



**Catch-up programmes in primary education in the Netherlands:
overview of programmes (first tranche) and a literature review of
effectiveness of programmes**

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Introduction

Following the outbreak of the coronavirus, school pupils were no longer able to attend school physically from around half-way through the school year, and teaching was then mainly provided online. Any learning losses that have accumulated as a result will have to be repaired, and schools could, and still can, apply for subsidies from the Ministry of Education, Culture and Science. Currently, 1,550 of the requests for funding have resulted in interventions that are already being implemented and schools will have a further two opportunities to submit new funding requests. The LEARN! research institute was commissioned by NRO (the Netherlands Initiative for Education Research) and the Ministry of Education, Culture and Science to carry out a monitoring study of the first round of funding requests and, based on a review of the literature to investigate their effectiveness.

In part 1 of this report, we start by presenting a literature review into the effectiveness of the most common intervention types to repair learning loss: one-on-one tuition, remedial teaching, additional support materials, summer/holiday schools, teacher professional development, strengthening parental engagement, support during school hours, extended school days and peer tutoring.

Part 2 sets out information on the interventions requested in the first round with a breakdown by intended target group and the objectives of the programme, the implementation of the programme and, where applicable, cooperation with external partners, and the type of intervention for which funding was requested.

Part 3 concludes the report by offering suggestions for schools wishing to evaluate their own catch-up and support programmes.

Summary

Our monitoring study shows that requests in the first tranche mainly concern extended school days, additional support during school hours, and summer school. These interventions are targeted to pupils with learning loss in language or arithmetic and pupils who have progressed to the next year conditionally.

Although it was not possible to identify the specific areas of learning loss for all schools, it is clear from analysis of the funding requests that these catch-up programmes are aimed at pupils who are lagging in performance due to the school closures (in primary and primary special needs education: in language and arithmetic; in secondary education: in the core subjects); many schools also include children with Dutch as a second language as a separate target group. In primary education, we also see (estimated) delays in socio-emotional development of pupils, while in secondary education (in particular upper vocational education), vocational education & training and secondary and secondary special needs education, interventions are used for pupils who lack practical experience because they were unable to attend their practical placement in the period from March-June 2020.

The objectives of the catch-up programmes described are highly geared to the intended target groups. Language, arithmetic, core subjects and general education subjects often form the core focus of the programme. A component is regularly added to this to strengthen the socio-emotional development of pupils (especially those in primary education), to improve study skills (especially in secondary education and vocational education & training) and to facilitate distance learning with a view to possible future use. Distance learning was found to be an important goal, in particular in special needs education. In a limited number of cases, the professional development of teachers (mostly in terms of pedagogy and didactics, but sometimes also in terms of online education) was at the heart of the programme requested. Because, relatively speaking, many summer school

interventions were requested in the first tranche, cultural deep dives, creativity and physical exercise in primary education were also frequent goals of the programme.

There are differences by sectors in terms of which external parties schools collaborate with (e.g. homework institutes, sports providers, the municipality), but in all sectors schools are usually in control of how the programmes themselves are developed and implemented.

In terms of type of intervention, in all sectors, most requests were for support during school hours, remedial teaching in small groups and extended school days. Because the application deadline for the first tranche was before the summer holidays, we observed that 20% of the programmes related to or included a summer school.

In our literature review, we mapped out the effectiveness of one-on-one tuition, remedial teaching, additional support materials, summer/holiday schools, teacher professional development, strengthening of parental engagement, support during school hours, extended school days, and peer tutoring. The review shows that the 'active ingredients' of all these variations are broadly comparable in terms of the number of hours per pupil, participation of the target group (and cooperation with parents/offering incentives to ensure participation), content and structure of the programme, qualified teacher, group size and gearing to the regular curriculum and classroom instruction. Teacher professional development, along with one-on-one tuition and peer tutoring (see below), is one of the most effective interventions to help repair learning loss. Effects are long-term because the basic quality of regular teaching improves for all pupils.

Part 1 Literature review

Effectiveness of catch-up and support programmes to repair learning loss: a review of the international and Dutch literature

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Introduction

Schools in the Netherlands and the Dutch Caribbean may apply for funding to support pupils who need extra help due to school closures during the COVID-19 pandemic. It is up to schools to decide how they organise this support, which pupils will be eligible and who they wish to collaborate with and why. Based on the academic literature and the funding requests in the first tranche, we can distinguish nine categories of interventions that are currently being used (or will be used) in the Netherlands to help repair any learning losses that have arisen due to school closures during the COVID-19 pandemic. These are: one-on-one tuition, remedial teaching, additional support resources, summer/holiday schools, teacher professional development, strengthening parental engagement, support during school hours, extended school days and peer tutoring. In this review, we discuss the scientific evidence for these various types of intervention and offer an analysis of the funding requests submitted in the first tranche. The search strategy used in this literature review can be found in appendix 1.

1. One-on-one tuition

One-on-one tuition is the intensive, individual tuition of a pupil by a teacher, teaching assistant or external tutor. This individual tuition usually takes place during school hours.

1.1 What makes one-on-one tuition work, and who is it for?

Research into the effectiveness of one-to-one tuition usually concerns tuition in the subjects of language and reading (EEF, 2018). These studies (usually large-scale review studies combining the effects of previous, individual studies) show that one-on-one tuition is especially effective, with effects being greatest when the tutor is a qualified, well-trained teacher of the pupil (Slavin et al., 2013). However, this is a costly option which requires the availability of a sufficient number of qualified teachers. The deployment of teaching assistants supported by the qualified teacher is almost as effective as the deployment of teachers (Slavin et al., 2013; Sebieta, 2016). Tuition by qualified teachers is on average twice as effective as tuition by volunteers or trainee teachers (EEF, 2018). In primary education, continuity of individual tuition is important for its continuing effectiveness (D'Agostino & Harmey, 2016). Research in secondary education has shown that it is important for these pupils to receive specific feedback on specific sub-skills that can be improved (e.g. literacy decoding skills) (Jun, Ramirez, & Cumming, 2014).

2. Remedial teaching

Remedial teaching in small groups is a form of work in which teachers give lessons in small groups (usually 2-5 pupils) for 30-40 minutes per day. This intensive form of teaching is often used to provide extra support during the school day to pupils with learning loss (Slavin et al., 2011).

2.1 What makes remedial teaching work, and who is it for?

In contrast to one-on-one tuition, remedial-teaching gives pupils the opportunity to learn from each other. On the other hand, it is more difficult to focus on the individual needs of pupils when teaching small groups. The average effects of remedial teaching in primary school children are therefore slightly lower than those for one-on-one tuition (Slavin et al., 2011). Research in secondary

education shows similar results, with pupils already benefiting from just one extra hour of mathematics class at school. Effectiveness is greatest when the groups are small (Cook et al., 2015).

3. Additional supporting resources

Offering additional resources usually consists of adaptive online programmes in which students can work at their own pace. Well-known examples include 'Rekentuin' (Arithmetic Garden) and 'Taalzee' (Language Sea), which also give the teacher insight into what children have practised outside school hours.

3.1 What makes adaptive online programmes work, and who are they for?

The magnitude of the impact observed varies from low to medium (EEF, 2018) for primary and secondary education. The most recent review study (Ma, Adesope, Nesbit, & Liu, 2014) covers 107 studies into the impact of adaptive online support programmes. This review study shows that the impact of these programmes is greater for slightly older pupils (upper years of primary school and secondary education), probably because these pupils have better ICT skills. Online programmes lose their effectiveness when used for an extended period of time: This is probably due to pupils losing interest in the programme over time. There are also indications from primary and secondary education that this type of programme is more effective when linked to prior knowledge, meaning that the use of online programmes for pupils with a significant learning loss could be less effective (Steenbergen - Hu, & Cooper, 2013). Adaptive computer support programmes are also important for pupils who have reduced access to individual tuition (whether during or outside school hours). A prerequisite for the effectiveness of programmes like this is that they are well-structured, they are consistent with theoretical knowledge of didactics in relation to the skills to be acquired, they are consistent with the attainment level and needs of learners, and they incorporate sufficient game elements (Slavin et al., 2011). Remarkably, the giving of feedback of during the programme was not considered to be an effective condition.

4. Summer school and holiday school

Summer schools or other holiday schools are frequently used in primary and secondary education to support the socio-emotional development of pupils and to help repair learning loss or delays in language (and sometimes also in other subjects). These programmes vary in duration, with more basic programmes consisting of weekly tutoring sessions without any other social or cultural activities. Evaluation of holiday schools in the Netherlands shows that, in primary education, the focus is often on catching up on language and arithmetic skills, while in secondary education the focus is usually on mathematics and English (Hoogeveen & Vaessen, 2013; Slaap & Kuiken, 2013; Haelermans, Ghysels, & Monfrance, 2018). The programme offered by Dutch holiday schools in secondary education is usually developed by the school's own subject teachers and is focused on individual pupil needs in 85% of cases.

4.1 What makes holiday school work, and who is it for?

International research shows holiday school to be effective for primary school pupils. Disadvantaged primary school pupils taking part in a holiday school programme have more confidence to start secondary education than pupils who did not take part (Sharp, 2018).

For children from vulnerable situations, summer school seems to have positive effects on school-related skills, independence, self-confidence, motivation as well as socio-emotional development (McCombs et al., 2014); Schwartz, Heather, McCombs, Augustine & Leschitz, 2018).

However, Dutch studies into the effectiveness of holiday school programmes in primary education have shown their effectiveness to be limited (Slaap & Kuiken, 2012; Hoogeveen & Vaessen, 2013).

Having said that, holiday school programmes do seem to be particularly effective at combatting non-promotion (repeating a year) in secondary education, especially in preparatory secondary vocational education (VMBO) and senior general secondary education (HAVO) (Faber, Timmerman & Kievitsbosch, 2014; Haelermans, Ghysels, Monfrance, Rud & Groot, 2017; Haelermans, Ghysels & Monfrance, 2018) and at reducing school drop-out rates (Mariano, Louis, Martorell & Berglund, 2018). Holiday school programmes in secondary education proved to be most effective if they lasted 10 days or more and if they took place over a period of consecutive weeks (Haelermans et al., 2018). Effective holiday school programmes work best when they involve small groups of pupils (5-15), use challenging teaching resources and activating forms of work, when they are well-structured, focus on repairing learning loss (i.e. are tailor-made) and are therefore well aligned with the school's own curriculum (Borman & Dowling, 2006; Cooper, Charlton, Valentine & Muhlenbruck, 2000; Faber et al., 2014; Haelermans et al., 2017; Lauer et al., 2006). Holiday school programmes are more effective when pupils are taught by experienced and qualified teachers rather than by external volunteers (Schwartz et al., 2018; Kidron, & Lindsay, 2014). Involving parents in summer school programmes increases their effectiveness (Kim & Quinn, 2013). To keep students enthusiastic, it is important to incorporate interactive play elements and to offer varied activities (Gorard, Siddiqui, & See, 2014).

Holiday school programmes generally require a lot of preparation time and are primarily effective in the shorter term (Haelermans et al., 2017; Sharp, 2018). Especially in primary education, summer school programmes are often outsourced (in part at least) to external organisations. However, the current shortage of teachers, the high pressure of work and the deployment of the school's own teachers on holiday school programmes are limiting factors in this respect. Motivating pupils with a learning loss, or those who are at risk of developing one, and their parents to participate in a holiday school programme is not easy: pupils tend to enrol to a limited extent for the holiday school programmes, and many will drop out shortly after the start of the programme (Sharp, 2018).

5. Teacher professional development

In order to strengthen the basic quality of regular education, one choice available is to further strengthen teacher professional development. Programmes aimed at developing pedagogical and didactical behaviour with a particular focus on coping with the larger differences between children in a classroom are common. Furthermore, the current situation in some cases calls for additional distance learning programmes. This option invests in teachers' skills to combine teaching with distance learning at home, the hardware and software (including online teaching packages and supplementary remedial resources). Engaging parents in an increasingly online society requires new skills from teachers. Finally, teachers can play an important role in encouraging study skills, and motivation for learning is important when a school closes, requiring pupils to be more independent learners.

5.1 What makes teacher professional development work?

A review study within primary education has shown that teacher training focusing on the pedagogical and didactical behaviour of the teacher can contribute to improved adaptive classroom instruction; such instruction has been found to contribute to improved pupil performance (Slavin et al., 2009). Teacher training in specific skills (e.g. reading skills) also improves the learning performance of pupils in that specific field (Slavin et al., 2011). Teacher professional development, together with one-on-one tuition and peer tutoring, (see below) is one of the most effective interventions to help repair learning loss. Effects are long-term because the basic quality of regular teaching improves for all pupils.

6. Strengthen parental engagement

Parental engagement programmes generally aim to develop specific skills (e.g. IT skills), encourage parents to support their children with reading or homework, for example, and to increase parents' involvement in learning activities at school. Parental engagement is often encouraged in early childhood education and primary education (EEF, 2020), especially for children with a learning loss or delay in language development (Van-Steensel, McElvany, Kurvers & Herppich, 2011).

6.1 How can parents be effectively engaged in their children's learning?

Relatively speaking, there is a great deal of evidence for the positive impact of parental engagement on learning outcomes (EEF, 2018), although specific examples of effective elements for strengthening parental engagement are not found in the literature. Various training programmes focusing on parental support with specific skills (mostly reading) in primary education show small to medium effects for parents of younger and older children (Kim, Sung Won, & Hill, 2015; Van Steenstel et al., 2011). The literature shows that implementing parental training in primary education is a determining factor for effectiveness, and experienced trainers in particular succeed at actually improving parental engagement. It is also important for parents that their own norms and values (i.e. any cultural differences) are considered as well as any barriers there may be (e.g. financial). Rapport with the trainer is important and is sometimes easier to achieve if trainers come from the same community as the parents. Flexibility in the design of the training programme, setting up the training programme in cooperation with the parents and repeatedly emphasising the importance of parental engagement for the learning of the children in question have been found to be key success factors (Manz, Hughes, Barnabas, Bracaliello, & Ginsburg-Block, 2010).

7. Support during school hours

Support during school hours consists of extra support within the regular school day, with pupils participating in the plenary instruction sessions in order to avoid exacerbating the learning loss. Examples include extra support during independent working time, smaller classes (more teachers in a class) and grouping pupils within classes for specific learning activities, with pupils of similar attainment levels working together under the supervision of their own teacher (attainment grouping). Benefits of support during school hours include the familiar environment of the pupils' own class and the option to stretch practice over a longer period of time, which is more effective than short bursts of intensive practice of learning resources (Dunlosky, Rawson, Marsh, Nathan & Willingham, 2013).

7.1 What makes support during school hours work, and who is it for?

The idea that children learn more and that teachers are more effective in smaller classes is also confirmed by the literature (EEF, 2018). As the size of a class or teaching group reduces, it is likely that individual students will receive more attention and that the attention can be more direct and therefore more effective. We see the greatest and most prolonged effects of smaller class sizes (up to 4 years after the reduction of a class in the case of up to 18 pupils in a class) in primary education. Dutch research into the relationship between class size and language and maths performance shows that pupils in larger classes with more than 25 pupils are more likely to underperform compared to pupils in smaller classes (Driessen, 2013). However, there are also studies that show large class sizes having no adverse effects. Furthermore, reducing class size is expensive and sometimes impossible due to shortages of qualified teachers.

Attainment groups are also regularly formed within classes. A review study of the effectiveness of these attainment groups shows that this approach is most effective in primary education when applied to a limited number of subjects (i.e. not all day), and that subgroups within language and

arithmetic are more effective than skills groups in other subjects (Puzio & Colby, 2010). One consideration to bear in mind with attainment grouping is that a wrong allocation to an attainment group could present a real risk, especially for pupils at a relatively high risk of suffering some kind of learning loss. Allocating pupils to attainment groups may have an impact on pupils' self-confidence, their engagement and their mindset in specific subgroups (EEF, 2018).

8. Extended school day

Programmes which extend the school day on one or two (or more) days a week are usually intended for pupils with a learning loss and take place within their own school. The implementation is the responsibility of the pupils' own teachers or external partners (homework institutes, students, subject teachers). An extended school day may take the form of subject-specific tutoring (usually for language, arithmetic, core subjects, but sometimes also for social-emotional development and physical education). But it may also consist of pre-teaching, which refers to differentiation prior to group instruction so that students are better prepared and are therefore in a better position to participate in the classroom lessons.

8.1 What makes extended school days work, and who is it for?

On average, pupils can gain up to two months of progress per year from an extended school day (EEF, 2018). However, the differences between programmes are great. Review studies of the international literature show that the effects of extended school days are modest for most programmes. Teaching by qualified teachers is a determining factor for the effectiveness of teaching time extensions in primary and secondary education (no effect was found when unqualified tutors were deployed). The method of instruction (traditional classroom versus more inquisitive learning or more experimental instruction styles) did not have an impact on the effectiveness of the programme. Effectiveness is greatest when after-school programmes focus on very specific learning deficits: for example, a training course to boost the social-emotional development of children with attention problems and hyperactive behaviour, or reading and language exercises in cases of language learning deficits (Durlak, Weissberg, & Pachan, 2010). There is evidence that pupils with learning loss benefit more from after-school programmes, not only in terms of school performance, but also in terms of improved behaviour and peer relationships (EEF, 2018). Studies in the Netherlands into extended school days (Meyer & van Klaveren, 2013; Slaap & Kuiken, 2012; Van Klaveren, Terwijn, & Meyer, 2012; Van Klaveren & de Witte, 2015) looked at the upper years of primary education, with a focus on language and arithmetic and, in some cases, on the socio-emotional development of the pupils. In general, extending school days was found to have little impact in the studies undertaken in the Netherlands.

9. Peer tutoring

Peer tutoring comprises a series of approaches in which pupils work in pairs or small groups to support each other. Two types can be distinguished: peer tutoring by a tutor of the same age or peer tutoring by an older tutor. Peer tutoring is more commonly found in secondary education than in primary education and usually takes place at school, during or after normal lessons (EEF, 2018).

9.1 What makes peer tutoring work, and who is it for?

The impact of peer tutoring has been found to be high in secondary education, but low or moderate for pupils in primary school. Engaging parents in peer tutoring programmes can double the effectiveness of the programme. Peer tutoring works best as part of a structured programme where progress is rewarded. In contrast to most catch-up and support programmes, peer tutoring should not be carried on too long: The impact of peer tutoring was found to decrease in both primary and secondary education if the programme lasts longer than 10 weeks (Leung, 2014). When selecting the

peer-tutor, it was found to be beneficial to pair children of the same sex together (Zeneli, Thurston, & Roseth, 2016). Supervision of the peer-tutor by qualified teachers is essential for success (Jun, Ramirez, & Cumming, 2014; Leun, 2014; Lloyd et al, 2015).

10. Possible issues in implementation and execution

Unfortunately, many schools find it difficult to reach the intended target groups for catch-up and support programmes and to retain them within the programmes they have developed. The problems are often practical ones and can limit the effectiveness of programmes. Common problems include: taking children to extra classes and picking them up again (e.g. weekend schools) due to family commitments, planned holidays (holiday schools), lack of motivation to participate and lack of engagement among parents and pupils (Maxwell, et al., 2014; Menzies et al., 2016). These practical issues require specific strategies to encourage participation: organised transport for participants; inclusion of extra game elements and sports or cultural activities to make participation in the programme (and individual learning moments) more appealing; attendance lotteries and contest prizes. More important, however, is good communication with parents about the purpose and format of the programme' (for example, sending parents a text message before a session; following up pupil absences by telephone) and good communication with pupils' teachers (Menzies et al., 2016). Parents benefit from concise and simple information about the programme (Miller et al, 2016). Training and explanations must match the abilities of parents, which can prove to be a challenge given the large differences among parents. Identifying the needs and wishes of parents in advance can prove effective (Hussain, Jabin, Haywood, Kasim, & Paylor, 2016).

There are also issues with programmes offered within school hours: For example, individual support (or remedial teaching) by teaching assistants requires the teaching assistants to have specific didactic and pedagogical skills. Extra training in their work as teaching assistants, good practical organisation and a focus on strengthening the self-confidence of the teaching assistants can help with this. Particularly important when supporting teaching assistants is ongoing and regular support by experienced and qualified teachers (Sibieta, 2106; Gorard, See & Siddiqui, 2014).

Final points

Studies into additional support to combat learning loss (within or outside school hours) show that strengthening pupils' social and emotional skills also often leads to improved school performance (Durlak, Weissberg, & Pachan, 2010). It is important to ensure that interventions focusing on social and emotional development are as specific as possible (for example, by focusing on attention and impulsive behaviour when pupils display problem behaviour) and to use active forms of work in which the learning objectives are clear and specific, and teachers, tutors and pupils are very clear about which skills the pupils are working on.

Table 1 provides an overview of the various catch-up and support programmes along with the key pros and cons of each and practical tips for developing and implementing these programmes.

Table 1. Summary of pros and cons of catch-up programmes

| Catch-up programmes | Pros | Cons | Tips for the implementation |
|--|--|--|---|
| One-on-one tuition | <ul style="list-style-type: none"> - Great effectiveness | <ul style="list-style-type: none"> - High cost - A lot of staff needed - Longer duration needed for lasting impact (primary education) | <ul style="list-style-type: none"> - Provide concrete, constructive feedback that focuses as specifically as possible on subskills that secondary school pupils can improve. - Duration of the intervention: the impact in the senior grades of primary education is only maintained if interventions continue after the first school year; continuity is particularly important for younger pupils. - The use of teaching assistants appears to be almost as effective for primary school pupils as |
| Remedial teaching (RT) in small groups | <ul style="list-style-type: none"> - Lower cost than one-on-one tuition. - The group environment creates opportunities for pupils to learn from each other as well as from the teacher. | <ul style="list-style-type: none"> - More expensive than classroom-based approaches. - Less effective than one-on-one tuition - Less customisation possible than one-to-one | <ul style="list-style-type: none"> - The smaller the groups, the more effective it is. - Actively offer pupils the opportunity to learn from each other. - Gear the instruction to the needs of the pupils. |
| Additional resources | <ul style="list-style-type: none"> - Pupils can work at their own pace. - Effective as a supplement to the regular teaching programme. - Low cost - No tutor or teacher required. | <ul style="list-style-type: none"> - Online programmes lose their effectiveness when they last too long due to declining motivation - Less effective for pupils with learning loss | <ul style="list-style-type: none"> - Consider (and provide support, if necessary) the ICT skills of pupils. - Gear as much as possible to the attainment level and prior knowledge of pupils and the existing curriculum. - Offer a structured programme with sufficient game elements (especially important for younger pupils). |

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| <p>Summer schools/holiday schools</p> | <ul style="list-style-type: none"> - Effective in combatting non-promotion (repeating a year) in secondary education. - | <ul style="list-style-type: none"> - Impact for primary school pupils appears to be limited. - Short-term impact. - More research is needed into the long-term impact of summer schools. - Lots of preparation time. - Shortage of qualified teachers. Difficult to recruit and motivate participants. | <ul style="list-style-type: none"> - Where possible, use qualified teachers. - Choose summer schools offering a minimum duration of 10 days in consecutive weeks. - Work in small groups. - Offer challenging education that is geared to the specific learning losses of the pupils and their school curriculum. - Provide game elements and/or other rewarding aspects (for example, free breakfast or excursions) to encourage participation. |
| <p>Teacher professional development</p> | <ul style="list-style-type: none"> - Major impact. - Enduring impact. - Impact for the whole class. | <ul style="list-style-type: none"> - Teachers need to invest their time (which is already in short supply). | |
| <p>Strengthen parental engagement</p> | <ul style="list-style-type: none"> - Effective for younger and older pupils. | <ul style="list-style-type: none"> - Small impact on learning performance of early years and primary school pupils. - Difficult to engage parents who themselves did not have a great school experience. | <ul style="list-style-type: none"> - Work with experienced trainers. - Try to ensure there is a rapport between trainers and parents. - Take into account the norms and values of the parents. - Remind parents regularly of the importance of their engagement in the process. - Offer flexible training sessions, planned in consultation with parents. |
| <p>Support during school hours</p> | <ul style="list-style-type: none"> - Usually in pupils' own classrooms (familiar environment) - Pupils remain part of the group and are less likely to be stigmatised. - Low cost. Enduring impact. | <ul style="list-style-type: none"> - Higher workload/work pressure for teachers. - Teachers must have the right knowledge and skills. | <ul style="list-style-type: none"> - Use qualified teachers where possible |

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| Extended school day | <ul style="list-style-type: none"> - Effective when the offering is specifically geared to learners' needs. | <ul style="list-style-type: none"> - Impact is low or non-existent in most programmes (in particular in studies in the Netherlands). - High cost - Target groups are difficult to reach, especially in secondary education. | <ul style="list-style-type: none"> - Ensure programmes are tailor-made as far as possible, and focus on specific learning deficits. - Combine programmes focusing on school subjects with elements that help social and emotional development. |
| Peer tutoring | <ul style="list-style-type: none"> - Can take place during or after school hours. - Encourages collaboration among or between year groups in the school. - Low cost. | <ul style="list-style-type: none"> - Lower impact for younger children. | <ul style="list-style-type: none"> - Should be led by qualified teachers. - Match the tutor and tutee by gender where possible. - Choose shorter programmes (less than 10 weeks). - Offer a structured programme that includes scope for rewards. - Engage parents in the programme whenever possible. |

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Appendix 1: Literature review search strategy

The aim of this literature review is to answer the question: What scientific evidence is there about repairing learning loss through catch-up and support programmes outside the regular teaching programme, and how can the intended target groups be effectively engaged? This study was carried out to follow up on an earlier study published by LEARN! The literature review in this report relies on 16 meta-analyses and reviews from 2010 onwards, as published in the 'Teaching and Learning Toolkit' on the website of Education Endowment Foundation (EEF) and specifically about: *One on one tuition, extended school time, individualised instruction/ intelligent tutoring systems, mentoring, parental engagement, peer tutoring, small group tuition, summer schools, and within class attainment grouping*. The following inclusion criteria were used:

- *The study should concern the impact and /or active ingredients of a catch -up or support programme; both experimental, observational and N=1 studies as well as reviews and meta-analyses.*
- *The target group must be teachers and pupils in early years education , primary education , secondary education or vocational education and training.*
- *It concerns pupils with an identified learning loss: the intervention should be aimed at providing catch- up assistance or support.*

Because the Teaching and Learning Toolkit was published in October 2018, it does not include the most recent studies. We therefore conducted an additional *search* into studies published between 1 October 2018 and mid-2020. The titles of publications in Web of Science, ERIC and Scopus were scoured using the following search terms: "summer school", "weekend school", "extended school", "extended day", "remedial teaching", "one-on-one tuition", "small group learning", "within class attainment grouping", "educational partnership" and "educational disadvantage" (and various spelling variations). This resulted in 199 individual studies, four of which were selected after reading titles and abstracts and were found to meet the above inclusion criteria.

Furthermore, an additional search was carried out into studies conducted in the Netherlands from 2010. Using Web of Science, ERIC and Scopus, we used the same search terms, but then added "Netherlands" or "Dutch" to the title. We also searched Google Scholar to search Dutch sources using some Dutch-language search terms (also includes some English terms commonly used in Dutch academic discourse): "zomerschool", "weekendschool", "verlengde school", "verlengde dag", "remedial teaching", "een-op-een begeleiding", "small group learning", "within class attainment grouping", "educational partnership" en "educational disadvantage". This resulted in 128 individual publications, of which three studies were selected for the review after reading titles and abstracts based on the above inclusion criteria.

Because some of the Dutch literature is difficult to find using these databases, we also searched through publications of the research programme expert team for this funding programme, and wrote to the experts to ask them for relevant additional publications. This resulted in three further studies. Finally, the reference lists of a number of key Dutch publications were reviewed, including a literature review of Dutch learning loss policy (Driessen, 2013), a memorandum on effective interventions to tackle learning loss by the Netherlands Youth Institute (Mutsaers, Son, de Baat, and Prins, 2013) and studies published by the NRO (Netherlands Initiative for Education Research) in their 'knowledge hub' (Emmelot, Boogaard, & Schenke, 2020); Schenke & van der Ploeg, 2020; Van der Ploeg, 2018). Based on this, we added a further two studies to our literature review.

Following an analysis of titles and abstracts, we selected nine Dutch publications for further analysis. These publications all fall within the categories of *extended school time* or *summer schools*.

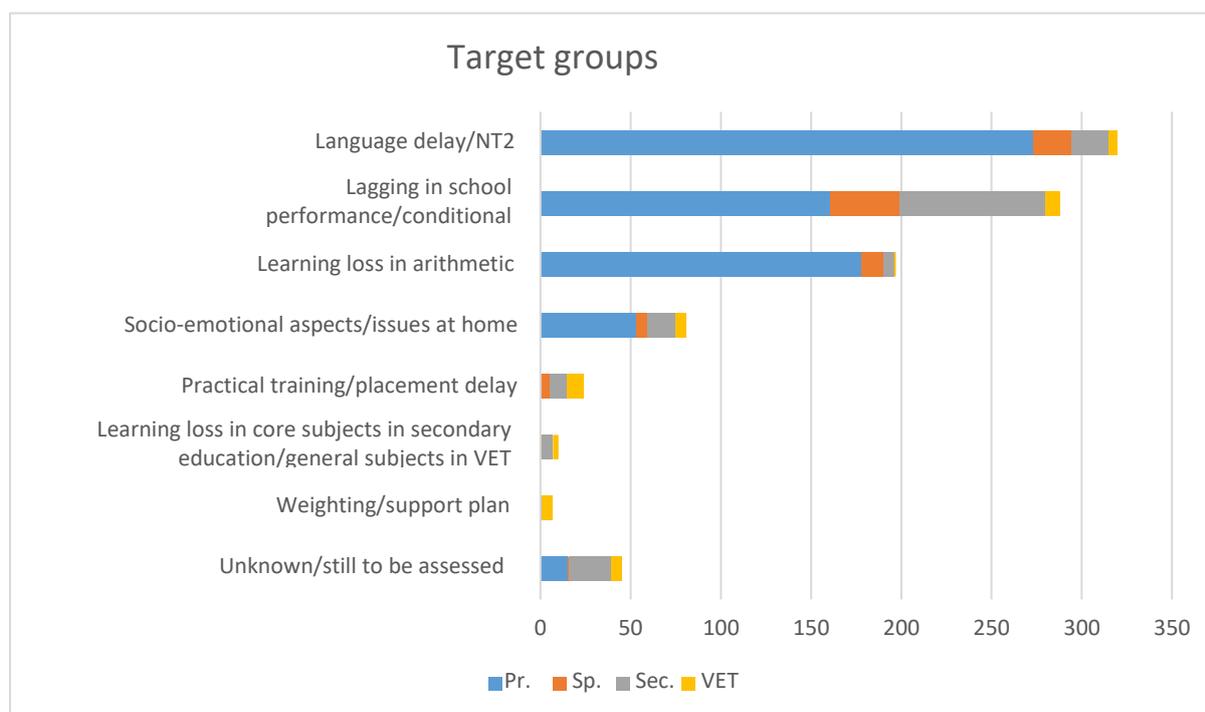
All studies were analysed for the following categories: programme type, target group, outcome, operation, sector, and we have systematically visualised them in the form of a data extraction matrix.

Part 2: Overview of interventions requested in the first tranche (interventions carried out between 1 July 2020 and 31 December 2020)

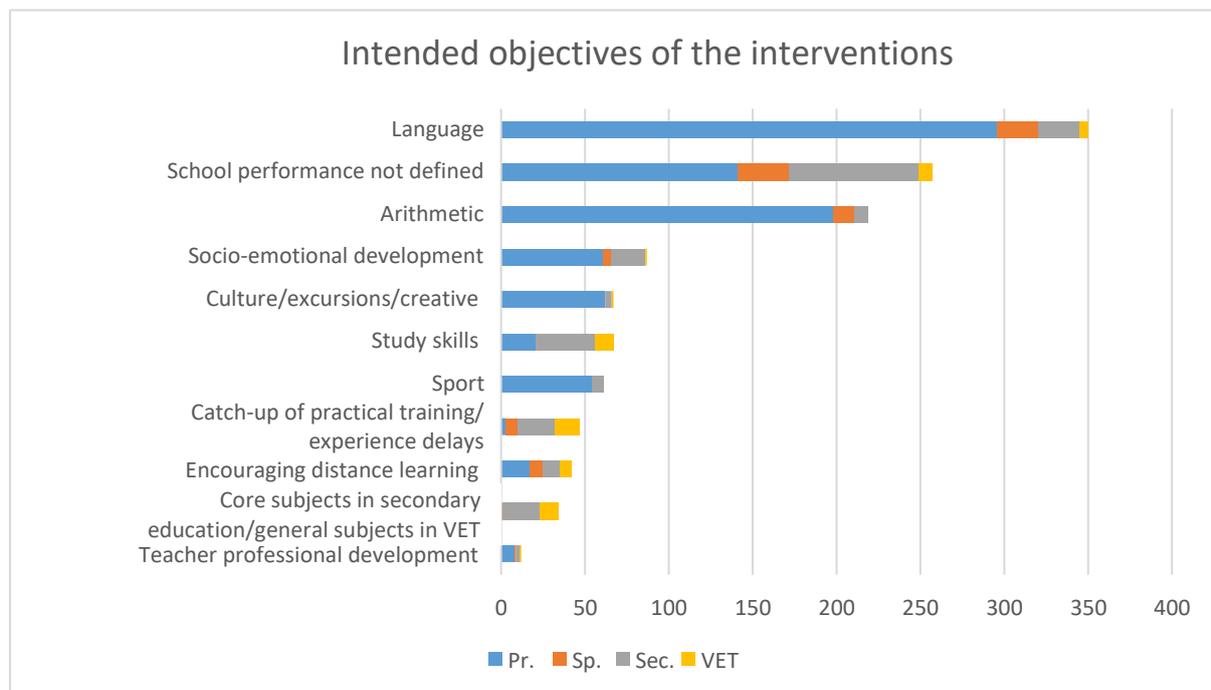
Introduction

During the first round of the funding programme, 1,559 requests for catch-up and support programmes were submitted by institutions in primary education, secondary education, special needs education, vocational education and training and adult secondary education. And 312 funding requests were submitted in a similar programme for early years education. The applications from primary education, secondary education, special needs education and vocational education and training were further analysed by LEARN! researchers to build a picture of the type of interventions that schools are using (or are intending to use) in order to repair learning loss, the target groups they want to help, and the practical aspects of implementation (such as cooperation with external parties). Below is a brief overview of these analyses based on a representative sample of 743 catch-up and support programmes (in terms of intervention type, cooperation, region and 'pupil weighting'. All funding requests from vocational education and training and special needs education were taken into account in order to build as representative a picture as possible despite the smaller number of applications from these sectors. On average, schools applied for funding for more than one programme. In our analysis of applications in the first tranche, we looked at the target groups that schools wanted to focus on, the goals they wanted to achieve for their pupils and the way they wanted organise the programme, for instance, with or without assistance from external parties.

1. Target groups and objectives of the programmes for which funding was requested



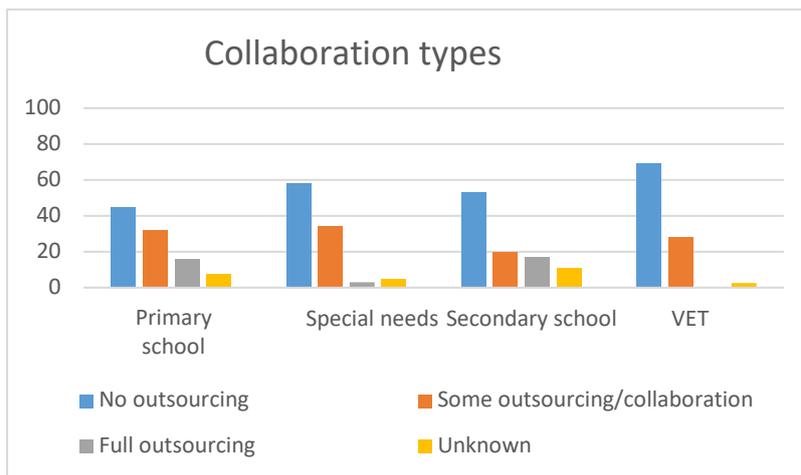
Although it was not possible to identify the specific areas of learning loss for all schools, it is clear from analysis of the funding requests that these catch-up programmes are aimed at pupils who are lagging in performance due to the school closures (in primary and primary special needs education: in language and arithmetic; in secondary education: in the core subjects); many schools also include children with Dutch as a second language as a separate target group. In primary education, we also see (estimated) delays in socio-emotional development of pupils, In secondary education (in particular upper vocational education), vocational education and training (VET) and special needs education, interventions are used for pupils who lack practical experience because they were unable to attend or complete a practical training placement in the period from March-June 2020.



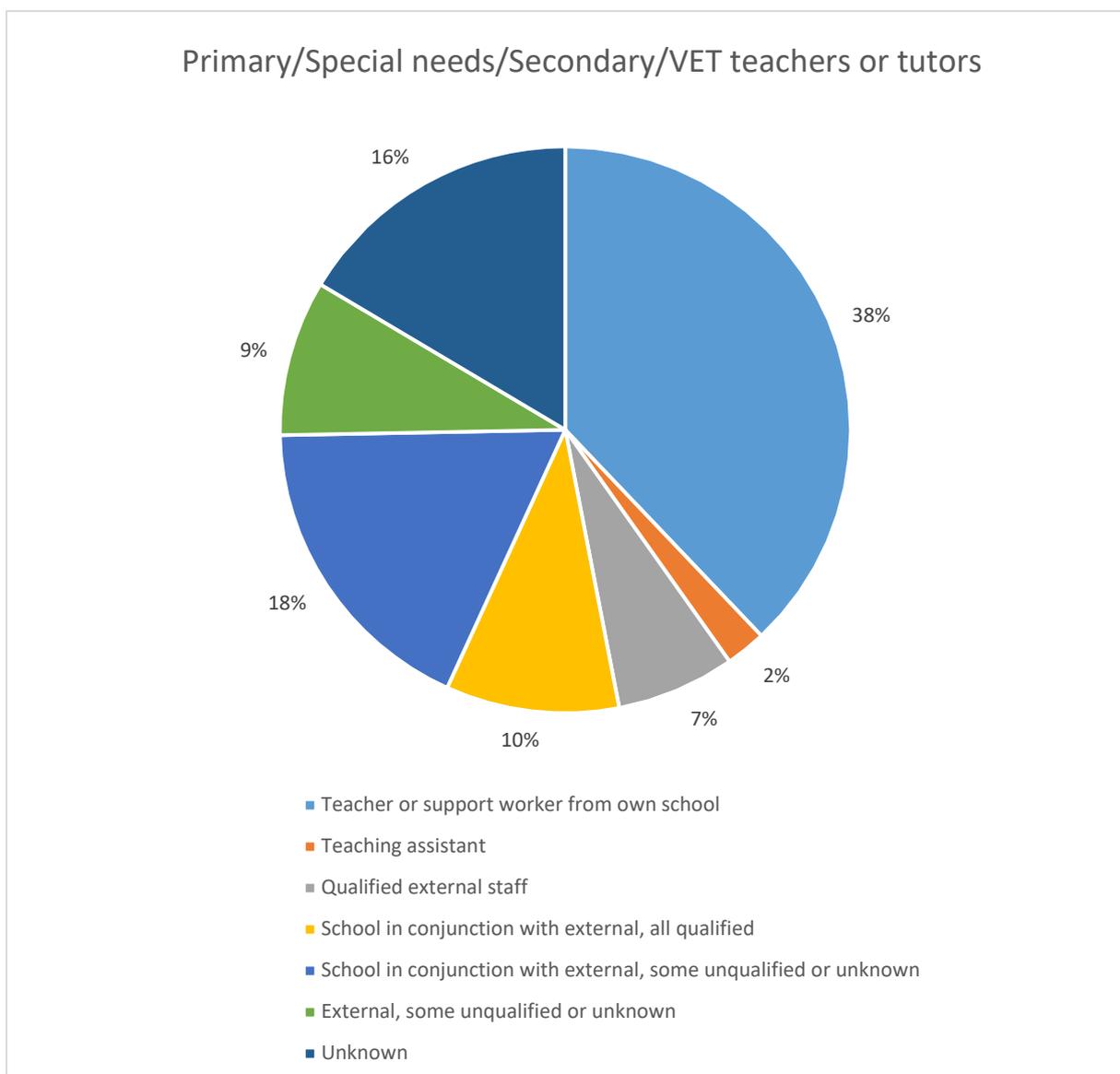
The objectives of the catch-up programmes described are highly geared to the intended target groups. Language, arithmetic, core subjects and general education subjects often form the core focus of the programme. A component is regularly added to this to strengthen the socio-emotional development of pupils (especially those in primary education), to improve study skills (especially in secondary education and vocational education & training) and to facilitate distance learning with a view to possible future use. Distance learning was found to be an important goal, in particular in special needs education. In a limited number of cases, the professional development of teachers (mostly in terms of pedagogy and didactics, but sometimes also in terms of online education) was at the heart of the programme requested. Because, relatively speaking, many summer school interventions were requested in the first tranche, cultural deep dives, creativity and physical exercise in primary education were also frequent goals of the programme.

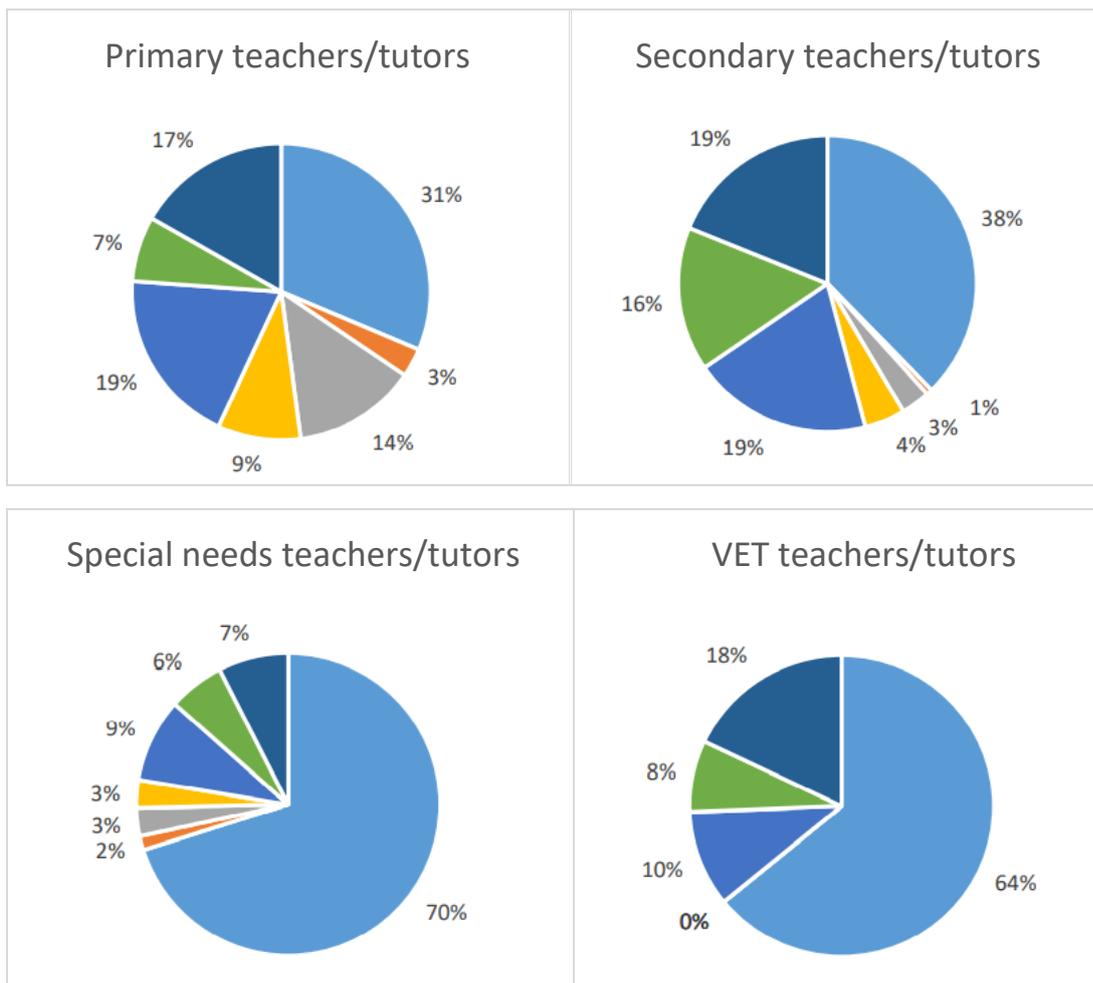
2. Implementation, teaching and collaboration within the programmes

In the development and implementation of catch-up programmes, schools may choose to collaborate with other schools, teacher training colleges or other external parties (such as educational consultants, homework institutes or the local municipality). The collaboration partners that schools choose vary by sector; for details, see the infographics of the Ministry of Education at <https://www.dus-i.nl/subsidies/inhaal--en-ondersteuningsprogramma-s-onderwijs/overzicht-aanvragen>.



Analysis of the description of this cooperation (where applicable) in the sampling shows that schools often take the lead when developing and implementing the programmes (this applies to all sectors).

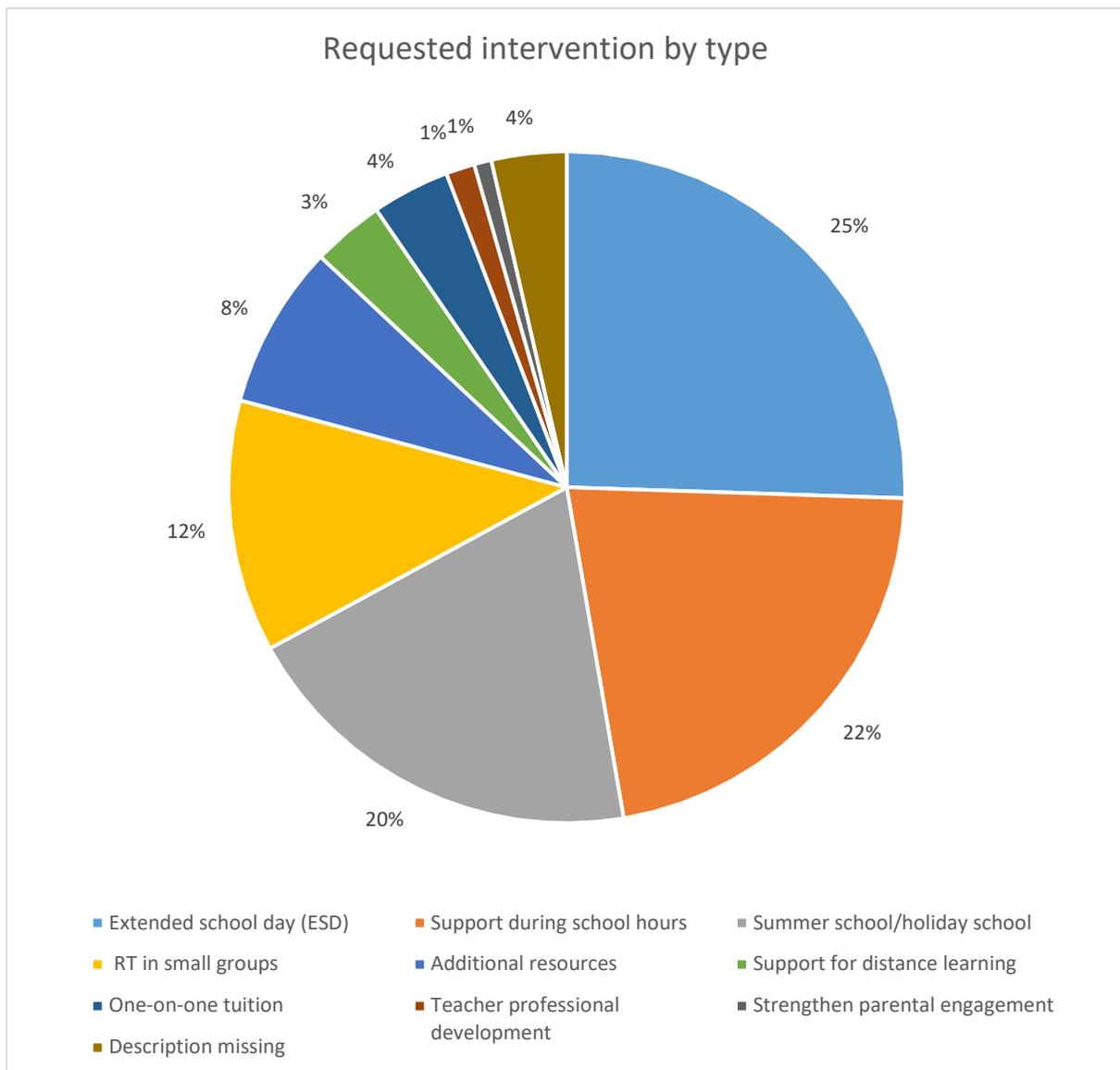




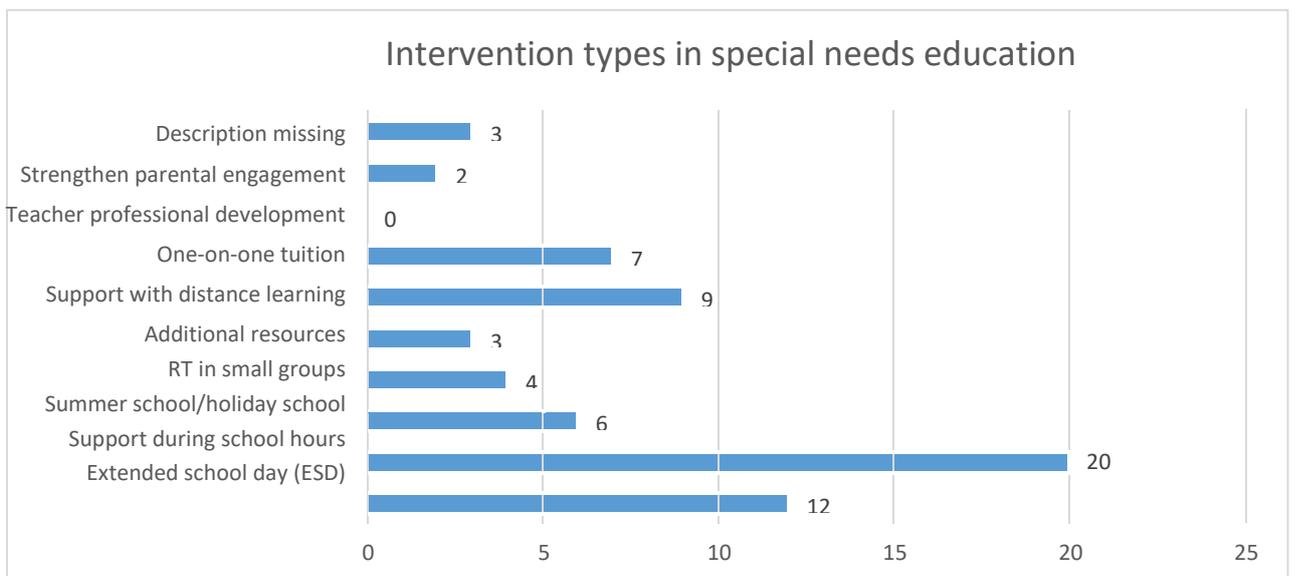
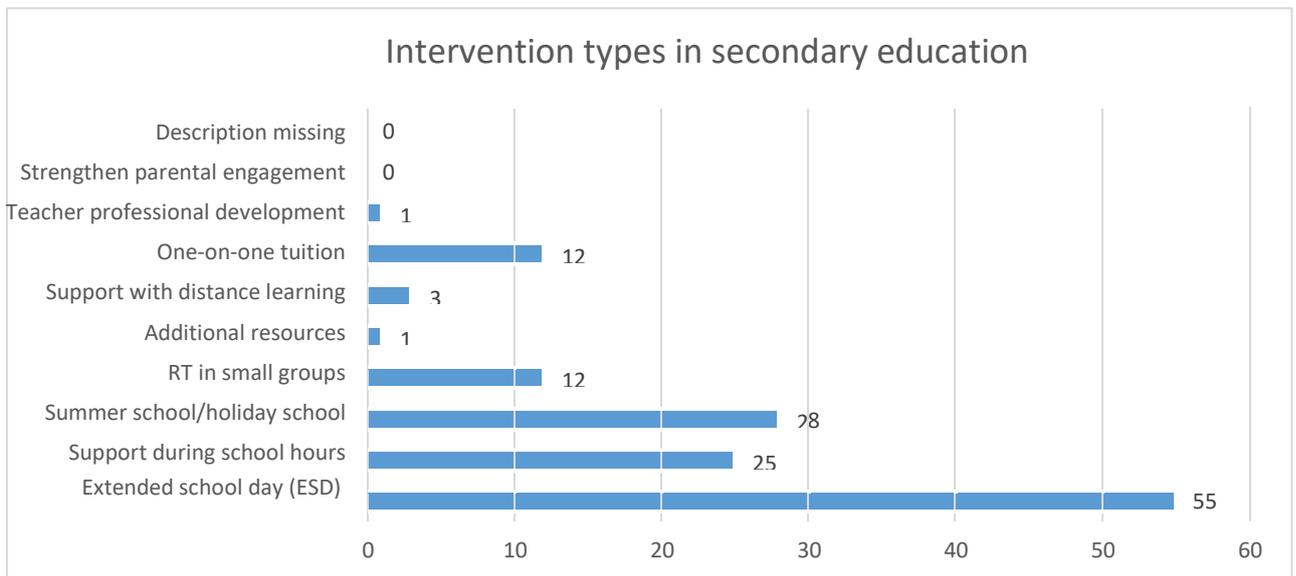
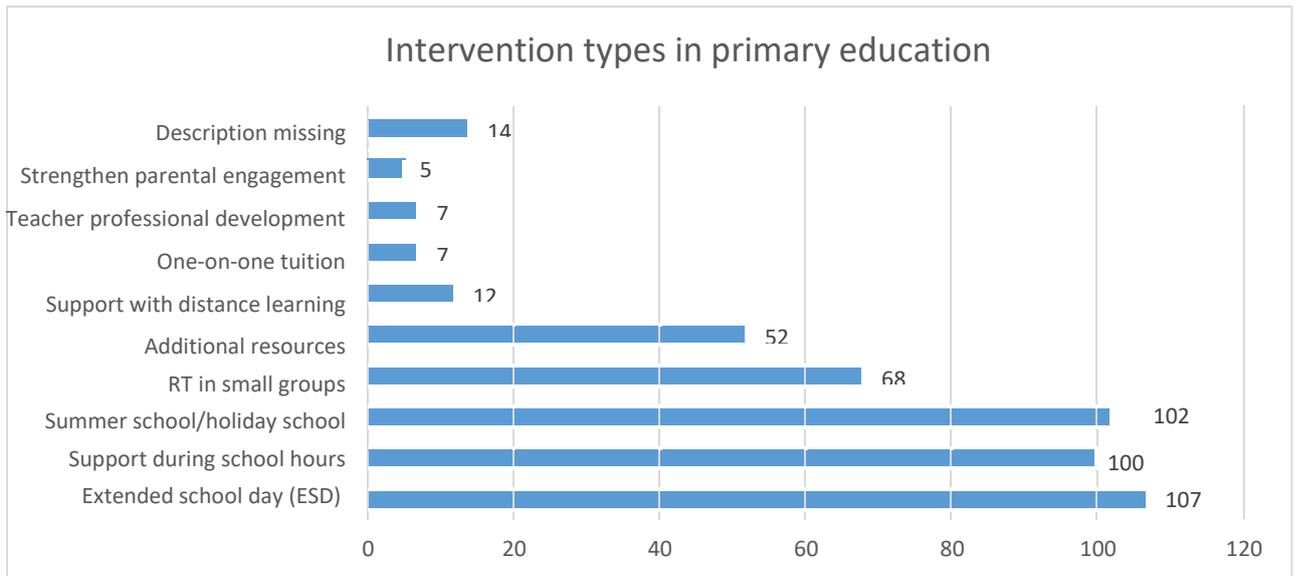
Although not all funding requests involving cooperation with external organisations make clear who will teach the pupils, it was found that pupils are taught by qualified teachers or other qualified staff in all sectors. This is relatively most common in special needs education and VET. 'Qualified staff' in the figures above includes qualified teachers, practitioners and other educators.

3. Types of interventions within the requested catch-up programmes

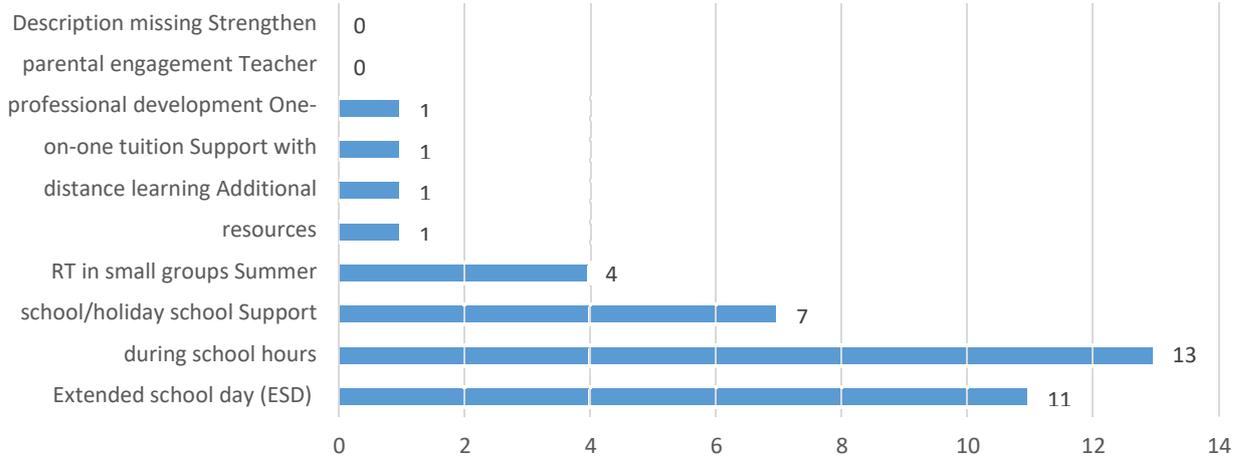
As a final step, we also assessed the intervention types. The figures below show first of all the percentages of funding requests across all sectors by intervention type. Support during school hours, remedial teaching in small groups and extended school days score particularly high. Because the application deadline for the first tranche was before the summer holidays, we observed that 20% of the programmes related to or included a summer school.



We then break down the requested interventions by sector. The figures presented below show that remedial teaching (RT) in small groups was requested relatively often in primary education. In special needs education, funding requests were often focused on encouraging or improving online teaching (distance learning) and catching up on practical lessons (secondary special needs education) in addition to support during school hours (primary special needs education and secondary special needs education). Catching up on practical lessons has been observed to be in the foreground in VET where fewer internships or training places are available, and some have been temporarily halted.



Intervention types in VET



Part 3: Tips for schools wishing to evaluate their own catch-up and support programmes

If a school or an organising partner working in partnership with a school wishes to evaluate the impact of its catch-up programme, there are a number of practical matters to be aware of:

1. Surveys are often used to evaluate what participants thought of a programme, what they learned from it, etc.
 - ✓ Try to avoid leading questions where possible. Leading questions steer participants' responses in a certain direction (often towards something that the organiser would like to hear). Questions such as '*would you recommend this to others?*' are the most neutral.
 - ✓ Ask questions that highlight the change a participant reports (for example, a participant was not motivated at all, but is now somewhat motivated, or a participant was already motivated, but is now very enthusiastic). Phrasing that could be useful here, for example, includes '*after participating in the programme I can now...*' (self-assessment by the participant of the extent to which the programme has contributed).
 - ✓ It makes sense to ask specifically how participating pupils are doing now, aside from questions about how the programme may have contributed to this. Phrasing that might be suitable for this purpose, for example, includes '*compared to other pupils in my class, I am...*'.
 - ✓ Try and use a scale that is not too precise: it takes a lot of thought to give an answer on a precise scale (e.g. a scale of 1 to 10), while answers on a 1 to 5 Likert scale can be equally effective.
 - ✓ For VET, secondary education and perhaps also upper years of primary education: make the questioning easier by using online surveys in the classroom with specific software. If teachers put a TinyURL on the board, the survey can be completed using smartphones.
2. Ask teachers and practitioners for their feedback and suggestions for improving the process: they notice other changes that students experience themselves, and they have a close eye on the learning process. Also, ask specifically for concrete improvement ideas that could increase participation and motivation of the participants or effectiveness.
3. If you want to investigate in quantitative terms whether the programme offered has had positive effects on learning performance using a student information system:
 - i. Examine how participating pupils progress in their test grades;
 - ii. Identify pupils in previous years who were just as far behind;
 - iii. Examine whether these 'control students' progressed as fast then as the participating students are progressing now.

Appendix 2 contains two sample questionnaires for participants of summer schools in primary and secondary education.

Appendix 2. Sample questionnaires for participants of catch-up and support programmes

Survey for primary summer school pupils

Questionnaire for when summer school finishes

Give a score from 1-5 (where 1 means 'strongly disagree' and 5 means 'strongly agree')

1. I'm looking forward to going back to school again after the holidays
2. I'm lagging behind slightly in arithmetic and language
3. I think I'm going to do well at school
4. I understand how to learn well at school
5. Thanks to the summer school, I like school better than before
6. Summer school is going to help me do better at school
7. Thanks to the summer school, I now understand better how to learn well at school
8. At summer school, I got the right kind of help
9. The staff at summer school explained things well
10. The staff at summer school were friendly
11. I had a great time at summer school
12. I made friends at summer school

The answers to these questions have a different scale:

13. Before summer, I was in group... (4, 5, 6, 7, 8)
14. I am... (a girl / a boy)
15. I am... x years old
16. Do you have anything else that you'd like to say about summer school? [open question]

Survey for secondary summer school pupils

Questionnaire for when summer school finishes

Give a score from 1-5 (where 1 means 'strongly disagree' and 5 means 'strongly agree')

1. I feel motivated about going back to school again after the holidays
2. Compared to other pupils in my class, I am lagging behind in a lot of subjects
3. I am confident I'll do well at school in the year ahead
4. I understand how to learn well at school
5. Thanks to summer school, I now feel more motivated than I was before
6. Thanks to summer school, I'm now lagging behind less than I was before
7. Thanks to summer school, I am more confident that I will do well at school
8. Thanks to summer school, I now understand better how to learn well at school
9. At summer school, I got the attention from the staff that I needed
10. The staff at summer school explained things well
11. The staff at summer school were friendly
12. I had a great time at summer school
13. I made friends at summer school
14. Summer school was useful for me

The answers to these questions have a different scale:

15. Before summer, I was in year... (1, 2, 3, 4, 5 or 6)
16. In upper vocational education, senior general secondary education, pre-university education
17. I am male/female
18. I am x years old
19. The four digits of my postcode are...
20. What would make summer school better? [open question]
21. Do you have anything else that you'd like to say about summer school? [open question]