OECD Reviews of School Resources

Responsive School Systems

CONNECTING FACILITIES, SECTORS AND PROGRAMMES FOR STUDENT SUCCESS

This report on Responsive School Systems constitutes the second of three thematic comparative reports bringing together findings from the OECD’s School Resources Review. Evolving educational objectives, changing student needs and demographic developments require school systems to be highly responsive to new patterns of demand and adapt their provision accordingly. The organisation of school facilities, sectors and programmes plays a key role in doing so and in providing students with a high-quality education where they need it. The report aims to assist governments in organising school infrastructures and services to achieve their education policy objectives and to ensure that resources are used effectively and equitably. It offers a systematic analysis of the governance of school networks, their adaption to demographic changes and student needs in urban, rural and remote areas, as well as the vertical and horizontal co-ordination of education services to improve students’ transitions.
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Connecting Facilities, Sectors and Programmes for Student Success

SUMMARY
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The executive summary and assessment and recommendations are drawn from:


Further information can be found on the project website: www.oecd.org/education/schoolresourcesreview.htm

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Executive summary

This report is the second in a series of thematic comparative reports bringing together the findings of the OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review). It provides analyses and policy options to assist governments in promoting educational quality, equity and efficiency through the organisation of school facilities and education services in a context of changing demand for school places and evolving student needs. Following the introduction, the report’s three main chapters focus on the thematic areas below:

- Chapter 2: How the distribution of responsibilities for the school network and different steering tools can contribute to the effective organisation, distribution and size of educational facilities.
- Chapter 3: How the school network can be adapted to demographic changes and student needs to support policy objectives in urban, rural and remote areas.
- Chapter 4: How education services can be co-ordinated across levels, sectors and programmes to support students’ vertical and horizontal transitions.

Chapter 1 introduces the trends that motivate the report and provides the context for the subsequent analyses. Countries are confronted with demographic trends, economic and social changes, as well as new and evolving educational objectives. Adjusting educational infrastructures and the services they deliver in response to these trends is crucial to ensure that students can continue to benefit from a high-quality education where they need it. Although physical resources account for a relatively small share of total educational expenditure in most school systems, they are critical to enable all actors in the system to work as effectively as possible towards students’ success.

The governance of responsive school networks requires effective steering and co-ordination

Chapter 2, Governing the school network, analyses the roles and responsibilities different actors assume in governing a system’s school facilities and how the relationships between them affect the system’s capacity to respond to changing educational demand and student needs. As OECD school systems have grown in administrative complexity, they are increasingly characterised by multi-actor and multi-level governance arrangements. These developments generate both opportunities and challenges for the governance of school networks and depend on an adequate allocation of responsibilities and strong co-ordination between national, regional and local authorities. Education authorities have a range of steering and co-ordination mechanisms at their disposal that they should use to facilitate the strategic planning of school networks at the central, regional and local levels. To ensure that the school network is responsive to the needs of today’s and tomorrow’s learners, the chapter recommends that reforms should seek to: invest planning authority at the appropriate level of government and strengthen horizontal co-ordination mechanisms; build capacity for school network planning supported by the collection and maintenance of high-quality data; balance incentives for network efficiency with the need to maintain high-quality provision in small schools and remote areas; and ensure equitable access to capital funding.
Efficient regional responses to changing educational demand are guided by equity and students’ needs

Demographic shifts, regional economic developments and changing student needs have generated costly mismatches between educational demand and the supply of school places in many OECD countries. Chapter 3, Adapting the school network to changing needs in urban, rural and remote areas, analyses efficient responses to this challenge and assumes a territorial perspective to acknowledge the significant heterogeneity that many countries face across different parts of their school network. In this context, responding to changing demand and student needs requires strategies that are sensitive to local contexts and take educational quality, equity and student well-being as their guiding principles. To do so, authorities need to identify and address equity concerns early on, engage relevant stakeholders and carefully evaluate ongoing network reforms. School network consolidation may be unavoidable to guarantee adequate learning environments for all students. Nevertheless, systems need to carefully weigh its costs and benefits and consider the potential efficiency gains afforded by sharing resources across providers, school clustering or the strategic redistribution of education services across sites. To adapt school networks to changing demand and student needs, the chapter recommends that reforms should aim to: consider a range of strategies to enhance the efficiency of school networks with overcapacities; compensate for efficiency, quality and equity challenges experienced by remote schools; and strategically respond to capacity shortages in urban school networks.

Educational levels, sectors and programmes must be aligned to support students’ vertical and horizontal transitions

Chapter 4, Co-ordinating educational levels and sectors to improve student trajectories, examines the distribution of the educational offer across levels and pathways in schools and the co-ordination between its different components. A failure to effectively co-ordinate the educational offer risks the duplication or fragmentation of services. It also creates barriers to students’ smooth progression across levels and their transition into post-secondary education or the labour market. To improve student trajectories, systems need to consider both the vertical co-ordination of levels and grades as well as the horizontal co-ordination of parallel sectors and programmes. Providing a variety of educational pathways has the potential to more closely match each student’s interests and needs but also risks increasing segregation and a fragmentation of the educational offer. Tackling duplications between programmes, enhancing their alignment with post-secondary opportunities and guiding students to programmes that correspond to their interests and needs thus plays an important role in reaping the benefits of a diversified offer. To improve the co-ordination of educational levels, sectors and programmes, the chapter also recommends that reforms should seek to: enable students’ smooth vertical progression by improving collaboration across levels and addressing grade repetition and drop out; ensure greater permeability between educational pathways; and strengthen the identification and supportive placement of students with special educational needs.
Responsive school systems: Main findings and policy pointers

The need for responsive school systems

A number of demographic trends, economic and social changes, as well as new and evolving educational objectives have required countries to respond and adjust the way they organise their school infrastructure and the education services it delivers to meet their students’ needs. Demographic shifts, regional and international migration have caused a drastic decline in some countries’ school-age population, reinforced regional variations in the demand for school places and led to greater student diversity. Changing family patterns and increased female labour market participation have raised the demand for early childhood education and care, while changing labour market needs have created pressures for vocational education and training (VET) and other sectors to adapt their educational offer. Finally, evolving educational objectives, including a strong commitment to inclusion as part of the UN’s Sustainable Development Goals, require the adaptation of school services and new forms of collaboration across sectorial lines. These trends make the organisation of school facilities and their educational offer a central issue for the effective use of school resources.

Beyond these developments, multiple considerations have motivated this report:

- Providing adequate facilities where they are needed is a critical condition for teachers to create effective learning environments and enable their students to succeed. Although physical resources account for a relatively small share of total educational expenditure, efficiently organised school networks can enable all actors in the system to work more effectively towards students’ success.

- The size and distribution of school facilities is intricately connected to their educational goals and the services they provide. The report’s holistic perspective seeks to do this justice by analysing the organisation of school infrastructure alongside that of educational levels, sectors and programmes. It can thereby highlight the synergies that may arise from fostering or re-thinking the connections between schools and the various elements of their educational offer.

- Efficiency alone is not the main concern of school systems but needs to be achieved alongside the quality and equity objectives that are at the heart of education. The report therefore focuses on how school facilities, sectors and programmes can be organised so that available resources best support high-quality teaching and provide equitable learning opportunities for all students.

This report was prepared as part of a major OECD study on the effective use of school resources resulting in the publication series OECD Reviews of School Resources. Nineteen school systems (referred to as the “OECD review countries”) were actively involved in the preparation of this report by participating in a qualitative data collection, preparing detailed country background reports and/or participating in OECD-led country reviews. In addition,
the analyses in this report draw on the broader research and policy literature, bringing together findings from as many OECD and partner countries as possible.

**Governing the school network**

Over the last decades, OECD school systems have grown in administrative complexity and are increasingly characterised by governance arrangements involving multi-level decision-making processes. The governance of the school network (henceforth defined as the entirety of a system’s educational facilities) is therefore frequently subject to complex relationships between multiple actors across different levels of government. Although the degree of local autonomy varies significantly across countries, in most of them, the central level remains a significant actor in steering the distribution and size of schools and shaping the relationships between them.

**Strengthening horizontal co-ordination mechanisms and clarifying responsibilities for the school network**

Decentralisation processes have led to the emergence of increasingly autonomous and powerful local actors sharing responsibilities with national and regional authorities in many OECD education systems. In this context of multi-level and multi-actor governance, many inefficiencies in the planning and organisation of school networks are rooted in weak co-ordination mechanisms across disconnected subsystems and communities. A key political and administrative challenge is therefore to reflect on the allocation of planning responsibilities between different authorities and their effective co-ordination. While motivations vary across countries, giving local actors significant planning responsibilities (e.g. for the opening or closure of schools) is typically expected to improve the school network’s adaptation to local conditions and the needs of local communities. This relies on adequate capacity at relevant levels of government and strong horizontal co-ordination.

Particularly in systems with a high degree of municipal fragmentation, where local authorities oversee a small number of schools, ensuring students’ access to all relevant parts of the educational offer while avoiding duplication across municipal boundaries require strong co-ordination mechanisms.

**Pointers for policy:** Mechanisms to support the planning of school networks need to reflect a system’s governance structure, the roles it assigns to local, regional and system-level entities as well as their respective capacity to carry out these responsibilities effectively. Particularly in systems where small, local authorities with little capacity are responsible for the governance of the school network, regional platforms can allow them to co-ordinate their provision more effectively across administrative boundaries. To improve the regional planning of the school network, authorities should seek to build on existing regional structures and co-ordination mechanisms, where possible, or institutionalise previously informal modes of co-operation. Where planning is hindered by fragmented responsibilities for different parts of the school network, a clearer division of labour can be another way to facilitate its efficient planning and oversight, reduce undesired competition between different public providers and increase the potential for co-operation among schools operating at the same level of education.
Monitoring demand and supply of school places and building planning capacity at relevant levels of government

High-quality data on the current capacity of school facilities and reliable forecasts of future demand are essential for the strategic planning and organisation of school networks. Effective monitoring and forecasting mechanisms can help countries develop strong administrative tools that enable them to recognise and respond to capacity challenges early on. The requisite data may be collected locally or centrally, on an ad hoc or regular basis and may include both quantitative and qualitative information on the capacity and condition of buildings and learning spaces. Particularly in decentralised systems, training local authorities to interpret and use capacity data or providing them with access to centrally administrated databases and infrastructural indicators can enhance their ability to plan their school networks effectively.

**Pointers for policy:** Combining robust models to forecast enrolment with high-quality data on the current state of educational provision can help authorities to identify and respond to discrepancies between the supply and demand for school places. Data collections and inventories are most effective if they are subject to regular updates and cover facilities across all relevant providers and sectors. Crucially, this data can also serve as a basis to assess the viability and expected effects of competing strategies to enhance the efficiency of the school network, such as sharing, clustering or closing facilities. If supplemented with information on the quality and condition of learning spaces, infrastructural inventories can also help to identify investment priorities and forecast renovation or maintenance needs. Capacity building should ensure that authorities at relevant levels can leverage the potential of these planning tools strategically.

Designing regulations and incentives for network efficiency that are sensitive to student needs and local contexts

The structure of a school network, including the size and distribution of its constituent units, has a significant impact on the resources required to operate and maintain its facilities. The average school size and proportion of very small providers varies considerably across OECD countries. Given the cost associated with excess capacity and instruction in very small schools or classes, this has prompted concerns about the efficient use of public funds in some systems. Steering tools such as minimum school and class size regulations can promote the provision of education services at an efficient scale and the parameters of funding formulas can create incentives for greater network efficiency. Strict per capita funding, for example, places larger providers with lower fixed costs at an advantage and encourages school consolidation. So can one-off payments in support of rationalisation projects. However, given the heterogeneity in regional and local contexts, it is important to bear in mind that there is no “one size fits all” solution to the size and distribution of schools. Many systems therefore face the challenge to reconcile incentives for a rational organisation of the school network with the recognition that high-quality instruction in small schools is more resource intensive and should be supported accordingly, particularly where consolidation is not an option.

**Pointers for policy:** Regulations and incentives for network efficiency need to be sensitive to student needs and local contexts. While incentives for the increase of schools’ size may improve educational quality and efficiency in some contexts, enforcing a lower bound may be neither feasible nor desirable in geographically isolated areas. To address this tension, authorities can exempt schools from size requirements if they are identified as meriting protected status to avoid placing student in remote areas at a disadvantage. Thresholds
should also reflect the pedagogical requirements and needs of students in different age groups and take into account the special attention required, for example, by disadvantaged students and those with special educational needs (SEN). Supporting network restructuring projects with direct grants provided outside the main funding formula can be another flexible solution that allows giving adequate consideration to schools’ role within their local educational context.

**Supporting educational quality and network efficiency with adequate licensing procedures**

Licensing procedures that regulate the creation of new schools play an important role in supporting equity, educational quality and efficiency in dynamic school networks. Low barriers to entry and incentives for the establishment of new (public or private) schools can be a way to increase the supply of school places and broaden parental choice. At the same time, it can lower educational standards, contribute to the fragmentation of the school networks and thwart efforts to consolidate excess capacity. To support quality, equity and efficiency, licensing criteria thus need to be well-aligned with policy priorities. Divided responsibilities for licensing new schools and funding can diminish incentives for network efficiency and reduce the scope for strategic planning, just as decentralised licensing procedures can raise concerns about transparency and the consistent application of quality assessment procedures.

**Pointers for policy:** Particularly in systems seeking to adapt their school networks, licensing procedures should be aligned with policy priorities. In regions without evidence of capacity shortages, authorities should ensure that the licensing of new providers and the allocation of public funds is conditional on the positive assessment of both quality and needs, for example by demonstrating demand for a sufficient number of classes above a minimum threshold. Needs-based assessments can also support the efficiency and relevance of the vocational offer by taking into account the views of and demand from relevant stakeholders and social partners in the licensing of schools or the accreditation of new programmes. The implementation of such needs-based licensing procedures relies on the formulation of clear, adequate and transparent criteria, their reliable measurement as well as sufficient capacity among school authorisers to carry out the corresponding assessments.

**Ensuring equitable access to capital funds and the efficient management of infrastructural investment**

Although – compared to staff salaries – a relatively small share of educational expenditure is devoted to physical resources, funding for educational materials and the construction and maintenance of school buildings is one of the most significant investments in public infrastructure. The mechanisms by which these capital and maintenance funds are distributed play an important role in ensuring that they are used effectively and reach the areas and facilities most in need of investment. While funding for current expenditure is usually allocated using earmarked grants or restricted block grants, the distribution of capital funding tends to rely on ad hoc grants and investment programmes. While these distribution mechanisms provide the requisite flexibility to redress the greatest infrastructural needs as they arise, they often require technical capacity and experience on the part of schools or local authorities, which can exacerbate inequities. Even if they succeed in accessing capital funding, some authorities may lack the means to effectively
manage large infrastructural developments, procurement processes and the purchase of materials and services.

**Pointers for policy:** To ensure a fair distribution of capital funding to the schools and locations that need it the most, distribution mechanisms should minimise barriers for recipients with less technical expertise and experience. Capacity building for schools and local authorities should ensure that they can successfully bid for infrastructure funding where necessary. Professional development programmes should equip them with the skills needed to provide effective oversight over capital development projects to ensure they are getting value for money. Central guidelines for the construction of school facilities can further reduce the costs of planning procedures and ensure the fulfilment of quality standards and policy objectives related to issues such as environmental performance or accessibility. Likewise, sharing best practices among schools and facilitating their co-ordination of procurement processes can improve the cost and time of constructions.

**Adapting the school network in urban, rural and remote areas**

To develop and maintain infrastructures that provide all students with adequate spaces to learn is a critical condition for an accessible and high-performing education system. Schools that are overcrowded or inadequately maintained, that lack facilities conducive to students’ learning, health and comfort or that are too distant from their homes are a significant barrier to achieving this goal. At the same time, demographic shifts, regional economic developments and changing student needs have exposed many school systems to costly mismatches between educational demand and supply in both rural and urban areas. Adapting the school network in response to these challenges has therefore become a central aim for systems seeking to enhance their efficiency to free up resources for the improvement of student outcomes. Place-based challenges and territorial heterogeneity in the structure of school networks call for strategies that are highly sensitive to local contexts.

**Selecting appropriate strategies to enhance efficiency in school networks with excess capacity**

Operating fragmented school networks with a large number of small schools or facilities with significant overcapacities can place a significant financial burden on education systems. Many OECD review countries have responded to this challenge by closing selected schools and transferring their students to proximate sites. Larger schools with lower per-student fixed costs may offer their students greater curricular diversity, specialised teachers, better equipment and facilities as well as the ability to organise all instruction in single-grade settings. Nevertheless, the disruptive experience of relocation and increased travel distances can negatively impact students’ well-being and learning outcomes in the short term. In addition, the process of consolidation can generate substantial public and private transition costs that need to be weighed against any economic benefits. In this context, many education systems are struggling to respond to an enduring decline of student enrolment in parts of their school networks while preserving students’ access to high-quality education and accounting for the needs of local communities. Yet, OECD review countries have used different strategies to successfully adapt and enhance the efficiency of their school networks, ranging from the shared use of facilities to the clustering of schools under a shared administration.

**Pointers for policy:** When adjusting school networks to enhance their efficiency and free up resources to improve student outcomes, policy makers should consider a range of different strategies to select the approach most suited to a given context. In many cases,
fostering co-operation and resource sharing between providers can allow smaller institutions to benefit from economies of scale and enhance efficiency while leaving the number, size and distribution of school facilities intact. Where possible, authorities should encourage this practice and reduce barriers or disincentives for small schools to engage in voluntary collaboration. This may include jointly providing specialised services or curricula; sharing human resources, facilities and back-end infrastructure; jointly purchasing materials or services; co-ordinating student transportation; and jointly offering professional development opportunities for teachers.

If properly administered, the creation of school clusters under joint administration can also generate significant improvements in efficiency and educational quality without diminishing the geographic coverage of the school network. In light of its complexity, the successful introduction of a centralised leadership team and budget for multi-site schools may require active support from regional or central authorities and an effort to build the requisite capacity for pedagogical and administrative leadership. Finally, authorities should take a modular approach to the educational offer and consider more targeted, selective forms of consolidation by rethinking how grade levels and different types of provision are combined and distributed across school sites.

When engaging in consolidation, authorities need to carefully weigh the benefits of school closures against their social and economic impact on surrounding communities, the transition costs generated in the process and the public and private expenditure on longer commuting distances. They need to ensure that the transition process is as smooth as possible, consult relevant stakeholders, identify and take precautions against any negative impacts on equity or local development and ensure that adequate transportation arrangements are in place by the time students are reallocated. A combination of policy levers including financial incentives and direct support can facilitate the closure process and assist the remaining schools in integrating transferred students.

**Compensating for efficiency, quality and equity challenges experienced by remote rural schools**

Very small rural schools often have difficulty recruiting and retaining teachers in certain subject areas and preparing them to teach effectively, for example in multi-grade settings. They may also lack the student numbers and personnel to offer specialised courses and after-school activities, and they can struggle to provide a supportive learning environment for specific student groups, such as special needs or academically gifted students. While the performance differential between rural and urban schools is largely explained by their students’ socio-economic background, rural students’ educational aspirations are significantly lower on average. Factors related to schools’ resources and regional economic conditions likely contribute to this gap. Particularly in remote rural areas, these problems are frequently compounded by geographic isolation, which limits the scope for inter-school co-operation, clustering or consolidation. A range of compensatory policies, including targeted funding and the use of ICT, can ameliorate the limitations imposed by the course offering and personnel of small rural schools and put them in a better position to provide their students with the high-quality education they deserve. Given that these schools are often embedded in tight-knit communities and serve an important role in their social life, many of them have sought to leverage the support of parents, small businesses and other local actors to ameliorate their condition. A lack of transparency and overly rigid regulations of volunteer involvement, however, can create uncertainties and barriers that reduce the ability of rural schools to draw on local support.
**Pointers for policy:** Where consolidation, inter-school co-operation and other means to improve the efficient provision of quality education are not an option, authorities should consider providing struggling schools with targeted financial support. In light of the higher per-student cost faced by small remote schools and their difficulty in attracting specialist teachers, dedicated compensatory funding or targeted programmes can support their teachers’ professional development or collaboration and vital services such as school transport arrangements. In addition, support for initial teacher preparation and effective “grow your own” programmes can help to alleviate concerns about teacher shortages in rural settings. While distance education and other forms of ICT-supported learning can offer remote schools a way to expand educational access and broaden their course offering, it is critical to build capacity among teachers and principals to use these tools effectively. Finally, to ensure remote schools can leverage the support of their local communities, a constructive regulatory environment should be combined with monitoring to ensure that health and safety regulations are adhered to and public resources are spent effectively.

**Responding strategically and sustainably to capacity shortages**

Particularly urban areas in many OECD review countries are faced with rising demand for school places, caused by residential development, increased birth rates and regional or international migration dynamics. These trends can be long-lasting or short-lived and appear with varying degrees of predictability, which makes it difficult to respond to them effectively under significant space constraints. Initiating new construction in response to temporary spikes in enrolment can render school buildings obsolete before the investment has paid off. Conversely, short-term solutions such as the intensified use of existing buildings or temporary facilities are unlikely to be efficient and beneficial for student learning if the level of enrolment remains high in the long run. While a high density of schools and students can enable cities to provide a rich educational offer and extensive choice, urban school networks are also more vulnerable to socio-economic segregation. To ensure that all students benefit from the rich educational opportunities afforded by dense school networks, policy responses should address the multi-faceted causes of segregation, bridging multiple domains from education to transport and housing.

**Pointers for policy:** Authorities in high-density areas need to cultivate strategic foresight and the capacity to distinguish long-term enrolment trends from short-term fluctuations to ensure that the school network’s capacity grows in line with increased long-term demand. This may include providing the responsible authorities with the analytical tools and capacity to identify areas of heightened demographic pressure and the sites where new school constructions can most effectively pre-empt or alleviate overcrowding. Contingency plans and guidance materials should be used to help schools and local authorities find adequate solutions where increases in student enrolment are expected to be temporary or occur too rapidly for new constructions to offer sufficient relief. These can include optimising schools’ use of their available spaces, re-directing students to undersubscribed providers, temporarily relaxing maximum class size rules, or deploying mobile classrooms. These prefabricated classrooms can add flexibility to the school network and attenuate the negative impact of acute overcrowding. Nevertheless, high standards should ensure that they not only guarantee the students’ health and safety but also provide them with a high-quality learning environment. To ensure that school networks expand in line with long-term educational demand, developer contributions can be an effective way to share the burden for infrastructural investments and local authorities should be enabled to negotiate satisfactory agreements if they are subject to site-by-site negotiations.
Making educational quality, equity and student well-being the guiding principles for network reforms

Education policy has an important role to play in ensuring that school networks are sufficiently adaptable to ensure their long-term efficiency and sustainability. Regardless of whether this goal is pursued through greater school collaboration, consolidation or the expansion of capacity, advancing educational quality, equity and student well-being should be the guiding principle for any network reforms. While school consolidation, for example, can provide students and teachers with access to better learning and professional development opportunities in some cases, it may result in prohibitively long travel distances in others. Making students’ educational benefit central to network reforms thus requires policy makers to acknowledge the limits of consolidation and to ensure that access to schools at a reasonable distance remains a priority, particularly for younger children. For school network reforms to benefit students of all backgrounds and needs, it is also essential for authorities to identify their potential impact on equity and the well-being of specific student groups in advance to take the necessary steps to address them.

Pointers for policy: As with any major reform project, the reorganisation of school networks should be preceded by the systematic consultation and engagement of all major stakeholders. This can help to resolve conflicts before they arise, hold authorities to account, yield solutions that are suitable to the local community’s needs and ensure that stakeholders are willing to effect change and possess the tools to implement a reform as planned. Authorities should contribute to this process by maintaining a high level of transparency, articulating a clear educational vision for the reforms and demonstrating that it will bring about tangible improvements in educational quality. Central guidance on when and how to conduct consultation procedures can be an effective means to support local authorities and align expectations among all actors involved. For school network reforms to benefit students of all backgrounds and needs, careful projections based on research evidence and the continuous monitoring of equity developments should be integrated into their planning and design from the outset. At the same time, representatives of vulnerable groups can be consulted and involved at key stages of the proposed reforms’ design and implementation. While authorities should draw on best practices and international experiences with network reforms, generating and sharing evaluation results at the sub-system level can also be effective in fostering system-wide learning and can generate reliable insights into the effects of networks adjustments on students.

Co-ordinating educational levels, sectors and programmes

Providing all students with a high-quality education where they need it depends not only on the construction and maintenance of school facilities, but also on the rational distribution of education services across school sites and the co-ordination of its various components. The failure to effectively organise educational levels, sectors and programmes risks causing the duplication and fragmentation of school services, barriers to students’ smooth progression through the system and their inadequate preparation to transition into post-secondary education or the labour market. Authorities therefore need to engage in both the vertical co-ordination of school years and levels as well as the horizontal co-ordination of parallel sectors and programmes.
Easing students’ vertical transitions across school years and levels through effective co-ordination and targeted support

Ensuring that students’ transition smoothly across school years and levels is a critical condition for their successful vertical progression throughout compulsory and upper secondary education. Misaligned course contents, a lack of guidance or support, and weakly connected remote schools are just some of the many barriers that students can face along the way. Consequences such as year repetition, early school leaving, and unsuccessful transitions beyond secondary education remain a challenge in many OECD review countries. School systems are keenly aware of the significant individual and social costs that this problem imposes and have sought to address it by easing transitions and providing targeted support to those who stand to benefit from early intervention. Many school systems, however, struggle to anticipate students’ failure, which prevents them from providing intensive, individualised support to struggling students and identifying systemic or organisational difficulties in supporting student with specific profiles. Likewise, while career and guidance counselling can be effective in enhancing students’ transitions between levels of education and into the labour market, they are severely under-resourced in many OECD review countries.

Pointers for policy: Strengthening connections between levels of education through administrative co-operation or even their integration can ease students’ transitions while also rationalising resources and reinforcing equity, professional collaboration and supervisory capacity. Designing explicit transition programmes or combining different levels of schooling into a single organisation in areas with high rates of early school leaving can help to ease vertical transitions for all students. These structural approaches should be complemented with targeted strategies to support students early on and address learning gaps before they widen. Early warning indicators that identify students who are at risk of grade repetition and dropout can provide a strong basis to prevent unsuccessful transitions and school failure, if combined with effective support and interventions. Strategic investments in data-supported counselling is resource intensive but can have a meaningful impact on students’ transitions and long-term trajectories. Lower-cost strategies involving insights from behavioural science, such as nudges to promote enrolment in tertiary education programmes, can be effective complements to remedy specific challenges.

Ensuring the VET offer’s continued relevance and facilitating its students’ horizontal transitions

The desire to improve the quality of educational provision and ensure that it matches each student’s interests and potential, has led many school systems to offer a variety of educational pathways and parallel programmes. The risks associated with this approach include increased segregation, mismatches in students’ pathway choices and a fragmentation of the educational offer. The horizontal co-ordination of education services across sectors and programmes and the ability to guide students to programmes that correspond to their interests and needs is therefore critical to reap the benefits of a diversified offer. Part of this challenge is to improve the fluidity between vocational and general education programmes and the evidence suggests that such transitions remain rare, even in systems that aspire to strengthen horizontal transitions and provide the requisite pathways.
Vocational education plays a central role in training highly-skilled young adults for the jobs of the future and the significant amount of resources devoted to VET students makes its efficient organisation and alignment with labour market needs a priority. Nevertheless, a lack of structured consultation procedures with industry representatives and limited use of labour-market forecasts has frequently resulted in VET programmes offering training that no longer reflects the structure of regional labour markets. In addition, despite the proven benefits of work-based learning, many VET programmes remain insufficiently connected to the world of work and overlook the potential for a broader involvement of employers in upper secondary VET. Complex governance arrangements in vocational education, fragmented school networks and a lack of co-ordination or oversight can add to these challenges. Poor planning and weak incentives for co-operation between local authorities are also prone to generate inefficient duplications in the educational offer, such as schools offering similar vocational programmes in close proximity to one another.

Pointers for policy: Regular consultations with labour market actors and rigorous forecasting of projected labour market needs can strengthen the system’s capacity to provide students with a VET offer that is aligned with industry needs. Including a substantial work-based component in VET programmes has not only been shown to improve the labour-market outcomes of graduates, but also provides opportunities for mutually beneficial cost-sharing arrangements between public and private actors. The design of funding mechanisms can also play an important role in setting incentives for the efficient provision of the vocational offer, just as fostering collaboration between regional providers can reduce duplication and make VET programmes more coherent. Facilitating students’ transitions between vocational and general education pathways has the potential to give more students access to tracks that match their interests and potential and to reduce the impact of socio-economic background on track choice or student outcomes.

Addressing infrastructural, administrative and pedagogical barriers between SEN and mainstream education to support inclusion

Over the past 40 years, at varying rates, OECD countries have recognised the imperative to provide equal educational opportunities to students with special educational needs (SEN). Recent evidence has added weight to the moral argument, demonstrating improved academic and life outcomes from educating students with SEN in the least restrictive environments while providing additional supports. Nevertheless, many systems still have a long way to go to create more welcoming and productive classrooms for students with special needs. Difficulties in the valid and reliable identification of special needs students have emerged as a significant obstacle to successful inclusion practices in some systems. While the paucity of international standards and comparable data limits the knowledge base on identification and inclusion practices, there is evidence of systematic over- or misidentification in some systems, which can have serious negative consequences for the students concerned and create negative externalities for the education system as a whole. The cost of educating students with SEN is high and the failure to accurately target these resources may come at the expense of those who need them the most.
As systems move towards integration and greater numbers of SEN students are educated in mainstream settings, co-ordination and collaboration across sectors plays an increasingly important critical role. Education systems may need to make significant investments and build capacity to reduce infrastructural, administrative and pedagogical barriers between special education and general schools. In some countries, for example, special education schools are governed by different authorities than mainstream schools. In addition to the difficulties this creates in monitoring school quality, licensing teachers, co-ordinating resources, and the creation of staff development plans, divided responsibilities can make the partial integration of students difficult.

**Pointers for policy**: The valid and reliable identification of students’ needs is a cornerstone of the effective co-ordination between mainstream and special needs education. Developing clear, standardised protocols for teams of educators and health professionals to recognise students’ special needs is an important step in this direction. They can also ensure that all relevant actors (students, families, teachers, school leaders, social workers, guidance counsellors, psychologists, health professionals and others) can have a voice in the decision-making process. Linking these protocols to data collections can help agencies to recognise irregularities and monitor whether all steps of the identification process have been taken. To support these efforts, governments should ensure that funding formulas do not create perverse incentives to over-identify SEN students or retain them in separate schools. This could mean equalising weighted per-student allocations across placements and differentiating them based on students’ objectively identified category of SEN. Likewise, appropriate monitoring procedures should ensure that these funds are used at the school level to serve SEN students or early intervention practices. Depending on the existing degree of integration, a range of measures can help systems improve the collaboration across sectors by reducing infrastructural, administrative or pedagogical barriers between them. Permitting staff working in special education schools to support instruction in mainstream settings and offering transferable licenses can, for example, facilitate the conversion of special needs schools into service providers offering multiple mainstream schools specialised assistance for the integration of SEN students.
SUMMARY

This report on Responsive School Systems is the second in a series of thematic comparative reports bringing together findings from the OECD’s School Resources Review. Evolving educational objectives, changing student needs and demographic developments require school systems to be highly responsive to new patterns of demand and adapt their provision accordingly. The organisation of school facilities, sectors and programmes plays a key role in doing so and in providing students with a high-quality education where they need it. The report aims to assist governments in organising school infrastructures and services to achieve their education policy objectives and to ensure that resources are used effectively and equitably. It offers a systematic analysis of the governance of school networks, their adaption to demographic changes and student needs in urban, rural and remote areas, as well as the vertical and horizontal co-ordination of education services to improve students’ transitions.