There are several actions that stakeholders across Lithuania's education system could undertake together to help consolidate the examinations team in the National Agency as respected centre of technical assessment expertise that would be a valuable resource for the entire education system:

- Clarifying its role within the certifications and assessment system (discussed directly below).
- Ensuring that the examinations team in the National Agency is in law, and in practice is perceived to be, the custodian of the national standards set out in the specifications (see Option 1.a. Supporting the developers of the Matura to produce high-quality items that fulfil their purpose).
- Consolidating the examinations team in the National Agency as a national leader of assessment expertise and analysis by supporting it to undertake more technical reviews of Matura events and continuous review of the assessment and certifications systems, as well as longer term research that seeks to identify best practice and ensure that the examination team's work is at the forefront of thinking on assessment (see Option 1.a. Supporting the developers of the Matura to produce high-quality items that fulfil their purpose).
- Ensuring that the examinations team in the National Agency has the responsibility, and staff with relevant expertise, to lead in communicating to students, their guardians and the general public about the role of the Matura and how it functions.

Clarifying the roles of relevant stakeholders in the development, administration and reform of the Matura would help to ensure that each actor occupies a role that best reflects its specific assets. In most cases, the certifications and assessment body is responsible for the day to day running of the certifications system including the development, marking, grading and analysis of results for each examination event. This body also undertakes a combination of regular, ad-hoc and mid- to long-term evaluation and research of the assessment and certifications system to provide an evidence base for regular adjustments to certifications across assessment events and for more significant reforms.

National policy making bodies such as the Ministry of Education are responsible for the overall policy for assessment and certifications. This means that where there are issues of national concern, such as the 2022 mathematics results, key stakeholders including the National Agency and the Ministry might come together to determine a national strategy to investigate the reasons for the issue. Once the process has started, the examination body would lead the review, undertaking the research independently, sharing findings and conclusions with all the relevant stakeholders so that the examination board can provide the Ministry of Education with recommendations for action that have the support of major stakeholder groups. The Ministry, with responsibility for overall policy, would then determine the appropriate response based on the technical assessment evidence. Similarly, where reform of a certification is being considered, the Ministry will be the initial sponsor of the reform with the examinations body providing evidence and technical expertise that informs decision-making and implementing the policy.

To reflect the examination team in the National Agency for Education's role as the national centre of expertise in assessment and certifications, it should have a more proactive role in communicating to students, parents and the general public about the Matura and its role in their future. This could include publishing case studies about young people with a positive story to tell about it. The same communication work could focus on communicating to non-technical experts, such as students and their families and guardians how the assessment and grading works. This would help to develop greater assessment

knowledge within the general public and position the examinations teams in the National Agency as the leader of assessment and certifications in the country. This kind of communication will be especially important when the future reforms to the Matura are introduced.

Investigating the reasons for the Maths 2022 results

In 2022, over a third of Grade 12 students in Lithuania failed the mathematics examination for the state Matura. Stakeholders reported to the OECD that this had to led to national reflections about what should happen to mathematics examination. Looking at the mathematics results over the past decade, the results are variable (Table 4.1). Aside from the 2022 situation, one of the factors leading to this variability was the decision by tertiary institutions to make the state Matura examination in mathematics compulsory for tertiary entrance. This decision resulted in a significant rise in the shares of students taking the paper and fall in the overall results.

In the context of national discussions around the 2022 results, undertaking research and evaluation can help to establish some of the factors that have led to the variability in mathematics results in recent years, and possible policy changes for the future. In other countries, when an issue occurs during an examination series that endangers student, public or policymaker confidence in the certifications, they are often followed by a focused programme of research and evaluation, sometimes conducted within a very short timescale, with a view to establishing whether immediate change is needed. For example, in 2019, Ofqual the qualifications and examinations in England, carried out a series of studies in response to school concerns about standards in newly introduced reformed upper secondary (A level) mathematics qualifications. An extensive programme of technical evaluation projects resulted in an overall conclusion that no immediate action was required, but that there may be implications for longer term practices (Ofqual, 2019^[9]). In Lithuania, taking the time to undertake an independent investigation of the 2022 results – and perhaps also mathematics results over the past decade given recent variability – will help to ensure that there is adequate evidence and time to fully consider the issue. The examinations team in the National Agency for Education might work with selected tertiary institutions on this research and more broadly to build centres of expertise in assessment and qualifications research in the country. The independence and rigour of the investigation will also help to reinforce the technical independence of the examinations team.

Supporting assessment reform and renewal

This section has set out some of the crucial activities that will help to support continual improvement and renewal of Lithuania's upper secondary certification so that it remains fit for purpose. The complexity and challenge of a high stakes national certification are significant, and as well as all the investments in technical development, it also requires extensive consultations and discussions with national actors. Research reviewing examinations across nine jurisdictions has found that three conditions are necessary for reforms to progress and be successful - dissatisfaction with the current system, an accepted alternative and majority stakeholder support. Achieving all these, particularly the last two which are particularly challenging and underscores the length and concentrated effort required for successful examination reforms, notably to provide sufficient time for stakeholder consultation and communication to secure agreement on an accepted alternative (Isaacs, 2018^[10]).

Box 4.1 discusses some aspects of the decade-long development of the new upper secondary certification in Hong Kong. The case of Hong Kong also highlights some of the continuing challenges and reviews that continue to be conducted on an on-going basis to support the new certification. Hong Kong's experience also illustrates the importance of systems being realistic about the likelihood of getting change right the first time and the need for immediate post-reform review and amendments made in response to feedback. Recent reform of the Queensland Certificate of Education in Australia also provides an example of the use of review immediately after implementation of reforms. Following the introduction of new subjects in 2019-2021, a review was initiated and the Queensland Curriculum and Assessment Authority has already

planned for a more systematic evaluation reporting in 2025 once the new qualifications have been in place for a while. It is notable that the findings of this evaluation are scheduled 13 years after the initial parliamentary enquiry that eventually led to the reforms (QCAA, 2023^[11]).

It is important to recognise that there are many aspects of certification reform and continuous improvement that have not been discussed here, notably the major support and investment in teachers' assessment literacy. There are also broader points around the wider context, where there needs to be an understanding across all actors, including politicians, senior stakeholders, parents, the media, students – that examination reforms rarely get it right first time. There is a risk that some stakeholders may not react favourably to changes at first. Undertaking skilful and well-resourced communication is important to prepare systems and provide support in this context.

Box 4.1. Reforming the Hong Kong Diploma of Secondary Education Examination

In 2012, Hong Kong introduced the new Hong Kong Diploma of Secondary Education Examination (HKDSE), replacing the former Hong Kong Certificate of Education Examination as certification for completion of secondary education, and the Hong Kong Advanced Level Examination as the main credentials for university admission in Hong Kong.

The new certification reflected over a decade of planning

The new HKDSE aligned with the new academic structure that had been introduced in 2009, and for which planning had started in 2000. The original proposal for the reform was set out in the Education Commission in 2000 focused on standards-based education. While there was a general understanding of the need for the new curriculum, there was also some resistance for its direction and diverse views around how it would be assessed. It took over a decade of discussion and consultation to reach agreement on the model for the new curriculum's assessment.

The principles of the new certification

After multiple rounds of discussions, the Education and Manpower Bureau published the Action Plan on The New Academic Structure for Senior Secondary Education and Higher Education, setting out the principles and the way forward for the new examination system. The specific issues that the new certification aimed to address included:

- Aligning certification at the end of upper secondary education with new curriculum.
- Being responsive to learner diversity, especially the country's two official languages - Chinese and English).
- Creating a broader, more flexible learning experience (in contrast to the previous streaming of learners into either sciences or arts).
- Facilitating student transitions into multiple pathways including tertiary education in Hong Kong and internationally.
- Serving the essential function of student certification.

The new HKDSE model

The new HKDSE model that was introduced in 2012 introduced a series of important changes, such as standards-referenced reporting with candidates' results reported against a set of prescribed levels of achievement based on typical performances at those levels; greater choice in papers including the use of differentiated papers in English and optional extended parts in mathematics to reflect student diversity; and the introduction of school-based assessment in some subjects.

The new model was a major change and over time, has been associated with further calls for review. These issues tended to focus on ensuring the maintenance of standards. The new certification had been introduced alongside changes to the structure of upper secondary education which was reduced from seven to six years while participation and completion of this level of education increased, leading to concerns about students covering the same breadth and depth of content in a shorter period while ensuring that the content was accessible for all learners. The introduction of school-based assessment, in an educational context that had previously been very examination-focused, was also challenging.

Several rounds of reviews have been undertaken to respond to emerging challenges, and as a consequence, changes introduced such as changing examination paper structure to better reflect the depth and breadth of the new curricula and simplification of school-based assessment and greater guidance for teachers about how to undertake it.

Source: Tong, C., C. Lee and G. Luo (2020^[12]), "Assessment reform in Hong Kong: developing the HKDSE to align with the new academic structure", *Assessment in Education: Principles, Policy and Practice*, Vol. 27/2, pp. 232-248, <https://doi.org/10.1080/0969594X.2020.1732866> (accessed on 6 November 2023).

Option 1.c. Making the most of the new digital examinations

Like many OECD countries, Lithuania currently uses digital technology to mark scripts but the examinations for the Matura continue to be delivered as pen and paper tests. As part of the Matura reforms, the country plans to introduce digital examinations for the intermediate examinations that students will take in Grade 11. While digital technologies can provide many potential benefits for student assessment, notably facilitating delivery, creating more inclusive assessment and enhancing the assessment of skills, they are also associated with challenges, not least being lengthy and costly to implement. This option sets out some of the considerations for Lithuania as it moves towards introducing high stakes digital examinations.

Identifying the objectives for the new digital examinations

As a first step towards introducing digital examinations, Lithuania will need to carefully consider the policy rationale and objectives that it wishes to achieve. Possible objectives might range from enhancing the delivery of the examination, for example by enabling it to be delivered more flexibly and be less dependent on teacher and school space availability to using new approaches to enhance the assessment of skills. Across different systems, some of the benefits that emerge from the use of digital technologies for high stakes assessments include:

- Improving delivery. Digital technologies might contribute to more resilient examination systems where delivery can be maintained even in the context of significant disruption such as school closures. The environmental impact can also be reduced by decreasing the need for the printing and distribution of examinations papers (Pickering, 2022^[13]).
- Improving the experience for users. Possibilities to provide more engaging content such as animations or recordings that might promote greater student engagement (OECD, 2021^[14]). Digital environments might enable students to have greater control of content, enabling them to manipulate it themselves to meet their needs such as being able to listen to a recording multiple times or pause an animation. There is also the potential for digital assessments to be tailored to candidates' needs, for example sign language can be integrated into questions (OECD, 2022^[15]) or incorporate text-to-speech features for learners with reading or language disabilities (Gane, Zaidi and Pellegrino, 2018^[16]).
- Enhancing the assessment of skills by assessing existing content in new ways, and in some cases, assessing new skills. For example, the simulations of real-world contexts that technology can

provide may make it easier to assess the integration of disciplinary conceptual knowledge and practical application of knowledge that most education curricula now emphasise (Gane, Zaidi and Pellegrino, 2018^[16]).

- More extensive feedback. Digital assessments can capture more information beyond student results to include how learners engage with different types of questions and content, for example if they spend more time on certain questions or the strategies that they employ for problem-solving (OECD, 2021^[14]). This information can provide richer feedback that teachers and schools who can use this information formatively to inform teaching and learning for future cohorts (Pickering, 2022^[13]). The information can also be used to generate greater insights on the performance of examination papers and individual items to support continuous improvement in assessment design (see Options 1 and 2).

Some of these benefits are associated with most digital examinations – such as a system that is more resilient to external disruptions and reducing the environmental impact – but others will largely depend on how Lithuania develops and defines its digital examinations. Since some of the challenges currently associated with the Matura are that items are reported to be predictable and unengaging, one objective could be to exploit the capacities of digital technologies to create a more engaging format. Another issue in Lithuania that stakeholders reported was the dominance of items that assess knowledge recall, especially in some subjects so another objective of the new digital examinations could be provide a more balanced assessment of different skills.

Being cognizant of the equity and fairness challenges of introducing digital assessment

While digital tools can enable enhanced skills assessment, developing valid, reliable and fair digital assessments can be challenging, and perhaps more challenging than traditional pen and paper tests (OECD, 2021^[14]). One of the key issues for education systems to consider is fairness and equity, with digital assessments raising new and different issues in contrast to analogue assessments, including:

- Ensuring equitable access to digital infrastructure. Most education systems have heterogeneous information technology infrastructure across different school settings where there is a range of different providers, and different pupil-to-device ratios. The most commonly cited issue for countries is around ensuring that all learners are able to access a device, especially when a full cohort is sitting an examination at the same time. Some systems have addressed this challenge through Bring Your Own Device systems such as Finland and New Zealand (Pickering, 2022^[13]), but this is also associated with challenges in terms of ensuring equitable access for all learners, ensuring compatibility of devices and potential security concerns.
- Accounting for learners' differential experiences with digital technologies. Differences in learners' access to, and use of, digital environments including different user interfaces and gaming technologies might lead to achievement differences on digital assessments. An important design element to reduce differential item functioning (i.e. when items do not perform as expected for learners of the same ability but different backgrounds) is to provide effective tutorials at the beginning of items or an assessment that quickly teaches the necessary mechanics for test-takers less familiar with the user interface. Items should also be analysed for such differential functioning with continuous efforts made to limit achievement differences associated with learner background including gender and other typical categories but also gaming experiences (OECD, 2021^[14]).
- Variations in teacher and school support. Teachers will vary in their fluency with digital technologies and digital assessments. Within a country, schools will also differ in how far technology is regularly used in the classroom. These differences might mean that students receive unequal support to prepare for digital assessments (Ofqual, 2020^[17]).
- Possibilities for compromised security. Security might be compromised by cyber security attacks which could be localised or affect an entire country. In this case, there is a risk not just to the

examination system but also to student personal data security. Digital technologies can also lead to new risks of malpractice, fraud or other cheating, which can create unfairness. These new risks may drive the need for changes to the role of invigilators or an increased use of technology to monitor students' activity during assessments (Ofqual, 2020^[17]).

Determining a national approach for implementation

Despite the many challenges associated with developing digital examinations, many countries have started to introduce some elements of digital assessment to their education systems. Since 2019, all the subjects in Finland's Matriculation Examination at the end of upper secondary education have been entirely digital (Board, 2023^[18]). The introduction of digital technology was motivated by the desire to assess skills in different ways and to ensure greater coherence with young people's daily lives and their post-school experiences. Students use their own digital devices which must first pass a compatibility test. If students do not have access to their own device, schools provide one for them. Assessments are encrypted and sent to schools in advance of the examination to avoid problems with rural power cuts (Pickering, 2022^[13]).

Norway has also recently started to develop digital examinations in upper secondary education (Box 4.2). As well as drawing on the experiences of other countries, Lithuania can also draw on its own experiences of digital assessment for national assessments in Grades 2, 4, 7 and 8.

The experiences of countries that have introduced digital technologies to high stakes national assessments highlight several important factors, notably: clearly outlining the objectives of the digital examinations and articulating the specific value the digital technology is expected to provide; understanding the equity and fairness challenges and taking appropriate steps to address them; starting small and building up. As part of the development of its new digital assessments, Lithuania will need to carefully consider which skills will be assessed by the digital examinations and which will be assessed by pen and paper assessments. The introduction of the digital assessments could become the focus on a national review.

Box 4.2. Insights from Norway's experiences in introducing digital examinations in upper secondary education

Norway's digital examinations for its national upper secondary examinations were introduced to create better alignment with the new curriculum and to increase reliability and validity of student results. In December 2022, Norway shared its experiences and insights in developing the digital examinations in a webinar with OECD countries organised by the OECD Above and Beyond: Transitions in Upper Secondary Education project.

The examinations have been initially developed as pilots in Norwegian, mathematics and English, with local teachers involved from the start. The pilot began with a pre-pilot with a small group of students, followed by a main pilot with a larger group of students, with feedback loops and analysis after both.

The new digital English examination has several components, including reception, mediation, interaction, and free writing. Previously, the pen and paper English exam consisted of two written texts, short and long. The new format enables students to demonstrate understanding of English, even if for those individual students, production in English (i.e. writing) is more challenging which was not possible with the previous examination.

Norway reflected that the process of designing question items for digital assessments was very complex, and had to account for the need to minimise distractions and ensure alignment on the screen for readability and accessibility. With multiple choice items, there was also a need to add more items for validity. The new digital systems created possibilities to enhance accessibility, for example by including options with captions or sign language for candidates with hearing impairments when using recordings.

Key challenges highlighted by Norway included working with stakeholders, internal capacity, and understanding how technology redefines subjects and assessments. Student feedback has been largely very positive, however some teachers and universities feel candidates have to be able to demonstrate their abilities in a non-digital context i.e. with pen and paper and without calculators. To allow time to adjust, the introduction of fully digital exams has been postponed to 2024.

Source: OECD (2022^[15]), Digital Examinations in Upper Secondary Education Webinar: Spotlight on Norway, 13 December 2022, OECD Above and Beyond: Transitions in Upper Secondary Education.

Issue 2. Introducing alternative types of assessment

One important consideration in the Matura's design is the range of assessment activities that students undertake. While the Matura currently draws on different types of assessments - a project, art portfolios and oral examination in foreign language examinations - the reliability and take-up of these assessments could be reinforced. At the same time, Lithuania might consider if other types of assessment could be introduced to assess students more effectively, and promote a broader range of, competencies. As well as considering the potential value of these different types of assessments in Lithuania, this issue also considers how their validity and reliability can be promoted.

The current context: the range and type of assessments in the Matura

The Matura serves two purposes: certification and selection into tertiary education

Like in other systems, the Matura in Lithuania serves the purpose of certifying student learning against expected learning standards (OECD, 2015^[19]). As in other systems, particular importance is attached to certification at this point because it marks the end of schooling. In Lithuania, the Matura is the first certification provided to young people after 12 years of schooling. It provides a record of their achievement to future employers, trainers and critically to tertiary education institutions for selection purposes. Using upper secondary certification for the dual purpose of certifying learning and providing the means for tertiary selection is common internationally and is the case in 20 systems across the OECD (OECD, 2019^[20]).

The Matura is a composite certification predominantly based on external, written examinations

The Matura is a composite certification which means that it draws on several different types of assessment instruments (Table 4.2.). At the end of upper secondary education, many education systems across the OECD use a range of assessment instruments for certification because it enables them to assess different competencies in different contexts (Stobart, 2021^[21]). This is increasingly important as countries' upper secondary curricula have evolved to include a wide range of cognitive and social-emotional competencies as well as values and attitudes (OECD, Forthcoming^[22]). Assessing such a broad range of learning expectations necessitates assessment instruments where students can demonstrate both the acquisition and application of knowledge and skills in a wide range of contexts, including those that are unfamiliar (OECD, 2019^[23]).

The assessment instruments that systems draw on internationally tend to differ in two main categories:

- The actors who develop, administer and mark the assessments. The main differentiation is that actors are either external to the school, such as national, provincial, state or locally based examination institutions, or internal to schools, such as groups of teachers or individual classroom teachers. It is not always the same organisation that is responsible for both developing and marking an assessment. In Sweden for example, schools administer and mark assessments that are developed at the national level (OECD, 2013^[1]).
- The type of assessment used. Different types of assessment include written examinations, investigative projects, extended assignments, experiments, portfolios of work and performances.

Lithuania's Matura is predominantly based on external, written examinations. While schools and teachers currently develop school-based examinations, it was reported to the OECD team that the marks are so variable and influenced by local factors that they are not perceived to be a reliable measure of student achievement. The marks from school-based examinations do not play any part in tertiary selection. As part of the current Matura reforms, all examinations will be developed at the state level from 2024 onwards, by the examinations team in the National Agency for Education.

Table 4.2. Upper secondary certification in Lithuania – current model and planned changes

	Current Matura Model	New Mature Model
Components	National level examinations School-level examinations Teacher marks from classroom work Optional project	National level examinations Optional project
Subjects	State-level - biology, chemistry, physics, geography, information technologies, history, mathematics, and foreign languages School-level – minority (native) languages (musicology, arts, and technology) Lithuanian can be taken as either state or school-level exam Students may take up to six examinations	State-levels examination in all subjects Lithuanian and mathematics to be provided at general and advanced levels
Sequencing	All examinations at end of Grade 12	Intermediate digital examination at the end of Grade 11 Final examination at the end of Grade 12
Certification	Students must pass school-level examinations in Lithuanian and an optional subject to receive the School Leaving Certificate	Students must pass two state-level examinations including Lithuanian and an optional subject to receive the School Leaving Certificate
Tertiary entrance	Students must pass examinations in Lithuania, Mathematics and an optional subject to be eligible for tertiary entry For tertiary entry, students' average mark from five selected subjects must be <7 for universities and <6 for colleges (VET orientation)	Students must pass examinations in Lithuania, Mathematics and an optional subject to be eligible for tertiary entry Tertiary entry requirements to be defined

Sources: Adapted from national information and stakeholder meetings in Lithuania

Note: The optional project does not contribute towards upper secondary completion or tertiary entrance at present.

There are a few exceptions to the central, written examinations in Lithuania's Matura

Aside from the centrally-developed, written examinations, the Matura also includes:

- A project assessment. Introduced in 2017, students can optionally decide to take a project assignment, which can replace a national (or school-level) examination at present. Very few students – around 100 on average each year – opt to undertake the project assessment. The examinations team in the National Agency is not involved in assessing, grading or overseeing projects, and assessment and grading takes place at the municipal level by a committee which includes teachers.
- Oral examinations in foreign languages. The current oral examination includes a monologue by the candidate and a dialogue between two students assessed by teachers.
- Art examinations. The arts examinations follow the syllabus and assessment criteria developed by the National Agency for Education. The examination is organised, conducted and evaluated by local commissions of teachers.

During discussions with stakeholders in Lithuania, it was reported to the OECD team that the project assessment is generally perceived to be well-designed and engaging for students. There was also broad recognition that it is assessing competencies that are important for young people's learning and future development. However, the absence of state-level marking means the grades are not perceived to be reliable and tertiary education institutions do not take the results into account for selection purposes. Stakeholders also reported to the OECD team that the project is a particularly challenging exercise and that at present, it tends to be only the most capable and dedicated students who opt to do it.

In contrast, the foreign language oral examinations are taken by nearly all students (61% in 2023 among those who took the Matura) because foreign languages, and in particular English, are considered essential in Lithuania. Stakeholders reported to the OECD that the oral assessment in English was generally recognised to be well-designed, requiring students to apply their linguistic skills in different contexts. However, discussions also revealed that there are challenges around the reliability of these assessments. In 2021, the examinations team in the National Agency for Education undertook a one-off research project reviewing teacher-assessed marks in Lithuanian and mathematics (Grade 10) for moderation purposes. This process found that almost all the marks would have been different if they had been awarded centrally by the examinations team, suggesting that the reliability of these assessments could be reinforced.

Policy options for introducing more alternative types of assessments

The section below provides three options for Lithuania to consider a broader range of alternative types of assessments i.e. assessments other than traditional written tasks produced under examination conditions, to the Matura with the objective of promoting and assessing a wider range of skills. The options also consider approaches to support the validity and reliability of alternative assessments by discussing different approaches to moderation.

Option 2.a. Reviewing and refining the current project component

Projects can contribute to academic learning, the development of wider competencies and be engaging and motivating for students (Drummond, 2017^[24]; Kingston, 2018^[25]). In Lithuania, while it was reported to the OECD team that the current project is perceived to be well-designed and to assess some competencies that are not assessed through the written examinations, it is not seen as a reliable measure of student achievement and very few – less than 1% of students opt to take it. In Lithuania, strengthening the project assessment might help to motivate upper secondary students while developing and giving greater prominence to their organisational skills that the tertiary sector and employers report are currently weak upon completion of upper secondary education.

Strengthening the value of a project assignment for young people

When well-designed and implemented, projects have the potential to support a range of cognitive and non-cognitive competencies. The open-ended and student-driven nature of projects can encourage learning beyond individual subjects, requiring students to discover and construct information for themselves (Kokotsaki, Menzies and Wiggins, 2016^[26]). This type of learning might be considered particularly important in upper secondary education to enable students to follow their interests and develop some of the socio-emotional skills such as planning, persistence and organisation which are especially important when young people enter higher education and employment. Stakeholders from tertiary institutions noted to the OECD team their perception that school leavers in Lithuania tend to lack these independent learning skills, and these comments were reinforced by students.

Some research suggests that the project-based pedagogy supports student learning and achievement. For example, the students from a project-based learning course on government and politics in the United States scored significantly higher in standardised assessments compared with traditionally taught students, and demonstrated deeper understanding of course content which enabled them to them apply it in a novel situation to solve a complex problem (Kingston, 2018^[25]). Considering student projects as part of upper secondary courses and certification specifically, research from England (United Kingdom) finds a positive relationship between the performance of students who take the Extended Project Qualification (Box 4.1) and their achievement in the country's general upper secondary certification – A-Levels. The research found that the A-level results of student who had also completed the project qualification achieved higher marks than their peers who did not, even when accounting for other factors, notably prior

performance in national examinations at 16 years (GCSEs), except in mathematics and foreign languages. The research concluded that there are specific, transferable skills that students developed while undertaking the project that they transferred to their subject-based examinations (Drummond, 2017^[24]).

One of the ways in which projects seem to promote higher levels of achievement is by developing the social-emotional competencies that are recognised as important contributors to general academic performance (OECD, 2021^[27]). Social-emotional competencies also promote young people's ability to navigate the choices and challenges of life when they leave the unstructured school setting. Projects develop these skills by requiring students to plan, organise their time and work, and structure enquiry to solve problems and produce a final output. The upper secondary education project in Sweden is designed to provide a setting for students to draw together their learning across a number of subjects and demonstrate that they are ready for work or further education (Skolverket, 2022^[28]) (Box 4.1). In England, the Extended Project Qualification is seen to promote student's self-regulation, by building learners' agency and self-awareness. During the project, learners are reported to make discoveries about themselves, their aptitudes and their learning preferences which enables them to optimise their approach towards learning (Stephenson and Isaacs, 2019^[29]).

Feedback from students across a range of contexts internationally has also shown that students tend to engage well with projects – they are excited to work on projects, enjoy working on them and are engaged in their learning when undertaking projects (Grossman et al., 2021^[30]). Research from England found that the projects seem to be catalyst for learner engagement (Stephenson and Isaacs, 2019^[29]). This feedback is particularly relevant for Lithuania where students reported to the OECD team that the Matura examination questions tended to be predictable and unengaging. These views might be at least partially driving the perceived lack of student motivation that many teachers reported to the OECD team.

While countries' experience has highlighted the significant potential of projects for student learning, engagement and development, it also indicates that projects require significant structuring and scaffolding by teachers, as well as student prior knowledge, in order to realise these positive benefits. Students need to be clearly guided to avoid acquiring misconceptions or developing incomplete, or disorganised knowledge, as well as to keep focused on relevant information and topics (Kokotsaki, Menzies and Wiggins, 2016^[26]). Students might also need to be directed and promoted to prompt higher-order skills, for example by teachers encouraging them to think deeply about their results or assumptions.

Redesigning the project assessment to encourage greater student take-up

One of the reasons cited for the low take-up of the project in Lithuania was that it tends to be very challenging and only accessible to the most capable and motivated students. This likely relates to the evidence that projects need to be accompanied by significant guidance, direction and teacher scaffolding in order for students to experience positive contributions to their learning. Given the potential contribution of the project for student development and their enjoyment of learning, Lithuania might consider steps that could be taken to make the project accessible to a wider range of students while remaining challenging for the highest achievers.

Providing more explicit national guidance around the project, including expectations in terms of the project's nature, a teacher's role and the development process for a project could help to guide students more explicitly through their project's development. The same guidelines could also help to promote equity, so that students with more resources and home support are not unfairly privileged by the assessment. Box 4.3 provides examples of the guidance that is provided for projects in England (United Kingdom) and Sweden. The examinations team in the National Agency for Education might develop guidance that covers some of the following areas:

- Clearly specifying what students are expected to produce for the project. This could include listing what kinds of production can be provided for the project such as a written report, video, presentation, photographs, object, etc. In Scotland for example, guidance on the Scottish

Baccalaureate Interdisciplinary Project sets out that the five mandatory pieces of evidence that candidates have to submit, for example to show evidence of planning before the project and evaluation after it has been produced. The aim of capturing this evidence of the process (rather than just the product) to better capture the skills that students demonstrate during the project (SQA, 2019^[31]).

- The amount of time that students are expected to devote to a project, for example in terms of total hours or the approximate length of any pieces of written evidence that are to be assessed. Guidance on the Scottish Baccalaureate Interdisciplinary Project provides templates that candidates can use to record their evidence if they wish and for the teacher to make comments and grade (SQA, n.d.^[32]).
- A teacher's role in supporting each student in the development of their project including the types of support and guidance, and how many hours of support. This should also specify whether the candidates can only submit their project once, or whether they are allowed to redraft after initial comments from the teacher.
- The expected process that students and their teachers will progress through to develop each project. Specific guidance might be provided for both teachers and students for the project. Guidance for teachers might also include like example projects with external moderator comments which can be made available to read online, or via face to face or online training sessions. The Scottish Qualifications Authority (SQA) provides a separate website with materials for teachers (SQA, n.d.^[33]). It also provides extensive materials for candidates an information pack for students and video case studies of previous candidates' experiences (SQA, n.d.^[32]).
- Projects might be written up in "controlled conditions" in normal classroom time, to ensure that students have the same time and access to the same resources. Teachers might also have regular meetings to talk to the student about what they have done and to certify that they are satisfied that is it the student's own work.

Revisiting some parts of the project assignment by providing further guidance, scaffolding and support as suggested above is likely to make the project more accessible and might encourage greater uptake. In England (United Kingdom), 13% of A-level students took the optional Extended Project Qualification in 2014/15 (Drummond, 2017^[24]).

In the future, Lithuania could consider making a project compulsory for all students. In a few systems - such as Sweden or the International Baccalaureate – completing a project-like assignment is a compulsory requirement for all students (Skolverket, 2022^[28]; International Baccalaureate, 2022^[34]). However, this is likely to raise many issues around equity in terms of the support and resources that students receive from their schools.

Box 4.3. Projects as part of upper secondary courses and certification

Extended Project Qualification, England

The Extended Project Qualification was introduced in 2008 as a single piece of work to assess a wide range of skills and require a high degree of planning, preparation and autonomous working. The project is usually taken alongside the main general upper secondary qualification (A-levels).

To develop and deliver their project, students are required to:

- Choose an area of interest – this might develop and extend from one or more of their study areas or it could be an area of personal interest or activity outside their upper secondary studies.
- Draft a title and aims of the project for formal approval by their centre (normally their school). Plan, research and carry out the project.
- Deliver a presentation to a non-specialist audience.
- Provide evidence of all stages of project development and production for assessment. All projects must produce a written report, and the exact length will depend on the nature of the project and other evidence provided. For example, a project with only a written report must have a report of around 5000 words while projects that include an artefact can submit a shorter report of at least 1000 words.

The specifications for the Extended Project Qualification note that students receive 120 guided learning hours to help them to develop their project. Of which, 30 hours are expected to focus on teaching skills for the project. The specific skills to be taught depend on the student and their project, and likely include research skills; skills or techniques around risk assessment, ethical conduct and research methodology; information technology; project management; the format and structure of academic research; referencing and preventing plagiarism, and presentation skills. The remaining hours of guided learning are devoted to students' independent work, individual supervision and guidance.

Diploma Project, Sweden

As part of both upper secondary general and vocational studies, all students in Sweden must complete a diploma project (*gymnasiearbete*). The purpose of the diploma project is for a student to tie together their learning across all their subjects and demonstrate their preparedness for higher education or employment. The diploma should be related to the content of their particular study programme, and can be undertaken individually or in groups, but each student is assessed individually. Students are required to plan, carry out and evaluate their own tasks.

Students have a teacher that is appointed to oversee their project, including helping them to determine the focus of the project and the tasks involved. There is separate guidance for students undertaking the diploma project in a vocational and general upper secondary programme. For vocational students, vocational students can carry out their project in the workplace or they might set up and run their own business. The Swedish National Agency of Education provides examples of the kinds of projects that students might undertake.

Source: AQA (2015^[35]), LEVEL 3 EXTENDED PROJECT QUALIFICATION Level 3 Extended Project Qualification (EPQ) 2013 onwards, (accessed 28 February 2023). Eurydice (2022^[36]), Teaching and learning in upper general and vocational secondary education Sweden, <https://eurydice.eacea.ec.europa.eu/national-education-systems/sweden/teaching-and-learning-upper-general-and-vocational-secondary>, (accessed 2 February 2023). Eurydice (2022^[37]), Glossary | Sweden, <https://eurydice.eacea.ec.europa.eu/national-education-systems/sweden/glossary#G>, (accessed 2 February 2023). Skolverket (2022^[28]), High school work - Swedish National Agency for Education, <https://www.skolverket.se/undervisning/gymnasieskolan/laroplan-program-och-amnen-i-gymnasieskolan/gymnasiearbetet>, (accessed 2 February 2023).

Considering the project assignment for vocational upper secondary students

Specific consideration should be given to the place of the project for students in vocational upper secondary education in Lithuania. At present, few to no vocational students undertake the project. This is likely because of it is not rewarded as part of the vocational qualification and its perceived difficulty which means that only the highest academically achieving students decide to take it. As part of the country's ambitions to improve the parity of esteem in which vocational education is held, steps could be taken to ensure that the project is accessible and rewarding for vocational students.

In line with the suggestions that the general content and related assessments that vocational students study should not merely replicate what general upper secondary students do, but be adapted to the reduced hours and vocational-focus of their course (see Chapter 3), the same principles should apply to the project assignment. This could be done in two different ways. Either the guidance and requirements of the project assignment could be sufficiently flexible and broad to encompass both general and vocational topics. In this case, the output that candidates are required to produce would have to be very open, for example, it might enable vocational students to investigate a research question in a sector where they are interested. Or the assessment could focus on the process, (rather than the product itself, similar to the Scottish Baccalaureate Interdisciplinary Project discussed above). Alternatively, there could be specific, separate project guidance for vocational and general students. In this case, the project requirements and process could be tailored and contextualised for different vocational areas. For example, vocational students might be required to demonstrate skill in a vocational setting or develop a business plan. The examinations team in the National Agency for Education could develop templates for tailored projects that either schools and students were required to follow, or to guide them. In Sweden, all students are required to produce a diploma project for their upper secondary certification, with slightly different requirements and guidance for general and vocational students (Box 4.3).

Option 2.b. Strengthening the reliability of alternative assessments

The design of the Matura as a “composite” certification means that it includes different types of assessments – the project (discussed in Option 2.a. Reviewing and refining the current project component), oral examinations in foreign languages, school-based examinations and teacher marks from classroom assessment. Each of these types of assessments includes some element of internal assessment, meaning that students’ classroom teachers, and in the case of the project, a committee of teachers at the municipal level, mark student work (and in some cases also set and administer the assessments). There are concerns about the reliability of these marks which has led to the school-based examinations and marks from teachers’ classroom-based assessment being phased out of the Matura from 2023. Concerns about the reliability of the marks from the project mean that it is not considered for tertiary selection. This section discusses steps that Lithuania might take to promote greater reliability in the Matura components that will remain from 2023 onwards.

Introducing more “controlled assessment” for the project

Perhaps the greatest disincentive for students to take the project is that the marks are not considered by tertiary institutions because they are not perceived to be reliable. The measures suggested in Option 2.a. to make the project more accessible for all students and more equitable through greater precision of the project focus and guidelines for its development will help to promote greater reliability (see Option 2.a. Reviewing and refining the current project component).

Lithuania could also consider how the project is marked so that tertiary institutions have confidence that the marks provided are an accurate reflection of student achievement. In the short term, one option to consider is introducing more “controlled assessment” which refers to the central assessment body – in this case the examinations team in the National Agency for Education - having some control over the key

stages of the project's development to promote greater reliability in the project marks. At one end of the scale, the examinations team in the National Agency could determine most of the main stages in the project's development, including judging/marking and grading the assessment. In this case, the examinations team would replace the current committee of teachers in each municipality that are responsible for marking student projects. In the short term, this could help to promote reliability of marks from the project and assure tertiary institutions of the accuracy of the marks across different schools.

Given the individual nature of the project, the school and a student's individual teacher would likely remain responsible for administering the assessment. Clear and specific guidance provided by the examinations team in the National Agency could set out conditions that schools or teachers are required to provide when students are completing the project, including the extent of teacher support and guidance to promote consistent conditions across different schools and classrooms (see Option 1.a. Supporting the developers of the Matura to produce high-quality items that fulfil their purpose).

Developing a robust model to moderate internal assessments

While a more centrally controlled model of the project would contribute to some aspects of its reliability, having the examinations team in the National Agency for Education mark all projects might become burdensome if an increasing share of students undertake the project. Some education stakeholders also feel that there is a specific learning and assessment value in having summative assessments marked by teachers. One of specific benefits include enhanced assessment validity because internal assessment can address educational aims which externally set and marked examinations taken under controlled conditions cannot assess. Another perceived benefit is that reliability might be improved because teachers can conduct assessments over multiple occasions in different settings rather than one-off, time-pressured examinations. Finally, there can be benefits to the education systems because teachers will develop assessment literacy by undertaking their own assessments for certification purposes (Black, n.d.^[38]).

In New Zealand, there is wide support for the combination of internal and external assessment in the country's end of upper secondary certification – the National Certification of Education Achievement – among teachers and students because stakeholders believe it enables assessments to be more authentic, especially in subjects with practical components like languages, and it provides students with different ways to demonstrate success (NZCER, 2018^[39]). Similarly, Hong Kong a country where national certification was previously based entirely on external assessments introduced school-based assessments to enhance the validity of assessment in biology, chemistry and physics. The teacher-assessed components of the examinations were introduced to promote a more reliable assessment of each student and encourage positive “backwash” on teaching and learning by requiring students to engage in meaningful activities, reinforce curriculum aims and good teaching practice (O'Donnell, 2019^[40]).

However, as Lithuania's experience shows, and as international research shows, when teachers assess their students, this raises concerns about reliability as the assessments and standards that teachers apply can differ (Cuff, 2018^[41]). In Lithuania, the response to these concerns has been to remove much of the internal teacher assessment, however this means that the system cannot draw on the potential benefits of internal assessments which is especially important in subjects where part of the achievement requires an authentic demonstration of skills – such as languages or science (O'Donnell, 2019^[40]). It also means that the lack of perceived and actual lack reliability in teachers' marks has not been directly addressed. To support students' learning, and critically in upper secondary education, to support learners to demonstrate achievement in line with national standards, teachers need a strong understanding of what those standards are. While the precise reasons for the lack of reliability in teachers' marks are not known in Lithuania, putting in processes to improve teachers' understanding and ability to apply national standards should also be seen as critical to strengthening overall pedagogy in the country.

To promote more reliable teacher assessments, Lithuania could consider drawing on, and combining some of the moderation models that are used internationally (Box 4.4). These models might be applied first to

modern language oral examinations – where there is an established tradition of teachers assessing their own students in Lithuania. In the future, the model might be extended to the project, and potentially to the assessment of other skills that cannot be assessed by written examinations, such as practical science skills (see Option 2.c. Considering other types of alternative assessment).

In choosing the moderation approach that works best for the country, Lithuania might draw on approaches that work directly with teachers to build their assessment literacy and provide strong external checks on internal marks to ensure reliability. In Queensland (Australia), where 75% of the marks in the country's upper secondary certificate are teacher-assessed, the country uses a two-staged moderation model:

- First, the state awarding body, the Queensland Curriculum and Assessment Authority (QCCA) works with teachers to validate their assessment tools before they are used with learners.
- Second, in Queensland, after young people have completed the assessment, teachers give provisional marks for student work and schools internally moderate their own student work. Then QCAA assessors review a sample of student work from internal assessments in every school to check that teachers have accurately and consistently applied the marking guide when marking student work, and this process confirms the final mark that students receive (Queensland Curriculum and Assessment Authority, 2023^[42]).

In Lithuania, the first stage of this process might be accompanied by other activities to build teachers' assessment literacy such as teacher discussions around different types of assessments, their advantages and disadvantages and their level of demand in relation to expected national achievement levels.

Box 4.4. Moderation – approaches and models

Moderation approaches can be broadly classified into two main approaches:

- Statistical moderation scales the results of teacher assessment using student results from an externally assessed test or examination.
One concern that some educators have with statistical moderation is that by scaling student results from teacher-based assessment to the external test results, the benefits of the teacher-based assessment in terms of capturing different types of learning and achievement that are might not be captured by an external examination, are lost.
- Social moderation tends to be characterised as involving human judgement.
Within social moderation, countries use, and sometimes combine, multiple models, which are discussed below.

Types of social moderation: inspection and verification models

This involves written evidence – in the form of all or a sample of student scripts - being submitted to a central awarding body for review. The moderator or verifier might also visit the examination centre for practical or ephemeral evidence such as to see student artefacts or view a student performance:

- Inspection: an external moderator reviews a sample of student work and following this review, has the power to change student marks.
- Verification: an external verifier reviews a sample or all the examples of student work, but the verifier only makes recommendations to the school or examination centre to change the marks themselves (rather than the verifier actually doing this themselves). If a verifier finds that marks deviate too much from expected standards, additional guidance or feedback are given to the school that year or in subsequent years. If malpractice is suspected further investigation might be conducted with appropriate sanctions taken if necessary, which at the extreme end could mean a school losing its approval for a qualification or subject.

One the challenges of inspection and verification is that moderators or verifiers, as diverse individuals with different experiences and perceptions, might not be able to ensure a fully standardised approach across different schools.

Group moderation

Group moderation involves a group of people coming together to discuss standards:

- Consensus moderation: where a group of teachers are required to come together to discuss their marking and judgement of student work, and to reach consensus on the decisions they have made.
- Consortium or area moderation: like consensus moderation but here there is also an external moderator who brings the group together and has ultimate say on assessment decisions.

Consensus moderation is very costly in terms of finances and resources and requires a lot of teacher time. However, it is often considered effective for promoting teachers' professional development and fostering innovation while achieving the required levels of assessment standards (Daly et al., 2011^[43]).

In both social and statistical moderation, the sampling approach needs to be carefully planned. In general, the more resource-intensive a moderation mode is, the lighter the sample tends to be. For example, social moderation models that are relatively resource-intensive might tend to have a lighter sample while statistical moderation, being less resource-intensive to implement, can have a much larger

sample. Some experts have suggested that this means that statistical moderation is more 'robust' because sampling rates can be very high, up to 100% (Cuff, 2018^[41]).

In terms of sampling, systems take different approaches. For example, some plan a structured sample of schools, subjects and candidates across the mark range, and also add in an additional share of 'random' audits of quality. Some systems operate a risk-based approach, which can sometimes effectively function as a rewards-based approach, for example, a school with more internal moderators who have undergone training/certification might be sampled less than a school with fewer certified internal moderators.

Source: Daly et al. (2011^[43]), Principles of Moderation of Internal Assessment, Centre for Education Research and Policy, AQA , www.cerp.org.uk, (accessed on 28 February 2023). Cuff (2018^[41]), International approaches to the moderation of non-examination assessments in secondary education, Ofqual, (accessed on 28 February 2023).

Providing teachers and schools with support for assessment

By definition, moderation is an ex-poste activity. Ensuring the reliability and validity of internal assessment also requires greater support and activities long before any assessment takes place to ensure that teachers have a good understanding of expected standards and how learners demonstrate those standards. This is important for the quality of internal assessments but more critically so that teachers can support their students to achieve in line with the expected national standards. Stakeholders in Lithuania shared examples with the OECD team about how external national assessments in primary and lower secondary were used to help teachers develop a common understanding of expected achievement. Similar activities could be introduced in upper secondary education such as:

- Providing more exemplars of student work at different achievement standards across all subjects.
- Developing communities of practice – both online and in-person - so that teachers can share practices and insights.
- Creating fora for item developers, national markers and the examinations team in the National Agency for Education to share advice and insights with teachers and schools before the Matura examinations and also after to discuss results. (This should be accompanied by clear guidance and controls about what item developers and markers can share about the Matura before it has been made public).
- Providing training courses in assessment literacy for teachers.
- Providing a range of sample assessment instruments and assessment templates that are easily accessible to teachers (e.g. online). As discussed above, teachers might also work with the examinations team in the National Agency to externally validate assessment instruments before they are used with learners.

Option 2.c. Considering other types of alternative assessment

Beyond the three types of alternative assessment that Lithuania will have from 2023 onwards – the project, oral examinations in foreign languages and the art portfolio - there are skills which cannot readily be assessed in a typical written examination. There is broad consensus in the field of science educators for instance, that practical science skills – where students are involved in manipulating and/or observing objects and materials to understand how a particular phenomenon works – is very challenging, if at all possible, through traditional summative assessments such as written examinations (Erduran et al., 2020^[44]). Going beyond subject-specific skills, as countries have implemented competency-based curricula, this has led to the recognition that some competencies, and in particular, social-emotional skills

like planning, self-reflection, investigation and collaboration, might be more readily assessed through assessments when students have to plan their work over a period of time or engage with their peers.

Identifying skills that cannot easily be assessed through written examinations

Lithuania could consider which of the skills that the country's upper secondary students are expected to develop across its upper secondary curricula might be assessed more effectively through alternative forms of assessment. For example, a review of high-performing countries in science in PISA 2015 found that 12 out of 19 systems had provide some kind of hands-on assessments or investigation to assess practical science skills (O'Donnell, 2019^[40]). In Ireland, many newer and social science subjects in the country's end of upper secondary certificate, the Leaving Certificate, now incorporate some type of coursework that contributes to students' final marks. The coursework contributes a minimum of around 20-30% of the Leaving Certificate marks and includes student research projects (e.g. in Geography, History and Economics) and practical skills examinations (e.g. in Engineering). The coursework, which is anonymised and marked externally by the State Examinations Commission, enables students to demonstrate proficiency in course content and skills that are not easily assessed by the end-of-course examination (Education, 2021^[45]).

In Lithuania, subject, curriculum and assessment experts could work together to identify which skills might be more effectively assessed through alternative forms of assessments – such as practical assessments or coursework. This work could be developed progressively, starting with a limited set of subjects providing a small overall percentage to student's final Matura marks. It would be important to ensure that a broad range of stakeholders reflecting subject and assessment expertise and policy making insights are able to work together to identify those skills that could be assessed in alternative forms and the most appropriate modes of assessment that could be used.

Developing governance arrangements to ensure broad representation and consensus decisions

Decisions about which parts of a qualification are assessed through different assessment types – either externally or internally, or through different types of tasks such as projects, investigations or extended essays – tend to involve a broad range of stakeholders. These stakeholders will typically combine a range of subject expertise, technical assessment expertise and policy power. In Hong Kong, as well as involving a range of subject and assessment specialists, there are efforts to ensure that there is regular turnover in external committee members through an open invitation to nominations from school leaders on a regular basis (Tong, Lee and Luo, 2020^[12]). In Scotland (United Kingdom), the Scottish Qualifications Authority (SQA) uses a series of committees and structures to promote broad representation and consensus-based decisions, including:

- An overarching decision-making group designed to provide accountability to external stakeholders.
- An internal group that quality assures and provisionally signs off all work for presentation to the external group.
- Advisory groups that provide views on a broad curricular area (intended to ensure coherence between cognate subjects and stop individual subject groups from creating unnecessary and unhelpful differences between similar subjects).
- Subject advisory groups, called Qualification Design Teams, who work at the level of individual subjects (for big developments, these might work at the level of individual qualifications).
- Small, focused working groups, who work on individual qualification developments or even specialist parts of this.

Each of these groups reports to the next level, and each has a defined role and remit, agreed breadth of membership, and defined mechanisms for recruiting members (SQA, 2021^[46]).

Issue 3. Providing more flexible choices and options within the Matura

Upper secondary examinations and qualifications are young people's passport to a range of different pathways including continuing education at tertiary and non-tertiary post-secondary level, employment and lifelong learning. This means that upper secondary qualifications need to be both responsive to a broad range of prior learning – candidates may have studied different content such as general or vocational and different subjects – and facilitate access to a diverse range of future pathways.

Achieving all these objectives is clearly challenging for any examination and qualification and is the reason why many education systems provide choices and options within their national examination for upper secondary certification. Many systems, for example, provide examinations at different levels, examinations linked to students' specialisation choices and frequently, provide distinct certification for general and vocational students. This issue discusses how the Matura in Lithuania might draw on some of these practices to provide a Matura that is more differentiated to the needs of different groups of students.

The Current Context: Choices and Options within the Matura

The content levels at which students study and the Matura examinations are not currently aligned

Currently, most upper secondary courses in Lithuania are offered as either general (B) and advanced (A) courses (Table 4.3.). Many OECD countries provide upper secondary students with the opportunity to study content at different levels of depth (Stronati, 2023^[47]). However, in Lithuania the difference across the B and A courses is related to the amount of teaching hours and the amount of content that is covered, rather than the depth of learning and degree of mastery required to demonstrate proficiency.

Students can choose between taking a school or a state-level examination for certification. The main difference between the two sets of examinations is the perceived rigour and reliability, which are greater with the state-level examinations. There is no established policy however setting out how the depth, breadth and level of demand across the school and state-level examinations should be differentiated. The state Matura examinations cover the content of the A-level courses but this is not articulated in the curriculum or examination specifications.

Vocational students are put at a disadvantage in the Matura examinations

If students wish to be eligible for tertiary education, they are required to take state-level Matura examinations in at least three subjects. The content for the state-level examinations is based on the A-level courses. This puts vocational students at an automatic disadvantage because vocational students typically take B-level courses, in line with the fewer hours of general curriculum courses that they take to create space for vocational content. This is likely one reason why very few vocational students – just 2% in 2020 - use the pathway from vocational education into tertiary education. Even though the pathway is technically open, in practice it would require additional learning time outside normal school hours to cover the examination content.

Curriculum and certification are not promoting either depth or breadth of learning

Like in most OECD countries, Lithuania's upper secondary curriculum aims to promote breadth of learning, with students in both general and vocational education required to study at least eight general subjects. In addition to their eight general subjects, vocational students must also pursue a vocational specialisation and students in general education frequently add electives (Table 4.3.). In contrast, students are only examined in three to four subjects – typically Lithuania, Mathematics, and one or two other subjects. This creates a situation where students are required to study a wide range of subjects but are only examined

in a narrow set of subjects. Internationally, most systems tend to provide breadth – with students required to study a wide range of subjects on which they are examined – or depth, with students studying a narrow range of subjects at greater depth in which they are certified (Stronati, 2023^[47]).

Table 4.3. Upper secondary curriculum and certification – current system

	Subjects	Levels at which subjects are taken		Matura examinations	
		Levels	VET	USE certification 2 subjects	Tertiary entrance 3 subjects
Compulsory	Ethics / religion	Single level		School level	State level
	Lithuania Language	A (advanced) or B (general)	B (general level)	School level Compulsory	State level Compulsory
	Foreign languages	A or B	B	School level	State level
	Social sciences (at least one from History or Geography)	A or B	B	School level	State level
	Mathematics	A or B	B	School level	State Compulsory
	Sciences (at least 1 from biology, physics or chemistry)	A or B	B	School level	State
	Physical education (at least one from basketball, football, athletics)	A or B	B	School level	State
	Arts or Technological learning (at least one from arts, music or technological skills)	A or B	B	School level	State
	Vocational subject		Vocational specialisation	Assessed and certified separately	
Electives	E.g. psychology, economics, business, ICT to advanced physics, biology, etc.	Defined by school teaching capabilities.		No examination	No examination
	Project	Optional	Optional	Municipal level, teacher committee	Municipal level, teacher committee
Total general curriculum hours		Minimum 28hours Maximum 35hours	Minimum 22hours Maximum 35hours		
Total examined subjects				2 subjects Passing grades from continuous assessment in all subjects	3 subjects

Sources: Adapted from national information and stakeholder meetings in Lithuania

There are few options to differentiate pathways to respond to student needs or interests

While curriculum content is provided at levels A and B, as discussed above, this difference relates to the amount of content covered rather than the depth of learning or demand. Similarly, the examinations for certification, and to access tertiary education are the same for all students – vocational and general upper secondary students alike. Furthermore, since upper secondary students wishing to enter tertiary education are required to take state Matura examinations in mathematics and Lithuanian, and English is generally viewed as essential, in practice the typical student will choose no, or perhaps one additional subject in which they are examined.

This structure provides upper secondary learners in Lithuania with relatively limited options to differentiate how they spend their time according to their levels of learning, interests and future ambitions. In contrast internationally, a defining feature of upper secondary education is the option for students to choose subjects or domains where they have a particular interest, as part of a progressive path towards defining their future focus in post-secondary education and employment (Stronati, 2023^[47]).

The new system from 2023 onwards will provide greater differentiation and flexibility

In 2023, as well as introducing a new curriculum, Lithuania will introduce new requirements for the subjects that students study and related changes to the Matura examinations (Table 4.4). Key changes relevant to this issue include:

- Reducing hours for all students: both general and vocational students will be required to study for fewer hours overall. In particular, the number of compulsory subjects for vocational students will fall significantly – to 5 – as well as reducing the minimum number of hours.
- Providing more choice for vocational students: as well as reducing the overall hours of general subjects that vocational students are required to take, the changes to the curriculum will provide them with greater choice so that they can choose across several subjects.
- Providing compulsory subjects at different levels: mathematics and Lithuanian examinations will be provided at two levels of difficulty / depth, a general and a higher level.
- Introducing intermediate and final examinations: most subjects will have two examinations, an intermediate examination at the end of Grade 11 which will contribute 40% of a student's marks to the final grade, and a final examination at the end of Grade 12.

Table 4.4. Curriculum and examinations – new system

Subjects		GEN	VET	State-level Matura examinations	
Core / compulsory	Lithuania Language	Compulsory	Compulsory	Compulsory Intermediate and final examination General and higher level	
	Mathematics	Compulsory	Compulsory	Intermediate and final examination General and higher level Compulsory for tertiary entrance only	
	Physical education	Compulsory		Information unavailable	
	At least one foreign language	Compulsory	At least two subjects from foreign languages; mathematics, science and technology group; and social sciences group	Intermediate and final examination	
Electives (depending on programme)	At least one from science and technology group	Compulsory		Intermediate and final examination	
	At least one from social sciences group	Compulsory		Intermediate and final examination	
	At least one from moral education	Compulsory	Optional	Intermediate and final examination	
	At least one from arts group	Compulsory	Optional	Intermediate and final examination	
	Defined by school teaching capabilities. E.g. psychology, national security and defense, law, history of art, geographic	Optional	Optional	No examination	No examination

	information systems, astronomy, etc.				
	Project	Optional	Optional		
Total general curriculum hours		Minimum 18.75 Minimum 8 subjects	Minimum 12.75 hrs Minimum 5 subjects		
Upper secondary certification				At least two subjects including Lithuanian	
Tertiary entrance				At least three subjects including Lithuanian and mathematics	

Source: Adapted from national information and stakeholder meetings in Lithuania

Policy options to provide more flexible choices and options within the Matura

The text below presents Lithuania with three options to expand the range of choices and options within the Matura, including promoting closer alignment between students' curriculum choices and the subjects in which they are examined by the Matura and considering the specific needs of vocational students. It begins by discussing the country's intentions to introduce more modular assessment to the Matura by sharing evidence about the impact of teaching and learning of modular and linear assessment.

Option 3.a. Defining the purpose, structure and consequences of a more modular approach to assessment

Lithuania's state Matura examinations are currently linear, which means that all examinations for each subject are taken at the end of the two years of study (Baird et al., 2019_[48]). As part of the proposed reforms to the Matura, Lithuania will introduce intermediate examinations that will assess part of the content for each subject and contribute 40% of a student's final mark in each subject. In some subjects, there will be multiple intermediate assessments. This change will make Lithuania's examinations more modular in nature. In a modular examination, assessment is broken into separate units of assessment which are combined to give an overall result (Baird et al., 2019_[48]). As a first step to introducing this reform, Lithuania will need to carefully consider the purpose of the new intermediate examinations to guide the design and implementation of the new examinations.

Defining the function of the new intermediate assessments

Overall, assessment literature finds that there are both advantages and disadvantages of linear and modular examinations (Table 4.5), rather than one system clearly standing out as being superior to the other (Baird et al., 2019_[48]). Research as well as student and teacher experiences suggest that different types of assessment can be beneficial for different types of students and in different contexts. In England, where modular assessment was introduced in high stakes examinations at 16 and 18 years (and later removed), teachers and schools have experience of both modular and linear assessment. In their reflections on the different systems, they noted that modular examinations seem to be more accessible for learners for whom it is more difficult to retain information and to maintain stamina for learning and preparation over the full course (Baird et al., 2019_[48]). Teachers in England noted that these challenges tended to be most relevant for lower performing students (Baird et al., 2019_[48]). The design of a more modular assessment, whereby learners can revise some content and then be examined in it could suit some learners in both the vocational and general programmes in Lithuania. In particular, the more modular approach could help to promote greater success among vocational learners cohort in the Matura examinations, who may already be familiar with this approach in their vocational qualifications.

The intermediate assessments could also provide two important systemic functions in Lithuania. First, they provide external, reliable information about student learning during upper secondary education. One of the challenges related to the Matura and assessment in upper secondary education in general is the reliability of school- and teacher-level assessments (see Issue 2. Introducing alternative types of assessment). The external, intermediate examinations could provide a useful indicator for students and teachers of where students are in their learning and how they might perform in the final examinations for the Matura. The results would be helpful for teachers as an external benchmark of expected standards to improve general assessment literacy. For students, the intermediate feedback on their achievement could also help to motivate them by enabling them to track their own progress and this could be useful in Lithuania given the recurrent perception among teachers and other adults that students are not motivated. However, country experience also demonstrates that for students who do not do well in intermediate examinations, the feedback can be demotivating (Baird et al., 2019^[48]). Second, the intermediate examination in Lithuania could be used to provide a closer alignment between the curriculum's emphasis on breadth and in contrast, the narrow range of subjects in which students are examined (see Option 3.b. Supporting a better match between course and examination choices).

Table 4.5. Relative benefits of linear and modular examinations

Based on research literature

	Linear examinations		Modular examinations	
	Benefits	Disadvantages	Benefits	Disadvantages
Learning	<ul style="list-style-type: none"> Long-term retention of information Foster depth of learning More time for the development of subject-specific skills Better subject understanding 		<ul style="list-style-type: none"> Testing when ready Students master a topic before moving on 	<ul style="list-style-type: none"> Less subject coherence Less time for extended writing
Teaching	<ul style="list-style-type: none"> More time for teaching due to less frequent exams 		<ul style="list-style-type: none"> Greater flexibility Better allocation of staffing and resources Content is covered in manageable chunks 	<ul style="list-style-type: none"> More examinations can be disruptive
Student experience	<ul style="list-style-type: none"> Overall exam load is lower Maturity when taking examination 	<ul style="list-style-type: none"> High peak of exam stress at end course 	<ul style="list-style-type: none"> Can track progress Frequent feedback to support improvement Short-term targets beneficial Easier to revise 	<ul style="list-style-type: none"> Constant workload to prepare for examinations
System challenges				<ul style="list-style-type: none"> Complexity of administration

Source: Adopted from Baird et al. (2019^[48]), Examination Reform: Impact of Linear and Modular Examinations at GCSE Summary Report, [Modular Linear GCSE summary final.pdf \(ox.ac.uk\)](#) (accessed on 13 February 2023).

Addressing the learning and well-being challenges of over-assessment

More modular examinations are also associated with a number of limitations, according to the literature (Table 4.5), which is also echoed by teacher and student experiences (Baird et al., 2019^[48]). A particularly relevant concern in Lithuania is likely to be student stress and over-assessment. While Lithuania does not have any other high stakes examinations for certification purposes in the earlier years of schooling, many students reported to the OECD team that they perceive the Grade 10 examination to carry high stakes for their future schooling. This is because, while enrolment in either general or vocational programmes is currently theoretically open to all students, in practice some general schools, especially those in the cities

where schools are competing to attract students and their families with high Matura results, might ask students to leave and move into a vocational programme if they achieve low marks in the Grade 10 examination. The emotional stress attached to this is likely quite high for individual students because it means leaving their current school and friends that they have been with for two years, to attend a new institution (see Chapter 3).

Regular, high stakes assessment also means that more learning time is devoted to examination preparation, which some teachers and subject experts feel reduces the time for deeper, cumulative learning that occurs across a longer period. This concern is echoed across all key subjects – notably mathematics, sciences and languages - but is arguably particularly prominent in subjects like the national language, where learners develop maturity and fluency of communication over the full course of study (Hayward, 2007^[49]). In Lithuania, some teachers and students already shared the view that a disproportionate amount of teaching time is already devoted to examination preparation in the workshops with the OECD. This situation risks being accentuated with the intermediate assessments without steps to ensure that the examinations focus more effectively on assessing the application of knowledge and other complex skills in the new curriculum (see Issue 1. Supporting continual improvement and high-quality assessment).

At present, Lithuania currently plans to introduce just one intermediate examination which will likely mean that the negative impacts of modular examinations where students and teachers feel that there is constant assessment is likely to be contained. However, in some subjects, there are plans to introduce more than one intermediate examination and these plans should be carefully considered alongside international evidence of the potential benefits and drawbacks of modular examinations. Policy makers in Lithuania should be particularly conscious that, following the introduction of intermediate examinations, learners in Lithuania will face a high stakes examination every year in the last three years of their schooling. Options to offset this stress should be considered including revisiting the procedure for transitions into upper secondary education so that the Grade 10 examination results are not the sole or primary factor that determine transitions (see PP 1) and considering a re-sit policy for intermediate examinations so that learners can make up for low scores if they wish.

Option 3.b. Supporting a better match between course and examination choices

The country's current reforms to the curriculum and Matura provide scope to ensure greater alignment across the courses that students study and at the same time, provide more space for the general upper secondary curriculum to be adapted to diverse needs and interests.

Providing greater alignment across course and examination choices

Lithuania's current configuration of compulsory and examined subjects requires students to study a broad range of subjects while they are only examined in a limited range of them. This system incentivises students to focus on their results in a narrow range of subjects – the three to four where they will be examined – but since the content of the examinations and courses where they are focusing for their examinations is not any greater, they are not gaining any additional depth in their learning, despite the narrowing of their focus.

At a national level, the current approach results in student choices being clustered in three main subjects – Lithuania and Mathematics, which are compulsory and English. In contrast, only 816 students, took chemistry in 2022 (Table 4.6.). Given the national concerns about the shortage of new graduates with technical and scientific skills (OECD, 2021^[50]), a national examination structure that promoted a more equitable spread of student choices across a range of subjects could help to create a pipeline of new graduates with the competencies needed in these sectors.

Table 4.6. State Matura examination results, 2022

	Total number of students taking examination	Of which % VET students	Total % of candidates who passed	% of VET students that passed
Mathematics	14 119	1.7%	65.7%	19%
Lithuanian language and literature	16 601	2.4%	93.1%	71.4%
English foreign language	17 116	5.0%	98.3%	93.6%
Information Technology	1 958	0.7%	86.7%	56.5%
Biology	5 370	2.4%	96.3%	75.6%
Chemistry	861	0.6%	96.3%	60%
Physics	1 893	1.6%	97.1%	77.4%
History	6 824	2.8%	99.1%	92.6%
Geography	3 373	6.3%	99.2%	97.2%

Source: Nacionalinė švietimo agentūra (2022^[51]), Rezultatų analizės, <https://www.nsa.smm.lt/egzaminai-ir-pasiekimu-patikrinimai/brandos-egzaminai/rezultatai/> (accessed on 28 February 2023).

The current examination structure also likely affects student motivation in the subjects where they are not examined for the state Matura. Students are currently required to achieve a passing grade in teachers' continuous classroom assessment for upper secondary certification but stakeholders told the OECD team that this is rarely a robust or reliable indication of student achievement and in practice, all students achieve a passing grade with minimal effort. In any case, with the new reforms, this requirement will be removed.

Lithuania could use the examination and curricula reform to promote a more consistent approach in course and examination choices, by either:

- Promoting greater breadth of learning - by requiring students to be assessed for certification in all the subjects that they study. This would result in learners being examined in at least six subjects which is similar to the range of subjects in most OECD countries. Students might take different subjects at advanced or general levels, based on their needs, interests and future ambitions. This would help to ensure that students remain motivated and engaged in almost all their compulsory subjects until the end of upper secondary education. It would also provide an external, robust measure of learning in all subjects which could help to promote fairer, more consistent standards nationally.
- Alternatively, promoting greater depth of study. One option is that students take the new intermediate examinations in a broad range of subjects i.e. all the compulsory subjects that they study in Grade 11, and then based on their examination results, they could have the option of dropping certain subjects and continuing with three to four in which they would take their final examinations. The course content in Grade 12 could be appreciably different from that in Grade 11, not necessarily covering more content but at greater depth than in Grade 11 and with more hours of study to reflect the reduced breadth of study. Student marks from both the intermediate and final examinations could be reflected in the final Matura grade, even in subjects that are dropped in Grade 12.

In either scenario, the government will have to work very closely with the tertiary education sector to develop a clear system for how examinations at higher and general levels, and in the intermediate and final examinations will be considered and rewarded as part of the tertiary selection process.

Moving forward with plans to provide Lithuanian and mathematics at general and higher levels

Lithuania is planning to introduce state Matura examinations on two levels - general and advanced – for Lithuanian and mathematics. Most OECD countries provide at least some upper secondary courses, often those that are compulsory, at different levels. In Sweden, for example, students can select modules in core subjects at different levels in order to meet their requirements (e.g. Swedish 3, Mathematics 2). In Finland, students can choose from Basic and Advanced Mathematics (Stronati, 2023^[47]).

The introduction of the new levels for the examinations in Lithuanian and mathematics should help to make sure that content is accessible for a wider range of students, and that the examination suits their needs. This is particularly important in core subjects like mathematics, where in 2022, 34% of Grade 12 students failed the examination (Nacionalinė švietimo agentūra, 2022^[51]). The new levels of examination should ensure that all students have a robust, external assessment of the mathematical competencies but that the examination is accessible across a wider range of the ability and importantly reflects the different future needs and ambitions of learners. While all learners need some fundamental mathematical competencies, only those intending to pursue certain careers such as scientific, technological or medical might need a higher level of mathematics.

As Lithuania introduces the new levels, the government will need to ensure that these are carefully matched to teaching. For example, students taking the higher paper need to have had the opportunity to learn content at a deeper level and master more advanced skills to prepare for the paper. This might mean providing different classes at different levels or additional classes for students preparing for the higher Matura paper. This would also require that teachers receive adequate preparation to teach the different courses and it may require more teachers to teach the different levels.

Working proactively with tertiary education partners to determine how they will set requirements for selection

Tertiary selection in Lithuania, as in many OECD countries, significantly influences how and where students and teachers focus their time during upper secondary education. While the tertiary sector in Lithuania is independent, as in other OECD countries, most students attend tertiary education through a state-funded place which makes it critical that the government and tertiary actors work together to determine how the Matura reforms will impact selection. It will be essential that the government initiates discussions with the tertiary education sector early on in its current reforms so that teachers and students have a clear and accurate understanding of how their choices in upper secondary education will impact their chances in tertiary selection.

A central issue will be how the new advanced and general levels will be accounted for in tertiary selection. Tertiary institutions might set specific requirements for certain subjects, for example, students wishing to study medicine might need advanced mathematics while history applicants might only require general mathematics. Certifications at general and advanced levels might be associated with different points for tertiary selection purposes. In the United Kingdom, an independent organisation, UCAS, provides a points calculator which enables students taking upper secondary qualifications across either England, Wales, Northern Ireland or Scotland to enter their qualifications and their grades and see how many points they would receive for their qualifications. Young people can then search across the UCAS website to see the tertiary education programmes they are likely to be able to access with their available points (UCAS, 2013^[52]). The government in Lithuania might encourage or require the tertiary sector to create a similar tool, especially for students accessing state-funded places.

Supporting students to make informed subject and level choices

The introduction of different levels, as well as intermediate examinations, and the associated reforms around subject choice will mean that young people in Lithuania and their teachers will need to be supported to understand the options available to them to make informed choices. Lithuania is strengthening its system for student guidance, by introducing student guidance earlier on and developing a new national website to provide accessible information for young people (see Chapter 3). These approaches should be developed to integrate advice about Matura options and levels. As part the process of transitioning into upper secondary education, as well as discussions about whether a general or vocational programme best suits an individual student, students should receive advice on:

- The elective subjects that they will take during upper secondary education, and for the vocational students, their VET specialisation.
- The level of demand – general or higher – that students will take mathematics and Lithuania at. This can focus both on their aptitude for the subject and future ambitions.

As well as providing advice during a face-to-face meeting with a student and their student guidance counsellor, students would be supported to reach informed decisions through clear information about future pathways available on the national career website. In Ireland, for example, the National Careers Portal sets out typical subject choices in the country’s upper secondary certification – the Leaving Certificate – according to future career ambitions (CareersPortal.ie, n.d.^[53]). While in New Zealand, the Careers New Zealand website provides users with a “Subject Matcher” tool that enables them to see the career paths that are linked with their upper secondary subject choice. A “Choosing School Subjects Action Plan” provides questions and prompts to help young people determine their upper secondary subject choices (careers.govt.nz, 2023^[54]).

Option 3.c. Meeting the needs of vocational upper secondary students in the Matura

In theory, Lithuania’s pathway from vocational upper secondary education into tertiary education is one of the most open across the OECD. Upon completion of upper secondary education, 94.0% of vocational upper secondary students in Lithuania have direct access to tertiary education, in contrast to 73.7% across the OECD on average (OECD, 2022^[55]). In practice, because very few vocational upper secondary students take the state Matura examinations, and even fewer pass them, only a tiny minority can access this pathway. In 2020, just 2% of upper secondary vocational graduates entered tertiary education (OECD, 2022^[55]). While the rate of entry into tertiary education is generally much lower for vocational graduates compared with general education graduates in all countries, it is particularly low in Lithuania (OECD, 2022^[55]). The text below discusses ways in which the state Matura examination could be revisited to reduce barriers for vocational students to enter tertiary education.

Ensuring that the new examinations are accessible for VET students

One of the major challenges with the removal of the school level examinations and the introduction of only state Matura examinations will be ensuring that the new examinations are provided at a standard that is accessible for most students. This is a significant risk because successfully passing the Lithuanian examination, and another examination of their choice, will be a requisite for certifying completion of upper secondary education. Currently, very few vocational students take the state Matura examinations so the examinations team in Lithuania’s National Agency for Education does not have reliable historical information on the performance of this student cohort. Providing the examination at two different levels is an important step to promote accessibility.

The government could also consider providing some subjects at multiple levels. This will be particularly important if the country considers making a broader range of subjects compulsory in the state Matura examinations (see Option 2). In Ireland for example, where the vast majority of the cohort (around 95%)

sits the Leaving Certificate examinations, students can choose from three levels of Irish which is required for certification of upper secondary education, three levels in mathematics - Foundation, Ordinary and Higher, which most tertiary institutions require (OECD, 2023^[56]). Similarly, in Japan schools might offer up to six different options for mathematics, while in Korea they offer a choice between three options in mathematics plus one in applied mathematics (Stronati, 2023^[47]). The introduction of more levels would help to ensure that students across the ability range and with different aspirations can certify skills in key subjects.

Developing a dedicated upper secondary certification for vocational students

The policy decision in Lithuania to have a single, uniform upper secondary qualification aims to maintain a direct pathway from vocational upper secondary into tertiary education and to promote equity of access. Few vocational students are ever able to access this pathway because they have to perform at the same levels as their peers in the general programme to be able to access it. This is profoundly unfair because the learners in the vocational pathway have less hours learning general subjects. This reduces their opportunities to develop subject-specific skills but also the transversal skills that learners develop across a curriculum of general subjects such as general higher-order skills like analysis, evaluation and the ability to synthesise large amounts of complex information, which are important for success in examinations such as the state Matura examination. In addition, learners in vocational pathways invariably begin with lower achievement in general subjects because this is generally a factor in orientation decisions into upper secondary education.

The quasi-impossibility for vocational students to access tertiary education is significantly impeding the parity of esteem for the vocational pathway and hinders the country's possibility to have a strong pipeline of upper secondary graduates into higher vocational education. Lithuania is currently developing short-course tertiary education (ISCED 5) which is generally designed as an important pathway for vocational learners into tertiary education (see Chapter 3). Graduates from vocational upper secondary programmes are still expected to achieve at the same level as their counterparts from general education in the Matura examination which determines their eligibility to access all tertiary education, including ISCED 5. This means that in practice, students from vocational upper secondary programmes might find themselves crowded out from accessing ISCED 5 places by general upper secondary graduates who do not achieve the grades to access to bachelors programmes in tertiary education (ISCED 6).

In the future, Lithuania will need to give very serious and careful consideration to developing an upper secondary examination and certification that values the skills of vocational graduates and recognises their achievement in general subjects. This could be achieved in different ways:

- Rewarding students' VET courses with points or as a component of the Matura. For example, a student's VET specialisation could replace some of the general courses of the Matura or, to be eligible to access tertiary education, vocational students might need to complete two general courses and their VET specialisation.
- A more flexible Matura that provides a wider range of subjects, including perhaps vocational and/or applied that subjects that bridge general and vocational content. This would have to entail a wider range of assessment approaches but some of these could probably draw directly on existing practices in vocational education. It might be difficult for some schools, especially those in rural areas, to provide a good offer of courses.
- Developing the Matura as a single umbrella certification which includes quite different certifications for different purposes within it. In France for example, students at 18 can take either a *baccalauréat général*, *baccalauréat technique* or a *baccalauréat professionnel*. While all the qualifications are achieved at the same level in the country's national qualification framework, the content and assessment are distinctly different, with students in the *baccalauréat professionnel* spending time on the job learning. Students in the *baccalauréat professionnel* spend less time in general subjects

such as French, mathematics, sciences and social sciences than their peers in the other baccalaureate options and take different examination in these subjects. While all the different types of French Baccalaureate provide access to tertiary education, they are each a pathway to different options. Generally the *baccalauréat professionnel* is a pathway to short course, vocationally-oriented programmes – BTS (ISCED 5), the *baccalauréat technique* to short course programmes – BTS and BTU (ISCED 5) and the *baccalauréat général* to bachelor programmes (ISCED 6) (Ministère de l'Éducation Nationale et de la Jeunesse, n.d.^[57])

If Lithuania chose to implement a Matura for vocational students that aimed to provide access to ISCED 5, it would be important to ensure accessible progression from ISCED 5 to ISCED 6 if students wished to pursue this route, either immediately or later in life (see Chapter 3).

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