

BRIDGING THE GAP BETWEEN EDUCATION AND WORK

First monitoring and evaluation report of the BRIDGE programme

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COLOPHON

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FIRST MONITORING AND EVALUATION REPORT OF THE BRIDGE PROGRAMME

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INTRODUCTION

1 INTRODUCTION

This report contains the first results of the BRIDGE project, which is being implemented in South Rotterdam with the financial support of the European Commission, in the period between the end of 2016 and the end of 2019. It consists of twenty educational interventions aimed at improving both the educational results of children from South Rotterdam and the alignment with the labour market. Children do not always complete their vocational education and too few opt for specialisations that offer good labour market prospects. By improving this situation, more young people in South Rotterdam should be able to find a job and be sustainably integrated in the employment process.

South Rotterdam lags behind North Rotterdam, other large Dutch cities and the Netherlands as a whole in socioeconomic terms. This is reflected, for example, in the fact that unemployment in South Rotterdam is considerably higher and labour participation lower than elsewhere. Moreover, there are many other problems, such as an educational disadvantage, poor housing quality and crime. Since all these problems are correlated, there is no easy solution. This is why the National Urgency Programme South Rotterdam (NPRZ) was developed. The programme focuses on three areas: education, housing and employment. BRIDGE is linked to the educational component of the NPRZ and has a duration of three years. After this period, the NPRZ intends to continue with the educational measures. Experiences from BRIDGE could result in adjustments to the educational interventions that are currently applied.

The following aspects are addressed in the first monitoring and evaluation report:

- The nature and implementation of the educational interventions. This also includes what we know about the extent to which the interventions are applied and their reach among schools and pupils. Furthermore, we discuss the intervention logic: how does the implementation, in theory, link to the effects what are the necessary preconditions for achieving an effect? And what does the literature say about the effectiveness of similar interventions elsewhere?
- The development of educational results. We have some doubt as to whether the quality of available quantitative data related to the application of the interventions is sufficient to measure an effect of these interventions on the educational results. We are still examining this matter. This report focuses on the development of the educational results over time. Is the percentage of young people in pre-vocational secondary education and vocational secondary education opting for technology, port-related or healthcare specialisations increasing compared with North Rotterdam, other large cities and the Netherlands as a whole? And if so, does the timing of this increase correspond to the introduction of BRIDGE or to previously increased participation in similar interventions in the context of the NPRZ programme?
- The development of labour market results. To what extent does obtaining a secondary vocational education qualification lead to more opportunities in the labour market? To what extent does a higher secondary vocational education qualification lead to more opportunities? And do young people who specialise in technology, port-related courses or healthcare perform better than young people with a qualification in a different field? For the analyses, a benchmark is used that also takes into account the sustainability of the employment. Moreover, we examine whether the effect of the educational level and specialisation in South Rotterdam is as large as in North Rotterdam and other large cities.

The results provide interim indications of the effects of BRIDGE. Furthermore, they demonstrate the extent to which better educational results lead to more opportunities in the labour market and sustainable employment.



INTERVENTIONS

2 INTERVENTIONS

2.1 INTRODUCTION

This chapter provides an overview of the content and the objective of the interventions in the context of BRIDGE, including the intervention logic of the project as a whole (paragraph 2.2). Next, we discuss what is known about the effectiveness of similar interventions elsewhere (paragraph 2.3). One could expect the effectiveness of the interventions elsewhere to provide an indication of the potential effects of BRIDGE or, at least, to provide a rationale (or not) for the choice of these interventions. In paragraph 2.4, we address the application (practical implementation) of the interventions. This paragraph has a considerable focus on career start guarantees, because of their important role in BRIDGE. Paragraph 2.5 discusses the reach of the interventions. Moreover, we examine the extent to which the interventions were already applied prior to BRIDGE. Hereby we do not only determine how the situation was before BRIDGE, but are also able to assess whether developments in the application of these interventions can already be identified in the target variables (such as the choice for a technology-, port- and healthcare-related study). We discuss these options in chapter 3.

2.2 CONTENT AND OBJECTIVE OF THE INTERVENTIONS

Table 2.1 presents a brief overview of the measures, their content and objectives. In general, these measures relate to career orientation, the link between education and the labour market, improvement of the level of education and professionalisation of education. Through these measures, BRIDGE aims to stimulate pupils from South Rotterdam to continue their education and select educational options that are more in line with labour demand. The ultimate objective is to improve the chances of young people from South Rotterdam of integrating sustainably in the employment process.

Table 2.2 categorises the BRIDGE measures in several ways. One way is the type of education to which the measure applies: primary education, secondary education (first and second stages) and secondary vocational education (MBO). Of the twenty measures, ten already exist, five are completely new, and five are new for some types of schools.¹

The measures can be classified into five categories:

- Discovering and experiencing;
- Reflecting and choosing;
- Labour market alignment;
- Extra support;
- Professionalisation.

The measures in the *discovering and experiencing* category introduce children to the technology, port and healthcare sectors. The aim of measures in the category *reflecting and choosing* is that students gain a better awareness of which educational options best suit their talents and interests. With regard to *alignment with the labour market*, the focus is more on improving the chance of finding a job. *Extra support* relates to the second stage of secondary education and secondary vocational education. The interventions in these categories are aimed at pupils. The final category, *professionalisation*, is aimed at teachers.

¹ It is not completely clear what 'new' exactly means, because at least one of these measures has already been included in existing yearly reports.

Table 2.1 Overview of BRIDGE interventions

| Intervention | Brief description | Main objective |
|---|---|--|
| Introduction to the port | Groups of pupils visit the Port and the Education and Information Centre Mainport Rotterdam (EIC). Prior to the visit, preparations are undertaken in the classroom. A report is written after the visit has taken place. | Initial general introduction to the port. It could be the first step for pupils to start considering a specialisation in technology/the Port. |
| Company visits: flash visits by PO and VO lower school | Small groups of young people are introduced to a company or institution and the work performed there. Practical assignments play a key role in the visit. After the visit, pupils write about their experiences in the form of a report. | Being in a better position to choose a secondary school, profile and/or subsequent specialisation. |
| Company visits in the second stage of secondary education | Similar approach as a flash training session in primary school and secondary school. | Being in a better position to choose a specialisation. |
| Technology lessons and workshops | Primary schools choose from a range of lessons and workshops offered by a large number of organisations. | To introduce children to technology and increase and retain their enthusiasm for the subject. |
| Information evenings about care/technology options | During information evenings, three secondary schools with technology and healthcare profiles provide information to children in the final stage of primary education and their parents, about the promising job prospects offered by healthcare, technology and port-related specialisations and the necessary pathway to reach them. | To encourage pupils and parents to choose a secondary school that offers healthcare and/or technology profiles. |
| Events introducing preferred professions | Events to provide further information about a particular sector. This could be organised by a single provider (Shell, Defence) or a cooperation partnership comprising various providers. Examples include: <i>Gaan voor een baan!</i> , <i>TechWorld</i> , <i>Shell Eco Marathon</i> , <i>Skills Masters</i> , <i>Week of Process Engineering</i> , <i>Week of Food Industry</i> , <i>Week of Healthcare and Social Work</i> , etc. Only <i>Gaan voor een baan!</i> is specific to NPRZ. | An introduction to the healthcare, port-related and technology sectors and the (contents of) courses and jobs in these sectors. |
| Civil service internship | Secondary education pupils perform a certain number of hours of volunteer work as part of their school career. | An introduction to the labour market and practising employee skills at the same time. |
| Study try outs | Pupils in the fourth year of VMBO (pre-vocational secondary education) spend half a day in MBO (secondary vocational education) to obtain an idea of their preferred specialisation. This includes: engaging in activities involved in the specialisation, discussions with students/teachers, information, a theoretical lesson, a guided tour. | For pupils to get a taste of their desired MBO (secondary vocational education) course, find out whether it really is suitable for them and reflect on this. |
| Digital talent portfolio | The pupil uses the portfolio to store all kinds of documents that refer in some way to his/her interests and other career skills. | Support for the LOB (career guidance) process, especially with regard to career development meetings with the pupils and their parents. |

| Intervention | Brief description | Main objective |
|--|--|---|
| Career development meetings involving the pupil - teacher - parent(s) | Periodic discussions involving the pupil/parent(s)/teacher about the development of career skills. The discussions may take different forms and be individual or group discussions. | To form the link between different LOB (career guidance) activities. This should ultimately result in an increased awareness of qualities and interests and deliberate career choices. Discussing the port, technology and healthcare sectors could be used to provide guidance. |
| Mentoring programme | Pupils receive one-to-one attention/coaching from student mentors from Rotterdam University of Applied Sciences. | The student mentor devotes attention to improving the ability to make choices, insight into personal talent, possibilities and the ability to reflect more effectively on work experience and thus career skills. The student mentor also focuses on school success and 'next century skills' (competences needed for the labour market). |
| Job interview training | Pupils practise taking part in a job interview through writing an application letter and role-playing with representatives from the business community (and institutions). | Practising interview skills in order to be more aware of one's interests and qualities. To make pupils more confident in the job application process and thus improve connections to the labour market. |
| Career Start Guarantees | Employers provide young people with a guaranteed first job if they enrol in a specific MBO course in healthcare, port or technology and that can be redeemed if they successfully complete the course (a number of additional conditions sometimes apply). | Greater focus on specialisations in port, healthcare and technology sectors, and as a result, an increase in admissions to these courses. |
| Employee skills training | Learning and training basic employee skills such as arriving at work on time, agreeable social interaction, adopting a service-minded approach and task orientation, demonstrating the motivation to work, motivation to learn, communication, etc. | To prepare pupils for the labour market, so that employers can feel confident that pupils from South Rotterdam are reliable employees; the ultimate objective being that more young people obtain a job right after completing their education. |
| Organisation of support classes in secondary school and secondary vocational education for higher qualifications | Young people from VMBO (pre-vocational secondary education) who are talented enough to progress to MBO (secondary vocational education) level 3 but tend to orient towards level 2, are provided with support in order to eliminate impeding factors. Within MBO (secondary vocational education), support classes focus on progressing to a higher level. | Increase in the number of admissions to more promising (higher) MBO (secondary vocational education) studies. |
| Support at home by neighbourhood teams | Neighbourhood teams help improve pupils' circumstances at home. The neighbourhood teams are also trained to provide support in the decision-making process. | To provide additional support at home that cannot be supplied by the teacher or employer, so that participants are helped to complete their chosen specialisation and enter the labour market. |
| Introduction to professions and sectors for teachers | Teachers in primary schools are introduced to professions and courses in healthcare, port and technology. Teachers can choose from different methods: study afternoons, company visits, guest lectures, speed dating with professionals and events. | To introduce teachers to the professions and specialisations, so that they are better equipped to support their pupils in and provide them with career guidance activities. This means that they are also better equipped to inform their pupils about sectors with promising career prospects. |

| Intervention | Brief description | Main objective |
|--|--|--|
| Career guidance conversation training for teachers | Teachers, tutors, counsellors and mentors are trained to conduct career guidance conversations with pupils and parents. The school is also assisted in implementing career guidance conversations in the school's curriculum and a link is ensured between the career guidance conversations and other career guidance activities carried out at the school. | Professionals teach them how to conduct an effective career guidance meeting, in order to help pupils develop career skills and make the right choices (<i>the assignment contract states that the training must contribute to an increase in admissions to healthcare, port and technological specialisations. The form that this will take still needs to be elaborated. The training may communicate that certain sectors and professionals offer better career prospects than others</i>). |
| Implementation of technology curriculum | Support for primary schools in South Rotterdam in implementing Science and Technology (W&T) in their curriculum. This includes a digital career guidance programme incorporating the context of the port, healthcare and technology. A mobile technology lab will also be developed. | To give science and technology a permanent position in primary education, so that children are introduced to the subjects early in their school career (which may influence their choices when they are older). |
| Empowerment Programme involving parents in career orientation and guidance | The school involves parents in LOB (career guidance) as an integral part of the school's objectives and methodology and has established this in the school plan. This includes a support programme by a working group at the school and the exchange of knowledge and experience with other schools. | To support a school team in developing and implementing an arrangement that is appropriate for the school to involve parents in activities related to the LOB career and talent orientation programme. Consequently, parents will be better equipped to support their children in making suitable choices. |

Table 2.2 Overview of BRIDGE interventions

| Theme | Intervention | Primary school | First stage of secondary school | Second stage of secondary school | Secondary vocational education | Existing or new |
|------------------------------|--|----------------|---------------------------------|----------------------------------|--------------------------------|--|
| Discovering and experiencing | Introduction to the port | Yes | Yes | Yes | No | Existing in primary, new for secondary |
| Discovering and experiencing | Company visits: flash visits by PO and VO lower school | Yes | Yes | Yes | Yes | Existing in primary school and existing in the first stage of secondary school |
| Discovering and experiencing | Company visits in the second stage of secondary education | No | No | Yes | No | New |
| Discovering and experiencing | Technology lessons and workshops | Yes | No | No | No | Existing |
| Discovering and experiencing | Information evenings about care/technology options | Yes | No | No | No | Existing |
| Discovering and experiencing | Events introducing preferred professions | Yes | Yes | Yes | Yes | Existing |
| Discovering and experiencing | Civil service internship | No | Yes | Yes | No | Existing |
| Discovering and experiencing | Study try outs | No | No | Yes | No | Existing |
| Reflecting and choosing | Digital talent portfolio | Yes | Yes | Yes | Yes | Existing in secondary, new for primary |
| Reflecting and choosing | Career development meetings involving the pupil - teacher - parent(s) | Yes | Yes | Yes | Yes | Mostly new (existing in some secondary schools) |
| Reflecting and choosing | Mentoring programme | Yes | Yes | Yes | No | Existing |
| Labour market alignment | Job interview training | No | No | Yes | No | Existing |
| Labour market alignment | Career Start Guarantees | No | No | Yes | No | Existing |
| Labour market alignment | Employee skills training | Yes | Yes | Yes | Yes | New |
| Extra support | Organisation of support classes in secondary school and secondary vocational education for higher qualifications | No | No | Yes | Yes | New |
| Extra support | Support at home by neighbourhood teams | No | No | Yes | Yes | New |
| Professionalisation | Introduction to professions and sectors for teachers | Yes | No | No | No | New |
| Professionalisation | Career guidance conversation training for teachers | Yes | Yes | Yes | Yes | New for primary and secondary, existing in secondary vocational education |

| Theme | Intervention | Primary school | First stage of secondary school | Second stage of secondary school | Secondary vocational education | Existing or new |
|---------------------|--|----------------|---------------------------------|----------------------------------|--------------------------------|-----------------|
| Professionalisation | Implementation of technology curriculum | Yes | No | No | No | Existing |
| Professionalisation | Empowerment programme involving parents in career orientation and guidance | Yes | Yes | Yes | Yes | Existing |

Figure 2.1 briefly illustrates the intervention logic related to the different measures. It indicates how these measures could – in theory – yield favourable results. On the left in the figure, the different measures are organised according to their type. On the right are the three ultimate, explicit objectives of BRIDGE (increasing enrolment in technology, healthcare and port-related specialisations, increasing opportunities in the labour market and reducing the number of young people dropping out of school). Important intermediate steps include acquiring knowledge of and experience in technology, port and healthcare, improving career skills and increasing the level of education.

The figure clarifies that the desired objectives differ for each tool, but that all tools cover at least one of the ultimate objectives. This may involve an intermediate step. For example, one vital intermediate step is acquiring experience (from an early age) with the port, technology and healthcare. This increases the possibility that pupils will choose these specialisations at a later stage. Another essential intermediate step concerns the improvement of career skills, which reduces the risk of pupils dropping out of school. Moreover, there is a connection between the intermediate step involving improved career skills and choosing technology, healthcare and port-related specialisations. This is illustrated by a dotted arrow, because only some of the interventions aimed at improving career skills also focus explicitly on giving more attention to the technology, healthcare and port-related sectors, and, subsequently, increasing the number of pupils opting for these specialisations. Company visits and civil service internships offer a significantly broader orientation than technology, port and healthcare.

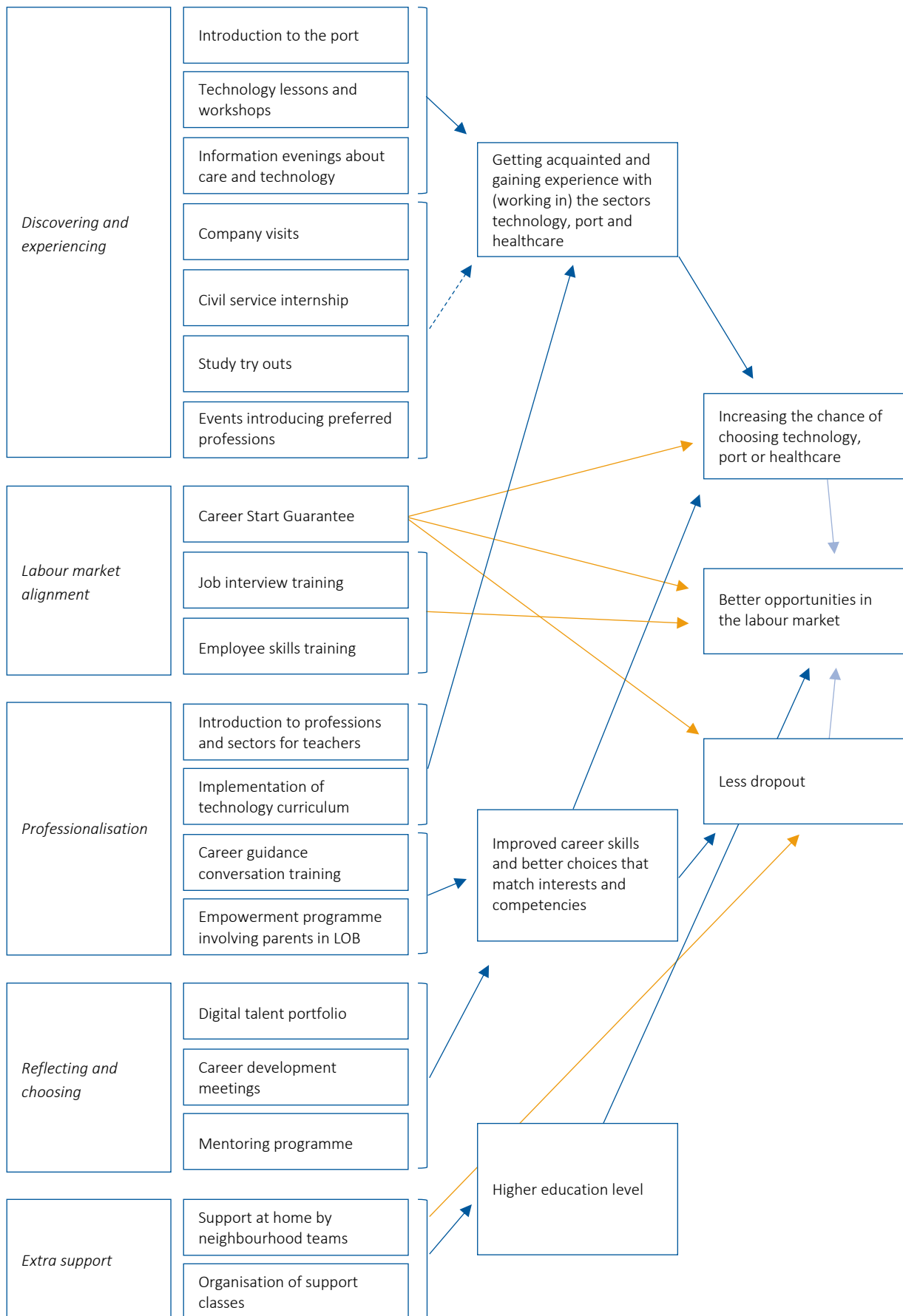
The illustrated theoretical relationships (ultimately) connect the various measures with several of the BRIDGE objectives. The most striking example concerns the career start guarantees. Their primary aim is to steer the choices of young people from South Rotterdam in the direction of the subjects to which they are connected, but they also directly lead to a better job perspective for those students holding a guarantee. Furthermore, the career start guarantees may result in fewer pupils dropping out of school because the prospect of a job could encourage students to persevere. The guarantee is often organised in such a way that support is also provided during the course.

Finally, we would like to emphasise that the ultimate objectives are inextricably linked to each other. An arrow indicates that an increase in students choosing studies related to technology, port and healthcare, leads to better job opportunities. In a separate analysis in chapter 4, we will examine this link.

So as not to make this figure more complicated, it does not include the further specific content of the interventions, which could possibly increase effectiveness. These have already been mentioned in the brief descriptions of the interventions in table 2.1. An example of one such precondition is that not only experience with technology, the port and healthcare is gained, but that this experience is also reflected upon.

The above relates to theoretical connections. In the following paragraph, we examine what is known about the effectiveness of similar interventions in the literature. Furthermore, attention is devoted to the preconditions that play a role in this regard. In the subsequent chapters, we examine what could be said about the effectiveness using the available data.

Figure 2.1 Global overview of the BRIDGE intervention logic



2.3 THE EFFECTIVENESS OF SIMILAR INTERVENTIONS ELSEWHERE

To obtain a first indication of the effectiveness of BRIDGE interventions, this paragraph focuses on what is known about these or similar measures in the literature. If certain interventions work effectively or less effectively elsewhere, is it quite possible that similar results could be expected in the context of BRIDGE. We also devote attention to the importance of certain preconditions in the implementation of the interventions that could have a major impact on their effectiveness.

Below, we discuss the individual BRIDGE interventions. In some cases, certain related interventions are clustered.

Company visits/introduction to the Port

A lot of research has been conducted into the use and effect of company visits or field visits by children. Zoldosova and Prokop (2006) studied field education and its impact on children's ideas and interests related to exact sciences. An experiment was conducted in which children embarked on a five-day trip to a laboratory (The Science Field Centre), where they were able to participate in various (practical) lessons, while a control group did not go on the trip.² The study revealed that children who participated adopted a more positive attitude and demonstrated greater interest in the exact sciences than those in the control group. The researchers therefore assume that field education has a significant effect on pupils' motivation to pursue studies in the field of exact sciences. It is likely that this effect also occurs among children who receive field education related to the port, technology or healthcare. However, it must be stressed that Zoldosova and Prokop focused exclusively on the effect of the visit in the short term. Hence, it is not possible to conclude that in the long-term children would be more inclined to opt for an exact science specialisation or vocation.

In their study, Jarvis and Pell (2004)³ did pay attention to the effects of field studies in the longer term. They examined the attitudes of children before a visit to a science and space center, shortly afterwards, two months and five months after the visit. The researchers did indeed observe an increase in interest in the subject directly following the visit. However, this increase proved to be short-lived, since several months later no significant effect was found. Hence, there are some doubts about the effectiveness of company visits in the long term. Post and Walma van der Molen (2014) also doubt the benefit of field visits. In their study, they discovered that field visits had hardly any or no effect on children's attitudes towards technology. Possible explanations for this are that pupils are often poorly or not at all prepared for the visits, low levels of teachers' involvement and a missing link to the rest of the curriculum (Finson & Enochs, 1987; Post & Walma van der Molen, 2014). It is thus important that pupils are well prepared, especially with regard to the physical properties of the building and the environment. This ensures that pupils are not too distracted by the physical environment during the visit and are able to focus more on the educational activities (Finson & Enochs, 1987).

Moreover, it is important that the company visit also has a connection to the rest of the curriculum. By devoting lessons to the visits beforehand and after they have taken place, pupils can link the experience gained during the visits to subject matter that they have learned at school. This enables them to store the experience in their long-term memory (Knapp, 2000; Kolb, 1984 in Post & Walma van der Molen, 2014). Teachers' behaviour during the visits is often passive and limited to the logistical aspect of the visit (Finson & Enochs, 1987; Jarvis & Pell, 2004; Post & Walma van der Molen, 2014). Teachers' active involvement before, during and after the visit is essential to ensure that pupils can actually link their experiences on site to the subject matter they learn at school. Finally, it is important that a balanced selection of traditional/stereotypical companies and modern, technically-oriented companies is made: in this way company visits are more in line with the various technical interests and talents of children

² It concerns a 'randomised experiment', i.e. both groups of pupils were selected randomly.

³ The study was performed using a pre-test (baseline measurement). No control group was used.

and thus promote a more positive picture of technology and technological professions (Post & Walma van der Molen, 2014).

One form of company visits in BRIDGE are ‘flash visits’, during which children from primary education and VMBO (pre-vocational secondary education) visit companies for a brief but productive introduction to a number of jobs. JINC, the organiser of the flash visits, has research carried out into the effectiveness of its projects.⁴ According to JINC’s research, participating several times (at least twice) results in a more advanced idea of the profession⁵ among pupils than if they take part just once.⁶ According to this study, flash visits help young people to develop a picture of the labour market and their options therein. In addition, it is important that pupils are well prepared and that the school discusses the visit with pupils after it has taken place. Lastly, the flash visit must include an active participation component in order to achieve an optimal result. Therefore, pupils must be set to work in a practical fashion. With regard to the effects, this study concentrates on developing a picture of the profession, i.e. on career guidance (LOB) skills, and not on the effects on the educational choices made (for example, whether company visits lead pupils to more often choose for a technical specialisation).

Technology classes and workshops in primary education

To increase the possibility of children specialising in the field of exact sciences later in life, it is important to introduce them to science and technology at an early age.⁷ A number of years ago, the *Nationaal Actieplan VTB 2004-2010* (National Action Plan for Broadening Technology in Primary Education) was launched to boost attention for exact sciences in primary education. The core of this plan was to provide a sustainable and structural implementation of technology in primary education on a national level (Walma van der Molen, 2008). By integrating technology in daily education, one hopes to achieve that pupils develop a more positive attitude towards the sector. The first pilot revealed that as their exposure to technology increased, pupils indeed developed a more positive attitude. At schools where pupils indicated in a questionnaire that they were engaging more in technology, the attitudes of pupils towards technology were also more positive. In the pilot, an attitude monitor (using questionnaires) developed by Walma van der Molen (2007) was used.

The main conclusion is that the extent to which technology is actually implemented in lessons is vital for pupils to develop a more varied and positive attitude towards technology (Walma van der Molen, 2008). It is important to not only devote attention to the traditional aspects of technology, such as handling machinery. Pupils should also view technology as coming up with solutions and new ideas. Teachers could play a major role in this regard, if they also have a more positive attitude towards technology (Walma van der Molen, 2007).

The National Technology Pact 2020 was drafted in May 2013. One of the aims of the Technology Pact is to ensure that more pupils opt for a technical specialisation and that more pupils and students with a technical qualification actually start working in the technical sector. As secondary education pupils have to decide whether or not to choose a technical profile relatively soon, it is too late to increase their enthusiasm for technology at that stage. This is why introducing technology in primary education is so important. Therefore, the National Technology Pact implies that all primary schools will have to offer science and technology structurally as of 2020.

⁴ A summary of the study can be found on the [JINC website](#). In the study, a survey and discussions were carried out involving pupils in years 2 and 4 of VMBO (during which important choices are made). We only have access to the summary of the study, which means that we were not able to analyse the exact details of the survey’s structure and its outcomes.

⁵ This refers to the extent to which pupils possess an advanced idea of all of the different professions that exist; which education is necessary to pursue a particular profession; which professions are a good match for the pupil’s strengths; and which professions are a good fit for what the pupil enjoys.

⁶ According to expectations, this outcome is not disrupted because pupils cannot determine individually how often they will participate in a flash visit. However, it is possible that schools that participate in flash visits more often, in general take part in more LOB (career guidance) activities, which could influence the results.

⁷ [Techniektalent.nu: Waarom wetenschap- en techniekonderwijs?](#)

Implementation of technology in the curriculum and introduction to professions and sectors by teachers

As already stressed by Walma van der Molen (2007), the teacher plays a major role in promoting science and technology in primary education. After all, the teacher determines the form that education takes in the classroom. Since few primary school teachers became familiar with science and technology in their preliminary training, it is important to take into account the potential insecurity among teachers (van Cuijck, van Keulen & Jochems, 2009). Research by van Cuijck, van Keulen and Jochems (2009) revealed that it is not always clear to the teacher what does and does not constitute technology in the classroom and what exactly is understood by 'science and technology'. Activities in lessons are therefore regularly based on misconceptions, which has the consequence that the range of lessons on offer in the field of technology does not correspond to what the government and VTB mean by technical education.

Van Eijck and van den Berg (2011) showed that teachers sometimes find it difficult to implement science and technology in lessons. This relates, for example, to a lack of time to prepare the lessons (practically and in terms of the subject-matter). Individuals indicated that there is insufficient knowledge about the subject-matter and teaching methodologies, a lack of good ideas for lessons or of teaching methods consistent with the school's vision. For the teachers, at times the difference between technology and physics is far from clear, and biology is often considered a separate subject. The study by Uum and Gravemeijer (2012) reveals that almost half of future teachers think that their knowledge of the subject-matter and technical skills are not yet adequate enough to be able to teach science and technology lessons. Hence, in order to provide successful science and technology lessons in primary education, it is important that teachers receive additional training in this subject and that teacher education devotes sufficient attention to exact sciences, science and technology.

Information sessions/events

During information sessions and events, pupils receive a great deal of information to process in one go. It seems impossible to retain all of this information and be able to adopt an objective view, especially if a strong preference already exists. According to Dijksterhuis (2007), attending an information session or event is still very useful. He suggests that, while it may not be possible to estimate the value of and effectively select all information, unconsciously a lot of information is absorbed. Eventually, this can be of use during the decision-making process. Impressions may also confirm or disprove the idea previously held by a pupil with regard to the specialisation. It is good to mutually discuss feedback at school about the information session and the impressions obtained (Jonker, 2010). This type of research is based on theoretical insights and not on 'hard' empirical measurements, in which choices are compared between people who did or did not attend information days.

Civil service internships

Most research into the effects of civil service internships focuses on citizenship skills, because this is considered to be the most important objective (e.g. the evaluation study by Bekkers & Karr, 2008). However, sometimes attention is also devoted to a possible link with dropping out of school and truancy. An overview study of truancy by De Baat (2010) refers to a foreign study in which civil service internships have positive effects on school attendance and performance. This connection was not included in figure 2.1 and thus not anticipated directly as an objective.

Little is to be found about the effects on educational choices. It is plausible that potential effects in this area 'persist' slightly longer than those related to company visits, because the duration is (somewhat) longer and the practical component stronger. However, the organisations in which the internships are performed, focus more on social services. Consequently, the healthcare sector is quite prominent, but the port-related and technology sector less so.

Study try outs

Rather a lot has been written about study try outs as a career guidance activity, though various studies focus primarily on the transition from secondary education to university, and to a lesser degree on the transition from primary to secondary education and from secondary education to secondary vocational

education. According to a study for the Education Council (Leest et al., 2013), it is difficult to establish the exact effects of a certain career guidance activity, because it is often part of a greater whole. A study by Hijzen and Koerhuis (2010) examined how pupils choose their specialisation. Study try outs for fourth year pupils in pre-vocational secondary education at ROC Mondriaan were also included in the study. ROC Mondriaan organised the reception, information provision and activities for the pupils. Although 58 pupils were surveyed, just three of them participated in the study try outs and thus the outcomes were not representative. However, the mentors and counsellors indicated that they viewed a study try out as the most useful activity to guide students in their choices. They stated that it offers the most comprehensive insight into the possible further specialisation and professional opportunities. According to Leest et al. (2013), study try outs are highly valued because they provide a more realistic picture of the specialisations compared with an information session.

Digital talent portfolio

Many teachers and counsellors consider the use of a portfolio as an important tool for career guidance for students (Mittendorff, 2008).⁸ Among other things, it contributes to the gathering of evidence about their performance and development and encourages own responsibility (and self-management) among students. In addition, it can help students to reflect on their future ambitions and support them when formulating learning objectives to achieve these ambitions. Digital portfolios or e-portfolios could also add extra dimensions. Examples include online files, images, hyperlinks and blogs (Sultana, 2013). In BRIDGE, the digital talent portfolio is described as a tool for conducting career development meetings between teachers, pupils and parents. The use of portfolios can be extremely effective, on the condition that pupils are given clear guidelines and support with regard to their use (Mittendorff, 2008). Portfolios must be designed in such a way that they are relevant, unambiguous and user-friendly, for teachers and students alike.

Elshout-Mohr and Daalen-Kapteijns (2003) cite several important measures for creating circumstances in which the student finds a portfolio to be useful. It is important that all parties involved (students, mentors and teachers) acknowledge that the use of portfolios not only serves as a reflection method, but also offers opportunities for coaching the pupil. Mittendorff et al. (2008) also stress the importance of dialogue between students and their supervisors with regard to the portfolio. Furthermore, students who keep a development portfolio should be rewarded for doing so. It is frustrating for students who invest a great deal of energy in their portfolio, to find out that nothing is done with the information afterwards. Unfortunately, this occurs regularly in practice, often because many teachers (still) do not know how to fulfil their new coaching role and what purpose a development portfolio could serve in this role. Therefore, it is important that teachers and mentors are well informed about what is expected from them, for the portfolio to be used successfully (Elshout-Mohr & Daalen-Kapteijns, 2003).

Reflection is an important component of the portfolio. Meijers, Kuijpers and Bakker (2006)⁹ emphasise the fact that, with regard to the career guidance (LOB) programme, reflection is an important skill. It contributes to the degree of self-management and enables pupils to identify their own possibilities, opportunities and wishes. Therefore, reflection contributes to the development of one's work identity. This concerns the ability to answer two questions: 'What does work mean for and in my life?' and 'What do I want to mean to others through my work?' Research reveals that work identity has a substantial effect on a pupil's motivation to learn, among other things.

Nonetheless, Mittendorff (2008) and Luken (2009) underline the potential risks of (too much) reflection. Many students consider reflective reports to be a pointless and mandatory process. Meijers et al. (2006) also acknowledge that many pupils display resistance to reflection. This is often because teachers hardly

⁸ Study based on three cases in which students, teachers and career counsellors were surveyed using individual, semi-structured interviews.

⁹ Study based on group interviews with pupils, teachers and career counsellors (the preliminary study) and on questionnaires involving pupils and teachers (the main study).

take any time to properly review and discuss students' reflections (Mittendorff, 2008). Meijers et al. (2006) write that active participation in, or (joint) control of, the individual learning process is essential to overcome this resistance. Luken (2009) doubts whether students are able to reflect at all. The brain and cognitive ability of young people, especially boys, would not be sufficiently developed to be able to effectively reflect. However, reflective and self-managing abilities could be developed through practice (Meijers, Kuijpers & Winters, 2010). Guidance from teachers and parents is vital in this regard.

Moreover, there is uncertainty about whether reflection does actually produce the desired results. The study by Kuijpers and Meijers (2008) shows that students who engage in a lot of reflection are more likely to consider dropping out of school. They provide three possible explanations for this. The first is that individuals only reflect on their education career, if they feel unsure about the choices that they have made up to that point. A second possibility is that the reflection process itself evokes uncertainty. When individuals start to critically think about their education career, the choices they have made are questioned, (temporarily) increasing the feeling of uncertainty. A third possible explanation is that students view reflection as being negative. As described above, students often adopt a negative attitude towards the (frequent) demand for reflection.

A digital talent portfolio is viewed as an important tool for supporting students in their career planning by those involved. Reflection is an important part of the talent portfolio. However, the literature points out various pitfalls. The conclusion with regard to the latter, is that one must guard against excessive reflection and that reflection must also be rewarded, in the sense that attention should be devoted to its outcomes.

Mentoring programme

The mentoring programme is a project in which students from Rotterdam University of Applied Sciences coach children and young people in South Rotterdam. The mentors can support them with homework, choosing a specialisation, discovering their talents and their general wellbeing. Student mentoring differs from adult mentoring and peer mentoring (Crul, 2003). The students are not yet adults, but neither are they peers of the pupils. The age difference with the mentee (five to ten years) means that they are closer to the mentee than a teacher or parent (Crul, 2003). An evaluation of the mentoring programme exists, but has not been made public.¹⁰ Crul (2003)¹¹ conducted a study into another student mentoring project¹² among immigrant youths. The project is less focused on career guidance, and more on pupils' general development. Crul (2003) describes a number of positive effects of a student mentor-mentee relationship:

- Interaction between the mentor and the mentee boosts the learning process and motivation to learn. The personal relation between the mentor and mentee and the informal atmosphere during meetings are the main ingredients for the mentoring's success.
- The possibility of individual coaching and sense of security: often, traditional learning does not offer children with little self-confidence the security to make mistakes or to ask for help. Asking questions or making mistakes is not as scary with a mentor.
- The small age difference between the mentor and mentee: the mentor's age falls between that of the teacher and the pupil. Moreover, the student mentor does not represent any interest, not of the school nor the family. Therefore, there is no power relationship in which the student demands something of the pupil. This is particularly important during puberty.

¹⁰ Monitoring and evaluation of this programme is performed by Panteia and commissioned by Stichting Verre Bergen, which is one of the programme's funders.

¹¹ Study based on qualitative research, surveys and consultation of evaluation reports.

¹² In this project, participants with the same ethnic background were paired. Therefore, Turkish students were paired with Turkish pupils; Moroccan students were paired with Moroccan pupils.

- The mentor is often an 'experience expert'. The student has often gone through the same issues and problems and sought solutions to them. This experience means that the student mentor can offer advice, mediation and support.
- The mentor is a role model. Children from disadvantaged environments often have few examples of successful young people in their circle. Higher education is rather remote and seems almost unattainable to them. Someone from the same disadvantaged situation who is successful, demonstrates that it is possible to go far.
- The mentor appeals to the pupil's capacities. The mentor offers encouragement and provides direction for the pupil's talents, but the pupil must ultimately do it him or herself. The mentor does not assume responsibility on behalf of the pupil, but points out the pupil's responsibility to perform.

To achieve positive effects from student mentoring, Crul and Vaessen (2001) believe that a number of conditions for success must be fulfilled:

1. The programme should reflect the school's culture.
2. The management, team, pupils and parents should support the programme.
3. There should be an effective pupil welfare system in operation.
4. There should be sound preparation and organisation.
5. The mentors' recruitment and selection process should be organised with care.
6. The mentor and mentee should be paired with care.
7. The mentors should be systematically trained and should receive intermediate supervision and guidance.
8. The programme should be structured and consistent, and be in line with the curriculum or orientation on the outside world.
9. Progress should be measured and assessed on a regular basis.
10. Sufficient time and money should be available.
11. A coaching institution should provide support and professionalisation.

There are other researchers, besides Crul, who have examined the effect of mentoring. Hanhart (2011) also discovered positive effects from a similar mentoring project; the examined effects were particularly significant in primary education. Hanhart studied the effects of the project according to the perception of the pupils and the teachers.¹³ According to the teachers, primary school pupils who participate in the mentoring project improve their general learning performance, language and maths. Moreover, the teachers see pupils progress in terms of their self-confidence and satisfaction. According to the pupils, they improve in the area of language and are happier about themselves. Pupils also believe that they are better at cooperating at the end of the mentoring period.

However, Gruppen, Grootenk and Hanssen (2010) stress that mentoring is often used as part of a wider range of interventions (the same applies to BRIDGE). This means that it is difficult to distinguish the direct effects of mentoring from the effects produced by other interventions. Nonetheless, it is possible to use qualitative research to measure the effects of participants' perceptions that are directly related to a specific intervention. Still, identifying perceptions is a less robust form of measuring outcomes.

The above-mentioned studies focus more on the (positive) influence of educational success. The overview study about school dropouts and truancy conducted by De Baat (2010) confirms the positive effects of mentorship in this area. However, little is known about the influence on career orientation skills and, more specifically, the outcomes of the decision-making process.

¹³ Study using questionnaires that were completed on two occasions: at the start of the project and towards the end.

Job interview training

During job interview trainings, students learn how to make a good impression on a potential employer. Many young people with a socio-economic disadvantage lack knowledge and skills involved in applying for a job. An organisation such as JINC, in association with the business community, organises interview training for this target group. Pupils practice writing an application letter and a CV and can gain practical experience with the interview itself through role play. Pupils are positive about the training, because of its similarity to a real job interview. It is especially important for them that the training is given by real employers who are smartly dressed. Research conducted by the provider JINC¹⁴ into the effectiveness of this project also shows that pupils have more self-confidence after receiving this training. Moreover, their knowledge of what the process entails increases (*What questions can I expect? What questions may I ask?*) and the pupils are more knowledgeable about the attitude that they should adopt during an interview. The pupils apply their new skills in 'real' interviews for an internship or part-time job. The preference is for the training to be given in a professional setting instead of at school. According to this study, job interview training is considered to be extremely useful.

However, the study did not examine the extent to which such improved skills actually led to greater job opportunities. The fact that one does not automatically lead to the other, becomes apparent from e.g. the application of such an intervention among job seekers in the context of ESF (see Struijven et al., 2013). A recent experimental study among job seekers did not find any positive net effects of interview training either (De Koning et al., 2016). Yet this study relates to a different target group than in BRIDGE, namely job seekers.

Career Start Guarantees

The BRIDGE Career Start Guarantee (CSG) involves young people being guaranteed a first job with an employer after successfully completing a specific secondary vocational education specialisation related to healthcare, port or technology.¹⁵ Only a few similar programmes exist into which extensive research has been conducted, but there are some examples of career guarantees internationally. These mainly concern universities and the highly skilled. Thomas College in the US has a *Guaranteed Job Program*. This means that Thomas College compensates students if they did not find a job within six months after they graduate.¹⁶ The Capitol Technology University in the US has a similar programme, *The Capitol Job Guarantee*. This university guarantees that graduates will find a job in the technical sector within 90 days.¹⁷ If this does not happen, the university will reimburse part of the tuition fees. It should be stressed that these two foreign programmes differ considerably from the career start guarantees within BRIDGE. Firstly, the students differ in terms of the level of education. Moreover, the programme originates from the school rather than employers. This means that the students that participate in the Guaranteed Job Program or The Capitol Job Guarantee have no guarantee of an initial job with a certain employer when they enrol in a study. Therefore, these initiatives can hardly be regarded as a comparable intervention elsewhere.

Employee skills training

Until now, we have found little literature that focuses on the effectiveness of training in employee skills among pupils with the aim of their transition to the labour market. In the literature, more attention is given to the role of internships. For most specialisations, internships are already part of the course itself.

¹⁴ [JINC \(2013\). Samenvatting van het onderzoek naar de effectiviteit van het project Sollicitatietraining van JINC](#). In the study the situation of participants (from Amsterdam) is measured before and after the training. The link contains a summary of the study. We do not have the full report at our disposal, so our information about the method used is limited.

¹⁵ Additional conditions sometimes apply. We will return to this later on.

¹⁶ [Guaranteed Job Program by Thomas College](#)

¹⁷ [The Capitol Job Commitment](#)

Organisation of support classes

We did not come across any effectiveness studies on this topic for the Netherlands.

Support at home by neighbourhood teams

More evaluation studies are available about neighbourhood teams. However, overviews thereof (Van Arum & Lub, 2015; Kok & Briels, 2014) reveal that most studies focus primarily on the organisational aspects, such as the embedding and possible substitution of other forms of services.¹⁸ Insofar as there is any form of impact assessment, it usually concerns the familiarity and satisfaction among clients (e.g. a study in Amersfoort: Rekenkamer Amersfoort/Panteia, 2017). Neighbourhood teams have broad objectives. Specific studies into the effects of e.g. educational choices or dropping out of school – which are important to our study – do not appear in the (overview) studies found.

Parents' involvement in the LOB (career guidance) programme

The involvement of parents is important in many respects. Parents contribute, among other things, to the performance of their children at school and prevention of dropping out of school. This applies to all parents, regardless of education level, socio-economic or ethnic background (Desforges & Abouchaar, 2013 in: Lusse, Kuijpers & Strijk, 2016). The review study by Bakker et al. (2013) reveals that parents' involvement contributes to pupils' learning performance, their motivation, wellbeing, self-image and self-esteem. The involvement that parents demonstrate at home has the greatest effect. The effects of involvement in school and contact with the teacher are not as significant. Kuijpers and Strijk (2016) also stress the importance of the involvement that parents demonstrate at home on their children's success at school. Demonstrating involvement at home comprises three major components:

- Pedagogic: parents are proud and have confidence in their child, and encourage him or her;
- Learning support: parents help to expand their child's horizon and structure school activities;
- Career development support: parents have high (realistic) expectations of their child and serve as a sounding board for their child to be able to discuss interests, future plans and career choices. In this way, parents support their child's career competences.

Nevertheless, a number of researchers have pointed out negative effects that could arise if parents interfere too much. Excessive involvement, such as checking homework too strictly or exerting too much pressure on a child to perform, could affect the pupil's autonomy and thus have a negative impact on his or her development (Bakker et al., 2013). Teachers could help increase parents' involvement. Bakker et al. (2013) describe several conditions for effectively fulfilling the role of the teacher in this regard. It is important that teachers adopt a positive attitude and are not too quick to judge parents' involvement. Prejudices against the involvement of certain groups of parents and group stereotyping hinder a positive relationship between teachers and parents. Furthermore, teachers should communicate openly and transparently with parents and be clear about the expectations they have with regard to the parents' involvement. Parents' involvement increases if teachers have frequent contact with them about their child's progress. Lusse (2013) describes ten factors for success for improving contact between parents and schools in metropolitan pre-vocational secondary schools.¹⁹ These factors are listed in the table on the following page.

¹⁸ For Rotterdam, this substitution leads to a positive social cost-benefit analysis (Spit et al., 2016).

¹⁹ Dissertation based on three research rounds; quantitative and qualitative analyses were used (see Lusse, 2013, p 67).

Table 2.3 Ten factors for success in organising contact between parents and school in the metropolitan pre-vocational secondary school (VMBO)

| Situation in metropolitan VMBO | How could the school act? | What initiates this? | What does the school achieve as a result? |
|--|--|---|---|
| 1. The school ensures that parents feel welcome | | | |
| If parents perceive a significant barrier with regard to school, | the latter extends a clear and timely invitation and adopts a friendly attitude and tone towards parents | so that parents feel welcome at the school, | which means parents will visit the school more easily when invited for regular discussions and parents' evenings. |
| 2. The school becomes acquainted with all parents early on | | | |
| At schools where parents and mentors only meet in person when there are problems, | the school organises individual introductory meetings (at home or at school) between the mentor and each parent at the beginning of the school year | so that both parent and mentor get to know each other in a positive way, | which means that the mentor and parent are more likely to contact each other if something occurs during the school year. |
| 3. The school has contact with the parent and, if necessary, another supervisor of each child | | | |
| If parents find it difficult to communicate with the school and/or support their child at home in his or her school career | the school, along with the parents, scans the family's network to identify an adult that could support the parent in the child's guidance | so that each child has an adult in his/her environment to provide support, | which means children in all families are supported in their school career. |
| 4. By default, the school invites the pupil for regular, individual contact with the parents | | | |
| If parents and pupils feel unsure about the position of the pupil with regard to contact between parents and the school, | the school invites all pupils for regular, individual contact between the school and parents by default | so that the pupil is key in the discussions about his or her performance and school career, | which gives the pupil greater insight into contact between the school and parents, avoids any misunderstanding about what is discussed and the pupil is no exception to classmates. |
| 5. The school ensures interaction, dialogue and the exchange of information with parents | | | |
| If parents experience one-way communication from the school, | the school makes sure that all parties have a chance to speak during contact with parents and that the child's development and support at home as well as at school is discussed | so that there is reciprocity in the relationship between parents and the school, | resulting in a better basis for cooperation, because parents know what is happening at school and the latter knows what is going on at home. |
| 6. The school promotes dialogue between the parent and the child at home | | | |
| If parents are trying to find out how to support their child at home in his or her school career, | the school provides parents with concrete tools and comprehensible information to shape the discussion about school at home | so that parents feel better equipped to hold a discussion with their child about school matters and school career choices, | which means the child feels he or she is supported more effectively in his/her school career. |
| 7. The school (also) devotes attention to the positive | | | |
| If parents feel that the school places them in an overly reprimanding and controlling role in relation to their children, | the school also devotes attention to the pupil's positive achievements and potential when in contact with parents, and communicates bad news in doses | so that the parent's pride towards the child is boosted, parents can (once again) encourage the child, and parents do not associate school exclusively with bad news, | which means it is more appealing for the children to involve their parents in their school career and put parents and the school in contact, and parents feel that the school is on their side. |

| Situation in metropolitan VMBO | How could the school act? | What initiates this? | What does the school achieve as a result? |
|--|--|---|---|
| 8. The school takes the pupil's school career development as the guideline for contact with parents | | | |
| If parents and pupils feel that contact with the school predominantly focuses on the pupil's weaknesses or wrongdoings, | the school invites all parents and pupils for regular progress meetings about the pupil's study progress, ambitions, talents and school career choices | so that the pupil's potential forms the starting point for the discussion and not the deficiency, | which means that the pupil and parent develop a realistic future prospect in a specialisation that fits the pupil's talents and ambitions. |
| 9. The school initiates a specific plan based on the pupil's points of improvement in which the contribution of the pupil, parent and school are clear | | | |
| If the support the child gets to improve certain points (a difficult subject, truancy, behaviour or career choice) from parents and from school are not sufficiently aligned | the school clarifies the contribution by the pupil, parent and school in the approach related to the point concerned and agrees how the school and the parents can keep each other informed about the progress | so that the parents and the school work together in supporting the pupil in the approach related to the point of improvement, | resulting in the pupil feeling that those at school and at home adopt a consistent approach and that there is an optimal outcome for the pupil with regard to the point of improvement concerned. |
| 10. The school discusses disappointments in the school career with the parent and the child | | | |
| If parents are disappointed with the results and options in their child's school career, | the school discusses the disappointment and, where possible, searches for an approach to improve the result and, if necessary, for alternative options | so that parents can feel proud (once more) of their child and see (new) future prospects, | which means parents are better equipped to contribute (again) to their child's self-confidence. |

Source: Lusse (2013)

Currently, experiments are being conducted at a number of pre-vocational secondary (VMBO) schools in which parents' involvement in the LOB career guidance programme is key as part of the national *CITY-deal programme*. The (interim) report is expected in 2018.

In the context of the BRIDGE objectives, it is important to mention that previous research revealed that parents have an effect on their children's educational choices. This certainly also applies to the parents of immigrant VMBO (pre-vocational secondary education) pupils (De Koning, Gelderblom & Gravesteyn, 2010). According to Lusse (2013), pupils mainly talk to their parents about their educational choices and want their parents to be involved. Improving the contact with parents regarding these choices also offers the opportunity to underline the advantages of technology, healthcare and port-related sectors to parents.

Career guidance conversation training and career guidance meetings involving pupil – teacher -parents

With regard to various interventions mentioned before, it is important that the role of the teacher in the career guidance process and more specifically, in career guidance conversations, is addressed. This means that the teacher plays a crucial role in relation to the parents (see parents' involvement in LOB) and in effectively handling and using the (digital) portfolio during the career guidance meetings.

Conclusion

In the final section of this part, first and foremost we provide some more general comments in relation to the above sections about the individual interventions. We subsequently conclude this final section with a summary in the form of a table.

The first general comment is that the above measures have been discussed separately. However, in reality they (partly) occur simultaneously, along with other BRIDGE measures. If the measures interact, they may supplement or reinforce each other. A company visit in itself may not be particularly useful, but a company visit combined with technology lessons could make a difference. Finson and Enochs (1987) and Post and Walma van der Molen (2014) stress how important it is for a company visit to be

linked to the curriculum. By including science and technology as standard in the curriculum, company visits could also have a greater effect on pupils. Company visits could also provide input for the digital talent portfolio and conducting LOB discussions.

Teachers' involvement and professional knowledge is vital for the measures to succeed. If the teacher has little understanding of the matter or is very passive in the field of science and technology, not much will come of lessons or company visits. One of the BRIDGE measures concerns support in implementing technology in the curriculum. Teachers are trained in the field of science and technology and in career orientation. Their involvement in career orientation is also crucial for the success of the digital talent portfolio. Teachers, as well as parents and mentors, could support pupils in actively reflecting on and considering their future.

The second comment is that, insofar as effects were established in research, they are often based on more qualitative studies and perceptions of those involved via interviews and surveys. 'Harder' outcome measurements, which use e.g. a control group consisting of non-participants, are far less common. Moreover, the research frequently focuses on more direct, short-term effects and not on the long-term effects of interventions on, for example, educational choices and entry to the labour market.

With these observations, we provide a summary containing the outcomes per intervention discussed above in table 2.4.

Table 2.4 Summary/overview of measures

| Measure | Effects type of intervention elsewhere | Important preconditions |
|---|---|---|
| <i>Company visit/introduction to the port</i> | In the short term, a more positive attitude towards the sector and/or clearer picture of the profession (although not all studies confirm this). Long-term effects uncertain. | Good preparation, teachers' involvement, link to the curriculum, practical experience ('participation'). |
| <i>Technology in primary education</i> | More positive attitude towards technology. | Not only devoting attention to the traditional aspects of technology; teachers must adopt a positive attitude and possess adequate knowledge. |
| <i>Implementation of technology in the curriculum and introduction to professions and sectors by teachers</i> | Research confirms serious obstacles among teachers related to knowledge of technology and the exact sciences and thus the need for such an intervention. | |
| <i>Events introducing preferred professions</i> | An abundance of information can be difficult to process, but unconsciously provides guidance when it comes to decision-making. However, this concerns 'conceptual' literature. There appears to be little empirical research with 'hard' measurements of the impact on decision-making processes. | Preparation, embedding and discussions after the event are important. |
| <i>Civil service internships</i> | A foreign study provides indications of positive effects on pupils dropping out of school. Little is to be found about the effects on educational choices. | |
| <i>Study try outs</i> | Judged, using the perceptions of those involved, to be a suitable tool for offering a more realistic picture of the next specialisation. | Is often part of a greater whole of LOB activities and thus also relies on being embedded therein. |
| <i>Digital talent portfolio</i> | Those involved believe it helps to guide students in their career planning. Reflection is part of the talent portfolio. However, the literature points out various pitfalls (see preconditions). | Importance of dialogue between the supervisor and pupil; one should guard against excessive reflection; reflection should be rewarded. |

| Measure | Effects type of intervention elsewhere | Important preconditions |
|--|---|--|
| <i>Job interview training</i> | According to the summary of the study carried out by the provider, this leads to an increase in self-confidence, greater substantive and practical knowledge. No positive effect on entry opportunities to the labour market is found in a study for other target groups. | The 'authenticity' of the training: pupils think that it is important that the training is given by a real employer who is also smartly dressed. The preference is for the training to be given in a professional setting instead of at school. A follow-up training session or repetition could contribute to the measure having a successful effect. |
| <i>Employee skills training</i> | Not known (the literature focuses more on internships as a resource for acquiring employee skills). | |
| <i>Support classes</i> | Not known | Not known |
| <i>Neighbourhood teams</i> | Existing research does not devote any specific attention to the effects on pupils dropping out of school or educational choices. | No known specific preconditions linked to the objective of pupils dropping out of school and educational choices. |
| <i>Mentoring programme</i> | Pupils are more motivated, more self-confident and acquire a role model. Limits the number of pupils dropping out of school. Less research into the effects on educational choices. | Careful selection and pairing of mentors and pupils; training and supervision of mentors; link to the school curriculum and culture; evaluation; structured programme. |
| <i>Parents' involvement in the LOB career guidance programme</i> | Contributes to pupils' learning performance, motivation, wellbeing, self-image and self-esteem. | The involvement should not be excessive, this negatively influences the pupil's autonomy; teachers should work together with parents in a constructive manner (avoid any prejudices, group stereotyping, communicate effectively, be clear about expectations). |
| <i>Career Start Guarantees</i> | Not known | Not known |
| <i>Career guidance conversation training and career development meetings involving the pupil – teacher – parents</i> | No direct outcome measurements, but the crucial role of the teacher recurs in various other interventions. | |

2.4 APPLICATION OF THE INTERVENTIONS

Since some of the interventions already existed before BRIDGE, experience with them has been built up and we can discuss their content in more detail. Below, we provide a more detailed description of a number of the existing interventions.

Introduction to the port

The Educational Information Centre (EIC) of the Port of Rotterdam is the provider of this intervention. The EIC is located in Rozenburg, the centre of the Rotterdam Port Region. The EIC team consists of 6 employees and 55 volunteer guides, mainly retired port professionals. There is also support from around 55 companies that cooperate in visits and/or provide guest lessons.

The EIC's aim is to introduce young people to the port, the industry and the many possibilities to work there. It provides an educationally differentiated port programme for primary, secondary and vocational secondary schools, higher professional education and university. The port programme includes guest lessons, learning material, a visit to the port exhibition, practical activities in the chemistry- and technolab and company visits. EIC acts as the service desk between schools and businesses (focused on the port and industry). It welcomes 23,000 pupils every year (in and outside of Rotterdam).

BRIDGE is connected to three ongoing programmes aimed at different target groups, for primary school children (Port Rangers), the first (Havenlink) and the second (Port Discovery) stage of secondary school.

Port Rangers

In 2013, the municipality of Rotterdam (alderman Hugo de Jonge), DeltaLinqs and the Rotterdam Port Authority agreed that primary and secondary school pupils in Rotterdam should have visited the port at least once during their primary and secondary education. Fifty percent of the funding is covered by the municipality²⁰ and the remaining fifty percent by Deltalinqs and the Rotterdam Port Authority.

EIC is accountable for the project in substantive and financial terms to the municipality of Rotterdam, Deltalinqs and the Rotterdam Port Authority. It is not accountable to the National Urgency Programme South Rotterdam (NPRZ), because there is no formal relationship between EIC and NPRZ with regard to Port Rangers. Considering the importance of NPRZ, informal reporting and cooperation has taken place since 2014.

With regard to the implementation of Port Rangers, EIC is responsible for project management and coordination. Pupils are prepared prior to the visits by means of educational materials, which offers a choice between:

1. 'Steurocht door de haven' (implemented by EIC). These study materials offer pupils a journey of discovery through the port. Pupils tackle the following questions: What does the port look like? What happens in the port? Which products are transported and processed? What is the impact on nature and the environment? Which jobs and professions are there in the port? The focus is on world orientation.
2. 'HavenTaaltrip' (implemented by JINC). These materials focus on language and learning words. The pupils first practice the words in school, then 'are confronted by the words in a real-life situation' during a visit to EIC, after which a quiz is organised at school to examine whether they have actually remembered the words.

Schools can choose from the two packages described above, selecting the one that is best suited to their curriculum. According to a contact person from EIC, the fact schools can choose is highly appreciated. The study material provided in preparation for the excursion is being used ever more effectively by schools; the idea that a visit to the port alone suffices no longer exists. Pupils are increasingly arriving at the location better prepared. However, the question is whether they can actually reproduce it later on. The contact person believes that repetition is essential for achieving results.

Pupils work on an evaluation assignment in relation to their visit to EIC. Schools submit the pupils' evaluation assignments to EIC and JINC. The six best ones are selected (three from the 'steurocht' visit and three from the 'taaltrip'). An annual celebratory event is organised for the schools and pupils who participated in Port Rangers during the year. This is a reward for the schools' efforts and is used as an additional showcase for the programme.

Havenlink

This programme focuses on pupils in the first stage of secondary school. There is a connection with LOB and geography. The study material serves as preparation for the profile/sector selected. Pupils travel to the EIC, visit the port exhibition and companies, and participate in the practical chemistry and technolab activities. Work is currently underway on an app, which will ask the pupils questions about the port exhibition. The results of the questionnaire will be sent to the pupil and his or her teacher by e-mail.

²⁰ Port Rangers is a Rotterdam-wide programme, but surrounding municipalities such as Capelle a/d IJssel also participate. These municipalities pay their contribution of 50 percent to the programme. In the future, the aim is to expand it to other municipalities in the region.

Port Discovery

This programme is aimed at pupils in the second stage of secondary education. The study material is linked to geography, economics, physics, chemistry, ANW (general science), technology and LOB (career guidance). The programme prepares pupils for their future specialisations and employment. A crucial element is the visit to EIC, possibly combined with a company visit.

McPort event and Process Engineering Week (*Week van de Procestechniek*)

The EIC is also involved in other events aimed at pupils of secondary schools, such as the McPort Event²¹ and Process Engineering Week.²² For these events, elements of Havenlink and Port Discovery are used, but these are customised accordingly.

Schools in South Rotterdam

Every year, the EIC communicates how many primary school children and which schools participate in Port Rangers in the NPRZ postcode area to the National Urgency Programme South Rotterdam (NPRZ). The results appear to be rather puzzling. Some primary schools do not participate every year because, for example, they have combined classes, or because they have to focus on the requirements of the education inspectorate. The teacher also plays a decisive role in practice; not all teachers are as willing to participate.

In addition, it has proved difficult to assemble many teachers from different schools at the same time to provide them with information about the programme. This was due to work pressure at school. Port Rangers employees also have to approach schools every year and maintain good contact with these afterwards. The fact that schools participate once, does not mean they will automatically participate in the following year.

Secondary schools in South Rotterdam do not display much enthusiasm for the programmes. Schools in South Rotterdam make little or no use of the available programmes. According to a contact person at the EIC, this is especially due to the low level of awareness of the programmes, competition from other activities and the costs. For example, organising a bus is a major obstacle for schools. Therefore, the EIC wants to use BRIDGE to involve schools in South Rotterdam more in the programmes. The EIC actively visits schools with the material it offers. Moreover, the schools do not need to pay for a bus and are exempt from the fee.²³ This lowers the threshold for participation in the EIC port programme.

Experience with the programmes

According to the contact person at the EIC, teachers award the Port Rangers programme a score of 8 out of 10. Secondary school teachers do not always appear to complete and submit the evaluations. The evaluations received indicate that overall, teachers are satisfied. The guides also provide evaluations. They find that most excursions run smoothly. Now and again, there is a difficult group of secondary school pupils, or pupils have not really been prepared at school for the visit. Recently, pupils have rated the EIC port exhibition via the app.

Each year, a report is sent to the municipality, which includes the teachers' evaluation. The reporting and accountability method is determined by the conditions in the municipal rules governing the subsidy.

The company visits are treasured and, according to the contact person, often are an important reason for participating in the programme. Usually, it is extremely difficult to gain access to these kinds of companies, due to e.g. safety regulations.

There are various providers of similar programmes in both similar and other sectors. The EIC contact person indicates that the management and mutual coordination could be improved in this regard.

²¹ See, for example: <http://www.platform-vmbombo-nwn.nl/evenement/mcport-event-2016/>

²² See, for example: <http://www.eic-mainport.nl/evenementen/week-van-de-procestechniek/>

²³ The following fees apply to other schools: €5.75 per pupil for half a day; €8.75 per pupil for a day.

Company visits

The company visits concern flash visits in primary education and the first stage of secondary education. JINC implements this intervention. JINC is a non-profit organisation that connects young people with the business community. The organisation operates in ten cities, in which similar types of interventions are applied. The flash visit is one of the interventions with which JINC has long-term experience. JINC employs a researcher (in Amsterdam) who studies the interventions, to gain insight into their results. This way, adjustments can be made when necessary. These studies were mentioned in section 2.2.

JINC is involved in Rotterdam as a whole; not just South Rotterdam. Currently, JINC does not operate in peripheral municipalities (such as Capelle).²⁴ The activities in Rotterdam are funded by the business community (60%), via funds (20%) and via the municipality (20%). The BRIDGE funds from a share of the funding by the municipality.

JINC has partners in the business community that are also part of the projects. For example, company employees act as interview trainers or run the flash visit on site. Companies may have different motives for participating/being a partner. Some companies consider it part of their social responsibility. Some are experiencing a (future) staff shortage thus hope to increase pupils' enthusiasm for their business. Other motives can also play a role. For instance, RET hopes that participation will reduce vandalism by allowing pupils to spend a day at the company.

The flash visit has been implemented in Rotterdam since 2011-2012. Small groups of young people (on average eight, with a maximum of ten) spend a few hours getting familiar with a company or institution and the work it performs. The target group consists of the final two years of primary education (group 7 and 8) and the first two years of pre-vocational secondary education. The aim is to organise two flash visits a year, so a total of eight flash visits over a period of four years. However, not all schools want, or are able, to fulfil this target. Yet, according to a contact person, the majority of schools do manage to participate twice a year.

The flash visits do not focus exclusively on the port, technology or healthcare. There is a deliberate focus on reaching this group of companies, because these are harder to access than, for example, a shop. A shop offers the advantage that there are off-peak hours, which are ideal for a flash visit. Part of the flash visit consists of practical activities. In some sectors, this forms a challenge: for example in the healthcare sector, where one has to handle patients, or in the technology sector, where safety regulations apply.

Pupils are prepared for the company visit in advance at school. Next, they spend half a day at a company. Afterwards, the pupils write a reflective report about the day. The teachers write an observation report. Companies are also approached to assess the group and asked which score they would give the school. All of these reports are sent to and processed by JINC. Schools and companies award each other marks and JINC ensures that both receive feedback. A common complaint from pupils is, for example, that the presentation at the company premises was too long, that difficult words were used or that the visit did not involve enough practical activities.

One example of continued development of the flash visit in the port concerns the collaboration with the Maritime Museum:²⁵

“In the project plan (in which interactive teaching programmes about technology, innovation and ship building are designed) pupils visiting the Maritime Museum first go to the high-tech, Offshore Experience exhibition, followed by a technical design workshop titled ‘offshore energy generation’ in the museum ship’s technical room. This is followed by a flash visit at a maritime firm in the port and manufacturing industry of Rotterdam. In association with the Maritime Museum, JINC will approach companies and will take care of the support and implementation with participating schools.”

²⁴ With the exception of a pilot running in Schiedam.

²⁵ <https://www.maritiemuseum.nl/uitbreiding-educatie-maritieme-stages>

Another example concerning technology is 'Technology Day' in group 7 of primary education (children aged 10-11 years). During this day, all kinds of technical professions are explored. Schools head to a location such as the Maassilo or RDM. They perform six practical assignments at the location.

Job interview training

JINC is the provider of the job interview training. The organisation has used this tool for a while and not exclusively in Rotterdam. Together with the flash visit, job interview training is one of JINC's core tools. It has been applied in Rotterdam since 2011-2012 and does not focus exclusively on South Rotterdam. According to the contact person, JINC has 100 percent coverage in South Rotterdam, and 80 percent in Rotterdam as a whole.

The intervention focuses on the second stage of VMBO (pre-vocational secondary education). Pupils generally participate once in this project, usually in the third class. The Dutch language teacher at the school often plays a coordinating role. The programme involves pupils having to write an application letter, to which they receive feedback from trainers from the businesses concerned. However, the emphasis in this programme is not on writing an letter, but rather on job interviews and social skills. Pupils practice using role play, in groups of 10 to 15 pupils. The training is not specifically aimed at port-related or technology sectors; the programme focusses on practical skills. This project is preferably combined with trying to find an internship or part-time job. This enables the pupils to immediately put what they have learned during the training into practice.

The trainers originate from the business community and their job often involves job applications. They could be e.g. HR managers, but people with all kinds of other positions participate too. The trainers receive information and a briefing from JINC about the intention and what is expected from them.

One of the bottlenecks encountered in the job interview training is that it is a time-consuming process for schools. Furthermore, its organisation is also a challenge for JINC. Every year, JINC visits all schools and companies to discuss the training programme. Finding enough trainers and teachers' ownership are also mentioned as limiting factors (in the intervention descriptions of WP6).

Mentoring programme

The essence of this programme is that students from Rotterdam University of Applied Sciences are allocated a pupil from a school to provide one-to-one support: help with homework, supporting their self-confidence and making a contribution to the LOB career guidance programme. The LOB element has been part of the intervention from the beginning, but its importance has increased over time. The student receives credits for participating in this programme. In total, it comprises approximately twenty hours (around five times 15 minutes a week for one semester). It is widely used in secondary education, as well as in a few primary schools. In 2013-2014, a 'cautious' start was made with the programme, after which it was expanded.

It is a search process to identify the students from the various specialisations that are the best fit for the programme and the school's pupils. It is important to examine which type of student is a match for the different target groups. For older VMBO (pre-vocational secondary education) pupils, certainly the ones with a basic (*VMBO basis*) or middle management (*VMBO kader*) level, experience has taught us that confident students and those who adopt a business-like approach achieve the best results. Currently, students from the HRM study programme play a role in finding and supporting a pupil with an internship as part of a pilot.

The link with the 'desired sectors' (healthcare, technology, port) and Career Start Guarantees concerns a growth process. The CSG's are abstract and difficult for students to comprehend. It demands a lot from a student to effectively assess who (s)he is dealing with and in how far the orientation of the pupil related to educational specialisations and employment is developed. The students' objective in practice is often to 'encourage the pupils to dream'. Above all, they do not want to disrupt any ambitions. However, there are plans to further develop the link with the promising sectors, by designing a game around the choice of profession. Technology students are also involved in the mentoring project. These

are students Engineering Applied Sciences who serve as mentors in the third year of technical VMBO (pre-vocational secondary education).

Implementation of the technology curriculum

Until now, this has mainly been applied in schools from BOOR²⁶, in South and North Rotterdam.²⁷ This programme concerns all groups, focusing on pupils from the age of 10-11 (*groep 6*) and older. Teachers are provided with didactic and teaching skills in the field of science and technology and career guidance. The training takes the form of learning groups led by a science and technology teacher trainer. The intention is that for the duration of BRIDGE, a mobile technology lab be developed that could visit primary schools in South Rotterdam.

Empowerment programme involving parents in Career Orientation and Guidance

The main objective of this intervention is to support a school team in developing and implementing an appropriate, sustainable and supported arrangement in order to involve parents in activities related to the career and talent orientation (*LOB*) programme. The following activities are used to achieve this:

- At each school, a working group will be supervised as they prepare a plan of action;
- Support during the plan's execution. Focus groups (mentors/parents/pupils) could be used to establish what was effective and what could be improved;
- The exchange of knowledge and experience with other schools in learning groups.

The intervention focuses on improving the quality of the *LOB* process in general and not specifically on enrolment in the technology, port-related and healthcare sectors. This could be a by-product, because e.g. talent and interest in technology is signalled more effectively. It should be acknowledged that parents play a crucial role in their children's choices.

This BRIDGE intervention is connected to the '*Leerling, ouders en school samen voor de loopbaan*' project ('pupil, parents and the school working together towards a career') launched in 2015 at two VMBO (pre-vocational secondary) schools and two MBO (secondary vocational education) studies in South Rotterdam.²⁸ The objective of this project is that the schools involved are able to improve the school career choices of pupils by increasing the involvement of parents in career guidance. This project is linked to a PhD research by Rotterdam University of Applied Sciences ('Parental involvement in *LOB*'), which – in addition to contributing to the development of theories about collaboration between the school and parents in the field of *LOB* – strives to develop interventions that VMBO (pre-vocational secondary education) schools can use to link the support that parents provide for their children at home to career development support at school.

Career Start Guarantees

Creation

The concept of the Career Start Guarantees (CSG) originated for the specialisations process operator and maintenance. There existed a considerable demand for people with these specialisations from companies in the port. Research revealed that (too) few pupils opted for these specialisations. One of the study's conclusions was that more specific agreements between schools and businesses should be made. The schools would supply a specified number of qualified students every year. The schools agreed to this requirement, under the condition that the business community (in this case Deltalinqs) would provide these students with a job guarantee. However, a job guarantee was too extensive for the business community. Hence, the idea of a career start guarantee emerged, which was made available for both operator and maintenance students.

²⁶ BOOR is the school board for public education in Rotterdam.

²⁷ It uses subsidies from the Science and Technology Expertise Centre Zuid Holland and resources from the BOSS programme for PABO (Teacher Education for Primary Schools).

²⁸ [First insights into the 'Pupil, parents and the school working together towards a career' project](#)

What did the Career Start Guarantee involve?

- Performance-related grant. The students received a certain amount of money for every year they successfully completed and another amount when obtaining their diploma.
- Internship placement. Every once in a while, a meeting was organised about the internship placements with the internship supervisors of the specific specialisations, to coordinate the number of students who would follow an internship and at which company.
- At least three job interviews. The business community that was connected within Deltalinqs undertook the commitment to facilitate graduates in their search for their first job. In a press release in 2012, Deltalinqs also cites the first appointment in the sector.²⁹ At the same time, it indicates that companies only undertake the commitment on the condition that no substantial changes occur with regard to economic circumstances.

Each student who enrolled in a process operator or maintenance specialisation was provided with the Career Start Guarantee. The students received a document stating the elements of the start guarantee, signed by the school and Deltalinqs. The CSGs were also handed over to students personally. According to someone involved, this was followed by a discussion that clearly explained that it did not mean that the students would be recruited automatically, but that they also needed to make an effort themselves. By extension, it was noted that the CSG could not be considered as an especially valuable document.

For Deltalinqs, the career start guarantees did not specifically focus on students from South Rotterdam, although later on an estimate was made of the share of available career start guarantees that would be allocated to students from South Rotterdam.³⁰

Due to substantial shifts in the relationship between supply and demand,³¹ a few years ago Deltalinqs decided to no longer distribute a document containing any specifics. However, certain elements still apply to pupils following the specialisations concerned. Although the performance-related grant was phased out, the guarantee of an internship placement still applies and – if desired – support is offered in finding a job. This is done, for example, by sending a CV to employers and by organising meet and greet events.³²

The career start guarantee concept developed with Deltalinqs served as the model for other employers and sectors. The actual content of the guarantee differs per employer and per school year. Most of these differences are explained to students in the fine print on the back of the employer cards, that are in the gold envelope they are handed during the *'Gaan voor een baan!'* event. The following table provides a brief overview of a few specific characteristics of the Career Start Guarantees at several employers.

²⁹ [Press release about Deltalinqs career start guarantee](#)

³⁰ The claim of 100 CSGs for young people from South Rotterdam was established as follows: in total, a necessary annual flow (operator and maintenance) of around 500 people was anticipated. The estimated share of young people from South Rotterdam within the Rijnmond region amounted to approximately one fifth. With regard to the companies, the South Rotterdam postcode area did not constitute a selection criterion.

³¹ Many more practical factors also played a role. The maintenance specialisations are difficult to delineate, because they are often specialisations that are only chosen at a later stage of the study. Another practical problem is that Deltalinqs only represents a portion of the demand, and thus in a situation where there are no longer any (serious) shortages, cannot assume full responsibility for placements.

³² As extra support, every autumn the Process college organises a meet-and-greet between businesses and graduate job-seekers: <http://www.procescollege.nl/ouders>.

Table 2.5 Overview of characteristics CSG at various employers

| Employer | Physical document available | Focuses exclusively on South Rotterdam | Nature of the support during the training | Nature of the guarantee/support for job placement | (Additional) conditions for job placement |
|------------|------------------------------------|--|--|---|--|
| Deltalinqs | No (previously yes) | No | - Guarantee of internship placement | - Support in finding a job (supply and demand database, sending CVs to employers, meet and greet) | |
| Food | No | No | - Support from the school and business community while following the specialisation | - Still needs to be established (there is no outflow as yet), but the market situation is definitely favourable for school leavers | |
| Defence | Yes (although this is hardly used) | Yes | - Support during the course; - Possible internship with Defence | - Guaranteed first job with Defence if you satisfy the requirements (see on the right). | - Joining Defence requires an examination, psychological as well as physical, and a check by the military intelligence service. This is only possible if the candidate concerned actually presents him/herself as a candidate and cannot be already carried out during MBO (secondary vocational) education. A certificate of no objection is also required. - The candidate must be at least 17.5 years old. |
| RET | No | No | - Intensive support, but this is inherent to the nature of the work-based pathway (BBL) specialisation | - It concerns work-based (BBL) pathways, so there is a job right away - After the work-based pathway (BBL), most progress to a regular job with RET (if there is any doubt there is sometimes a temporary contract with an extra mentor) | - Minimum MBO (secondary vocational education) diploma - On-site aptitude test - Selection interview with the RET supervisor and STC representative - A driving test on the bus with an instructor - A psychological test at an external location - A medical examination for CBR as well as the RET |

| Employer | Physical document available | Focuses exclusively on South Rotterdam | Nature of the support during the training | Nature of the guarantee/support for job placement | (Additional) conditions for job placement |
|-------------|--|--|---|---|---|
| Healthcare | Yes | Yes | <ul style="list-style-type: none"> - Support from a mentor originating from one of the care institutions | <ul style="list-style-type: none"> - Actual job guarantee for qualified nurses (level 4) with CSG - Obligation to make an effort for carers IG (level 3) (help in finding a job). In the future, it is possible that level 3 will be allocated the same status as level 4 | |
| Stadsbeheer | Yes, planned (but not yet distributed) | Yes | <ul style="list-style-type: none"> - Pupils who demonstrated an interest and have received a CSG are monitored (planning) - To be eligible for a CSG, pupils must follow an internship with Stadsbeheer | <ul style="list-style-type: none"> - (Planned) document contains specific pledge of a (for now) temporary job lasting two years | <ul style="list-style-type: none"> - Obtaining the diploma - Following an internship at Stadsbeheer |

Some Career Start Guarantees do not focus exclusively on South Rotterdam. This applies mainly to Deltalinqs, Food and the RET. It should be noted, however, that plans are being developed at Deltalinqs to aim the start guarantee more specifically at certain target groups. Hence, refinement towards (certain) students from South Rotterdam will become possible.

The RET deliberately does not distribute documents to students from South Rotterdam, because this would create an unequal situation between students in the class of future bus drivers. According to a contact person, it would put pressure on the collegial relationships and group dynamic if it appeared that some candidates receive a preferential treatment. The use of work-based pathways (BBL) immediately binds participants via an employment contract. The vast majority continues their employment at the RET after successfully completing the specialisation. However, hard guarantees at the beginning of the course are impossible, because in the long term, RET activities depend on the issuance of concessions that are at stake every few years.

Healthcare, Defence and Stadsbeheer use a tangible, physical document. With regard to all three employers, the pupils in relevant specialisations must take the initiative to actually obtain it. Students in the Healthcare specialisation can obtain the Career Start Guarantee during their introductory interview. They are already following the specialisation at that time. However, a number of students do not show up for this interview. Some students still do not show up, even after written reminders that a start guarantee is on the table. During the school year 2016-17, slightly over half received a Career Start Guarantee. At the introductory interviews, the Career Start Guarantee was often a surprise, despite the promotional campaigns and attention devoted to it.

At Stadsbeheer, students from South Rotterdam following the relevant specialisations are sent a letter with the aim of rousing their interest for Stadsbeheer as an employer and announcing the possibility of a Career Start Guarantee. Just six pupils registered their interest and half of them actually took up an invitation for an introduction and guided tour. The plan is for these pupils to be 'retained' and offered a Career Start Guarantee. As far as Defence is concerned, specialisations with a CSG in the first year were visited. During these visits, the possibility was offered of registering for a CSG, which only happened once.

For all three employers issuing physical documents, the pupil and a supervisor from the employer sign the document. With regard to Healthcare, besides the chairman of the board of deRotterdamseZorg, the mentor also signs as the third signatory. The wording of the guarantee document for Healthcare differs between levels 3 and 4:³³

- Level 3: *deRotterdamseZorg **strives** to ensure that, as a student from South Rotterdam, you will obtain a job at deRotterdamseZorg after successfully completing your secondary vocational education (MBO level 3).*
- Level 4: *deRotterdamseZorg **guarantees** that, as a pupil from South Rotterdam, you will obtain a job at deRotterdamseZorg if you successfully complete your secondary vocational education (MBO level 4).*

The wording adopted by Stadsbeheer is still being formulated.³⁴

The nature of the guarantees often relates to support both during the course of the specialisation and in the transition from school to work. The specific nature of the support and guarantees differs from one employer to another. The support during the course of the specialisation, sometimes involves a separate mentor (such as in Healthcare). In other cases, students are monitored slightly more remotely. There is also the possibility, guarantee or even the obligation to follow an internship at the employer or employers concerned. The content of the Career Start Guarantee also differs per type of employer, when it comes to the transition to work. This varies from a pledge of support in finding a job to a firm job guarantee.

A Career Start Guarantee is more difficult to organise for sectors than for individual employers, because of the question whether an individual company is (or wants to be) accountable for an agreement made at sector-level. This is especially difficult if the shortages are (or become) less acute, or if a specific candidate is assessed

³³ Moreover, a decision to afford level 3 the same status as level 4 is being considered.

³⁴ We did not receive the wording from Defence.

as being less suitable despite obtaining the necessary qualification. Ultimately, these kinds of factors formed the reason why Food, for example, did not issue any document. Healthcare did do so eventually, although the conditions that applied to level 4 differ from those applicable to level 3.

2.5 REACH OF THE INTERVENTIONS

In discussing the reach of the interventions, we examine the participation in the existing interventions. This concerns participation at school level (how many schools participate), as well as at pupil level (how many pupils participate). In some interventions in which companies also participate, we also provide information about this actor.

We use the following sources:

- A survey conducted by SEOR in association with NPRZ among primary and secondary schools. We use this data for interventions in secondary schools because of the 100 percent response rate among the secondary schools approached. The response rate was lower (47 percent) among primary schools. This survey enquired about participation in the different interventions up to the school year 2012-13.
- NPRZ reports. These concern planned activities at individual schools (participating or not) that have been processed into an Excel overview (checklists).
- Participation data from the providers of the interventions.

These participation data, which date back to a period prior to BRIDGE, have the following objectives:

- These data form a kind of 'baseline measurement' for assessing whether participation in interventions has at least stayed the same or increased since BRIDGE was launched;
- The level of participation in interventions provides an indication of the extent to which problems arise in their implementation;
- Since we have data about general trends in educational choices of pupils in South Rotterdam in recent years (also in relation to other regions), we can ascertain whether there is a link between the degree of participation in interventions and trends in educational choices.
- Since we have data about schools' participation, it is possible to link (changes in) the pattern of pupils' educational choices to the application of interventions in their (previous) school. Since we only have data at the school level, we cannot accurately determine whether an intervention actually applied to a specific individual; it rather concerns a probability. The question is whether pupils at a school where an intervention is applied, demonstrate a different pattern of choices than schools at which this is not the case, taking into account the characteristics of these pupils.

Below we discuss the reach separately for primary education, secondary education and secondary vocational education.

Primary education

Since the survey among schools was (as yet) only answered by some of the schools, we base the participation of primary schools on data from the NPRZ, which provides a fairly complete picture of primary schools. One limitation of these data is that they concern plans prior to participation and do not necessarily mean actual participation. Furthermore, we know less about the share of pupils participating. Moreover, these 'checklists' do not date back as far.

The checklists reveal a mixed picture. In some interventions, approximately half of the schools take part (information evenings, technology lessons, port visits and flash visits to companies). Other interventions, e.g. job interview training, have only been conducted at a few schools in recent years.

Based on the checklists, developments between 2015-16 and 2016-17 are complex. School participation in some interventions increases significantly between 2015-16 and 2016-17, while in others it decreases dramatically. Since the total number of schools decreases from year to year (probably due to mergers), a fall in the number of schools does not mean that the *share* of schools decreases. However, for various

interventions in table 2.6, we also observe a relative decrease between 2015-16 and 2016-17, i.e. a decrease in the share of schools participating. We should point out that the decrease in port visits and flash visits does not correspond to the providers' data. According to the providers, there has been a stabilisation or increase in school participation, and in terms of pupils there was an increase in both according to the providers (see table 2.7). It is difficult to draw far-reaching conclusions for the series of interventions from the trend between 2015-16 and 2016-17. The trend for the following year is different. Plans for 2017-18 demonstrate an increase in participation for most interventions compared with 2016-17. A decrease is only observed for information evenings and the development of employee skills.

What is striking is the fact that the intervention related to the development of employee skills has been applied previously, while it is considered to be new in the context of BRIDGE. The same applies to the digital talent portfolio and career guidance training. Therefore, we expect schools to have already developed their own initiatives for these areas.

Table 2.6 Overview of planned participation of primary schools in similar BRIDGE interventions

| Tool | 2015-16 | 2016-17 | 2017-18 |
|---|--------------------|--------------------|------------------|
| Port visits (Port Rangers) | (47) ^{b)} | (28) ^{b)} | 40 |
| Flash visits | (31) ^{c)} | (25) ^{c)} | 42 |
| Other company visits | | 16 | 19 |
| Skills Masters | 20 | 8 | |
| ECO marathon (event) | 17 | | 24 ^{d)} |
| Information evenings | 13 | 35 | 29 |
| Technology curriculum ^{a)} | 30 | 13 | 24 |
| Technology classes and workshops ^{a)} | 22 | 33 | 50 |
| Digital talent portfolio | 17 | 9 | 19 |
| Career development meetings with pupils and parents | 9 | 16 | 27 |
| Employee skills development | 16 | 10 | 6 |
| Professionalisation of technology education ^{a)} | 10 | 7 | 9 |
| Career guidance conversation training for teachers | 11 | 3 | 6 |
| Total number of primary schools in South Rotterdam | 68 | 57 | 53 |

Source: NPRZ 'checklists'

- a) The difference between technology lessons and workshops, technology curriculum and the professionalisation of technology education is not entirely clear.
- b) According to the provider EIC, 54 schools actually took part in 2015-16 and 53 in 2016-17. Although this concerns a slightly different structure of the overview of the schools (more disaggregated according to locations), there are also discrepancies between both sources at the level of individual schools.
- c) The record of participating schools from the provider JINC indicates that (significantly) more schools participated. Although this concerns a slightly different structure of the overview of the schools (more disaggregated according to locations), there are also discrepancies between both sources at the level of individual schools.
- d) Events such as the total category (including Skills Juniors).

For a few interventions, more specific data related to participation is available via the providers (table 2.7). These three interventions demonstrate an increase in participation between 2015-16 and 2016-17. A school year in primary education consists of roughly 2,000 pupils in the relevant postcode areas. For Port Rangers, this means that with the participation of 1,700 pupils a year from schools in the postcode area, an average of almost one occasion is achieved in primary education. For flash visits, the total potential target group consists of approximately 7,000 pupils (4,000 for the last two years of primary education and 3,000 for the first two years of pre-vocational secondary education). With 6,000 participating pupils, this means that pupils from these four school years often participate in a school year and thus participate several times during all these school years.

Table 2.7 Data from the providers related to the participation of pupils from South Rotterdam in several interventions in primary education

| Tool | 2015-16 | 2016-17 |
|--|---------|---------|
| Port visits (Port Rangers) | 1,531 | 1,709 |
| Flash visits (primary and secondary schools) | 4,708 | 6,253 |
| Mentoring programme | 26 | 127 |

Source: data supplied by the providers

So what does this all mean for BRIDGE? Firstly, there is certainly potential to expand the scope of various tools. Secondly, the intentions in the checklists provide an indication that, between 2016-17 and 2017-18, there is an actual increase in the reach. However, this increase only involves intentions and thus should be assessed further during the course of the period. The field work will also have to demonstrate what participation means for the pupils concerned.

Secondary education

Table 2.8 shows the participation of schools providing pre-vocational secondary education, using the survey conducted among schools. As far as the most recent year is concerned, several interventions are applied at over two-thirds of the schools. The vast majority of schools participates in the interventions implemented by JINC (job interview training and flash visits). Study try outs, the digital talent portfolio, career development meetings with pupils and parents, and provision of information about Career Start Guarantees are also used in the majority of schools.

Table 2.8 Participation of pre-vocational secondary schools in similar interventions as those in BRIDGE

| Tool | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|--|---------|---------|---------|-----------------|-----------------|
| Visits to the port (Havenlink and/or Port Discovery) | 5 | 5 | 4 | 4 | 4 ^{a)} |
| Flash visits | 4 | 4 | 10 | 11 | 12 |
| Other company visits and excursions | 5 | 6 | 6 | 7 | 8 |
| Skills Masters | 8 | 11 | 8 | 4 | 2 |
| Visits to other events | 1 | 0 | 1 | 4 | 5 |
| Civil service internships | 10 | 9 | 5 | 3 | 3 |
| Study try outs | 5 | 6 | 9 | 11 | 11 |
| Digital talent portfolio | 0 | 2 | 5 | 6 | 10 |
| Career development meetings with pupils and parents | 5 | 7 | 7 | 8 | 10 |
| Mentoring programme | 0 | 0 | 4 | 5 | 6 |
| Job interview training | 5 | 5 | 10 | 10 | 12 |
| Information about specialisations with Career Start Guarantees | 1 | 1 | 3 | 9 | 11 |
| Employee skills training | 2 | 2 | 2 | 3 | 4 |
| Career guidance conversation training for teachers | 0 | 1 | 2 | 2 | 2 |
| Empowerment Programme involving parents in Career Orientation and Guidance | 0 | 0 | 0 | 0 ^{b)} | 0 ^{b)} |
| Total schools providing pre-vocational secondary education | 14 | 14 | 14 | 14 | 14 |

Source: survey conducted among schools

- a) According to EIC, in 2016-17 secondary schools from South Rotterdam did not participate in Havenlink and Port Discovery, but did participate in Process Technology Week and the McPort event, in which EIC also played a role. Further analysis at the school level reveals that, according to expectations, the schools concerned had mixed up these interventions. However, this does not explain all cases that participation was filled in. We will return to the discrepancies between the different sources at a later stage.
- b) It should be noted here that four schools did not answer the question concerned. One of these four does plan on applying the intervention in 2017-18, and therefore may have applied it previously (Olympia College). Moreover, a couple of (2) practical schools (which provide practical education tailored to pupils who would otherwise not be able to obtain a VMBO-diploma) indicated that they participated.

The table also shows that many interventions are applied by an increasing number of schools. This trend is clear with regard to flash visits and other company visits, study try outs, career development meetings with pupils and parents, digital talent portfolio, mentoring programme, job interview training³⁵ and the provision of information about Career Start Guarantees. In contrast, barely any growth or even a decline was observed in visits to the port, Skills Masters and civil service internships.

As in primary education, there are several interventions that are cited as new in BRIDGE, but have already been applied in one form or another according to (some) schools. It concerns the interventions employee skills training and career guidance training.

The second source is the NPRZ checklist. This source does not involve exactly the same set of schools as the previous table, but is broader and concerns all secondary schools (instead of only pre-vocational secondary education schools). Overall, the scores are slightly higher than in the previous table. This especially applies to the digital talent portfolio, employee skills training and career guidance training.³⁶ Between 2015-16 and 2016-17, strong growth was observed (greater than in the previous table, which also shows growth). Development between 2016-17 and 2017-18 is complex. Some interventions grow extremely quickly, while others rapidly decline.

Table 2.9 Participation of secondary schools in similar interventions as those in BRIDGE

| Tool | 2015-16 | 2016-17 | 2017-18 |
|--|-----------|-----------|-----------|
| Visits to the port (Havenlink and/or Port Discovery) | 6 | 0 | 9 |
| Flash visits | 15 | 16 | 17 |
| Other company visits and excursions | 11 | 15 | 13 |
| Skills Masters | - | 2 | - |
| Civil service internships | 3 | 5 | 7 |
| Study try outs | 9 | 17 | 15 |
| Digital talent portfolio | 10 | 17 | 15 |
| Career development meetings with pupils and parents | 10 | 19 | 18 |
| Mentoring programme | 5 | 6 | 15 |
| Job interview training | 11 | 18 | 17 |
| Information about specialisations with Career Start Guarantees | - | 9 | 14 |
| Employee skills training | 6 | 13 | 7 |
| Career guidance conversation training for teachers | 8 | 12 | 11 |
| Empowerment Programme involving parents in Career Orientation and Guidance | - | - | 5 |
| Total number of secondary schools | 20 | 20 | 19 |

Source: NPRZ 'checklists'

'-' means not recorded.

The survey conducted among schools also enquired about estimates (in the form of intervals) of the number of pupils participating per school year. This makes it possible to produce an estimate of the share of all VMBO (pre-vocational secondary education) pupils in South Rotterdam who participated in the interventions. In doing so, we took into account the relative size of schools, which means that the answers from some schools weigh more heavily on the total for South Rotterdam than others. However, it remains an estimate because schools also provided their answers in (fairly broad) intervals. In the following table, the outcomes for the school year 2016-17 are also given in intervals using shades of colour. The darker the cell, the higher the relative degree of participation.

³⁵ Individual registration by JINC about participation of schools in different school years confirms the increase in participation of schools in flash visits and job interview training. The numbers sometimes deviate (minimally), but the fact that the basic set of schools is not exactly the same also plays a role.

³⁶ In the latter, the fact that this intervention was included separately in the survey at the end of the questionnaire and was not completed by some, plays a role.

Table 2.10 reveals that a limited number of interventions have a higher coverage than 40 percent in a particular school year. This concerns the flash visits in the first two years of VMBO (pre-vocational secondary education), job interview training in the third year and the provision of information about Career Start Guarantees in the fourth year. The Empowerment Programme involving parents in Career Orientation and Guidance (LOB) also has a higher coverage percentage for VMBO 1 and 2, but this relates to the coverage among teachers of the pupils concerned.

These data were also requested in the survey for previous school years. These were requested for longer than was the case in the checklist, back to the school year 2012-13. When we compare the different years, there is an increase in participation for this period (school years 2012-13 to 2016-17) for most of the interventions, with the exception of visits to the Port of Rotterdam (relatively stable), Skills Masters visit (decline) and social internships (decline).

Table 2.10 Estimate of the degree of participation of VMBO pupils per school year (2016-2017)

| Intervention | VMBO 1 | VMBO 2 | VMBO 3 | VMBO 4 |
|--|--------|--------|--------|--------|
| Visits to the port (Havenlink and/or Port Discovery) | | | | |
| Flash visits | | | | |
| Other company visits and excursions | | | | |
| Skills Masters | | | | |
| Visits to other events | | | | |
| Civil service internships | | | | |
| Study try outs | | | | |
| Digital talent portfolio | | | | |
| Career development meetings with pupils and parents | | | | |
| Mentoring programme | | | | |
| Job interview training | | | | |
| Information about specialisations with Career Start Guarantees | | | | |
| Employee skills training | | | | |
| Career guidance conversation training for teachers | | | | |
| Empowerment Programme involving parents in Career Orientation and Guidance | | | | |
| Total number of pupils in VMBO at these schools in this school year | 1,643 | 1,326 | 1,284 | 1,278 |

Legend

| | |
|----------|--|
| 0-1% | |
| 2-10% | |
| 11-25% | |
| 26-40% | |
| 41-60% | |
| Over 60% | |

Source: survey conducted among schools, processed by SEOR

Registration by providers

We also have data about pupil participation from some providers. As expected, this data is more accurate, but it is only available for a limited number of interventions and fewer years. Moreover, these participation figures are aggregated across schools and school years, which means that the breakdowns that could be compiled from the survey are not possible for these participation figures. The figures from visits to the port illustrate that it is difficult for EIC to reach secondary schools in South Rotterdam. Participation in the flash visits, job interview training and mentoring programme clearly increased between 2015-16 and 2016-17. With regard to job interview training, the number (over 1,300) in 2016-17 is such that on average, every pupil in the second stage of pre-vocational secondary education participates at least once.

Table 2.11 Number of participants from South Rotterdam in secondary education for a number of interventions according to the providers

| Tool | 2015-16 | 2016-17 |
|--|---------------------------------|-----------------------------------|
| Visit to the port: Havenlink | 49 | - |
| Visit to the port: Port Discovery | 25 | - |
| Visit to the port/Process Technology Week event | 125 | 165 |
| Visit to the port/McPort event | 25 | 150 |
| Flash visit (primary education and pre-vocational secondary education) | 4,708 | 6,253 |
| Mentoring programme | 644 (total secondary education) | 1,023 (total secondary education) |
| Job interview training | 1,085 | 1,329 |

Source: data supplied by the providers, processed by SEOR

The scores for the mentoring programme relate to different forms of secondary school education: the broader first year of secondary school, pre-vocational secondary education (VMBO), practical education, senior general secondary education (HAVO) and international transition classes. However, the primary focus is on VMBO.

Comments related to the sources and translation to BRIDGE

Several sources were used to obtain an indication of the reach of the interventions. The conclusion for all of the sources is that there is an increase in participation, even if there are deviations in specific years and/or specific interventions in this pattern. Since BRIDGE has started at the end of 2016, one would expect to see its effects in the changes in participation between 2016-17 and 2017-18. When looking at intentions of schools (the NPRZ checklists), strong growth is indeed visible for some of the interventions (mainly visits to the port, the mentoring programme, the information provision about CSGs and the Empowerment Programme for parents in Career Orientation and Guidance). However, the participation in other BRIDGE-interventions does increase or even decreases. In terms of pupils, it also appears that in South Rotterdam, there is still room to increase participation in many interventions.

One point of interest is that the different sources display discrepancies. This also applies when we compare the participation of individual schools in the different sources. The data supplied by the providers are probably the most reliable, but these are available for just a limited number of interventions and only up to 2016-17. Because the other sources (survey and checklist) show deviations on the data from the providers, they should be viewed more as an indication. The anticipated fieldwork also offers added value for this reason.

MBO (secondary vocational education)

Data from the NPRZ about the planned activities indicate that the BRIDGE-related interventions mentioned in table 2.12 were planned in at least some of the secondary vocational studies in Rotterdam. A number of these interventions already have a history in secondary vocational education. What is striking is the fact that in 2016-17, the digital talent portfolio is no longer checked. Job interview training will take the form of training sessions implemented by the MBO itself. They are not carried out by JINC, the provider of these training sessions in the context of BRIDGE in primary and secondary schools.

Table 2.12 Earlier applications of interventions that are used in secondary vocational education in BRIDGE

| Intervention | 2015-16 | 2016-17 |
|---|--------------------------|---------|
| Study try outs in higher professional education (HBO) | No information available | Yes |
| Digital talent portfolio | Yes | No |
| Career development meetings with pupils and parents | Yes | Yes |
| Job interview training | No information available | Yes |
| Employee skills training | No information available | Yes |
| Career guidance conversation training for teachers | Yes | Yes |
| Career Start Guarantees | Yes | Yes |

Source: NPRZ 'checklists'; Career Start Guarantees have already been used for a number of years.

Note: for 2015-16, these data are based on responses from the three MBO institutions (Zadkine, Albeda and STC). In 2016-17, these were based more on certain parts of Zadkine and Albeda).

Since the Career Start Guarantee takes a prominent position in the BRIDGE interventions and more data are available on this intervention, below we focus on it in more detail. The following table shows the number of students living in South Rotterdam as of 1 October 2017, who enrolled in a specialisation associated with a Career Start Guarantee in the academic year 2017-18.

Table 2.13 Number of admissions from South Rotterdam in MBO (secondary vocational education) specialisations associated with Career Start Guarantees

| Specialisations associated with the CSG from | Total 2015-16 | Total 2016-17 | Number of registrations as of 1 October 2017 | | | | | Total 2017-18 |
|--|---------------|---------------|--|-----------|-----------|-----------|----------|---------------|
| | | | Albeda | Zadkine | TCR | STC | Lentiz | |
| Deltaliqqs | 68 | 72 | | | 61 | 9 | | 70 |
| Ministry of Defence | 98 | 109 | | | 56 | 13 | | 69 |
| Stadsbeheer Rotterdam | N/A | N/A | | | 46 | | | 46 |
| <i>Minus doubles</i> | -27 | -31 | | | -65 | -9 | | -74 |
| RET | 10 | 7 | | | | 11 | | 11 |
| Food Innovation Academy | 1 | 2 | | | | | 0 | 0 |
| deRotterdamseZorg | 156 | 147 | 78 | 72 | | | | 150 |
| Total | 306 | 306 | 78 | 72 | 98 | 24 | 0 | 272 |

Sources: STC, Albeda, Zadkine and Lentiz Life College. Totals for 2015-16 and 2016-17 have been copied from the previous NPRZ reports.

Comments:

- For all specialisations holds that it does not concern the number of documents actually issued, because either no document is issued or because participants have to register separately for a Career Start Guarantee document.
- A number of admissions are also possible around February; this applies especially to Healthcare.
- Several technical specialisations appear in the list of Deltaliqqs, Defence and/or Stadsbeheer. They are all included separately for these individual employers, but counted just once in the final total.
- With regard to the Ministry of Defence, the differences between 2016-17 and 2017-18 can largely be explained by the fact that in 2016-17, more specialisations were taken into account, including a number of BBL (work-based pathway) variants of technical specialisations.

This table shows that the number of admissions is relatively stable, but decreased slightly between 2016-17 and 2017-18. This is mainly due to the fact that fewer specialisations were eligible for a Career Start Guarantee from the Ministry of Defence. The decrease is partly compensated by the fact that Stadsbeheer entered as a new employer offering Career Start Guarantees. However, this concerns a lot of specialisations that are also eligible for a CSG with one of the other employers.

The actual issuance of ‘physical documents’ as start guarantees is considerably lower. Some employers do not provide a physical document, while for others, not all pupils use the option of obtaining such a document. The following table provides an estimate of the number of physical documents issued. Only deRotterdamseZorg has issued a substantial number of documents, although the number is still lower than the total number of admissions. In 2016-17, it concerned slightly over half of pupils who were eligible, an increase from 2015-16.

Table 2.14 Issuance of physical documents

| Employer offering a start guarantee | Total number of physical documents issued | | |
|-------------------------------------|--|--------------------------------|---|
| | 2015-16 | 2016-17 | Beginning 2017-18 |
| Deltalinqs | Still issued documents in 2014-15, but probably no longer did so in 2015-16 | Documents no longer issued | Documents no longer issued |
| Ministry of Defence | | | Involves just a few |
| Stadsbeheer Rotterdam | No CSG yet | No CSG yet | Document being developed, but just a few eligible |
| RET | No physical document but participants do have a contract, since they followed the BBL (work-based pathway) variant | | |
| Food Innovation Academy | No physical document is issued | No physical document is issued | No physical document is issued |
| deRotterdamseZorg | 41 | 78 | Not yet known |

The healthcare sector has the best information with regard to monitoring pupils during the specialisation. DeRotterdamseZorg keeps the following data in its administration:

- Student details;
- School;
- Student numbers;
- Telephone numbers;
- Specialisation (nurse/carer);
- Mentor and institution;
- Cohort;
- 1st academic year completed;
- 2nd academic year completed;
- 3rd academic year completed;
- 4th academic year completed;
- Expected date on which the specialisation will be completed;
- Diploma obtained;
- Award guarantee/effort obligation.

Since the first graduates have not yet entered the labour market, no information is available about them yet, but this inflow will soon start.

Deltalinqs is also busy compiling a database, but this will be less systematic than deRotterdamseZorg, because there is no systematic input of pupils' data from the schools. Therefore, it is compiled in an ad hoc manner.

At this stage, it is important to mention that participation in specialisations with a CSG has not increased since the start of BRIDGE. Several interviewees at employers observe more of an effect among parents than directly among pupils themselves. With regard to the latter, one should note that only some of the pupils obtain a physical document if it is available. The fieldwork – that focuses specifically on the CSG – allows us to examine the extent to which the CSG plays a role in the choice of a specialisation in more detail.

2.6 CONCLUSION

BRIDGE aims to improve labour market opportunities for young people from South Rotterdam through several interventions in and around education. To this end, three objectives have been formulated that concern (1) reducing the number of pupils dropping out of school (because actually obtaining a diploma increases opportunities in the labour market), (2) increasing the number of pupils who choose specialisations in the sectors technology, port and healthcare, because these offer relatively favourable labour market prospects, and (3) a more successful transition from school to the labour market.

BRIDGE consists of a total of twenty interventions. From several perspectives, these interventions form a consistent and complete whole that is more than the sum of its parts:

- Some interventions focus on reducing the number of pupils who drop out of school, others on opting for the technology, port-related and healthcare specialisations, while others focus more directly on the transition from education to the labour market;
- The interventions concern both primary education, secondary education and secondary vocational education, and thus comprise an entire educational pillar;
- The interventions are aimed at all actors involved: the children/students themselves, teachers, parents and businesses.

With regard to the goals of the interventions, it is unclear whether or not some are aimed at encouraging pupils to specialise in technology, port and healthcare. Sometimes they have a more fundamental basis: the vision that career guidance (LOB) in general must be improved and that opting for technology, port and healthcare specialisations is just one possible by-product, but not the main objective. In some cases, the reason is more a practical one: obstacles emerge with regard to showcasing these specialisations more (e.g. flash visits).

The literature about experiences with these types of interventions provides indications that the majority are, or at least could be, effective. At the same time, the literature study reveals that the effectiveness is highly influenced by a range of preconditions. For example, the role of the teacher is crucial in several interventions. The assessment methods used also have some limitations. Often, the effects are determined, for example, on the basis of perceptions, or there is less information about the effects in the long term.

Since many of the interventions are not new, the reach in previous years has been mapped out. This provides a baseline to compare the reach during the BRIDGE period with. Furthermore, it is possible that there has already been an intensification, which could be a potential factor in changes to the target variables in the past (e.g. shifts in young people choosing technology, port and healthcare). A combination of an increase of the participation in interventions and shifts in the direction of technology, port and healthcare, could be a first indication that the interventions are effective.

Some interventions involved in BRIDGE are considered new, while others are a continuation of already existing interventions. What stands out in the analysis of the reach is that a number of the 'new' interventions have already been applied in (some) schools before the start of BRIDGE. Consequently, establishing the exact reach in the past is an extremely complex matter. In principle, there are three sources to achieve this: data from certain providers, a checklist from the NPRZ of participating schools based on their plans at the beginning of the school year and a survey among schools. Each of the three sources has its limitations. Moreover, it seems that, when compared, the outcomes are not always consistent. The following can be reported (taking the limitations into account):

- In primary education, the picture from recent years with regard to the number of schools participating in interventions, is relatively complex. The degree of participation varies considerably per intervention and the changes between 2015-16 and 2016-17 are different for every intervention. For BRIDGE, the transition from 2016-17 to 2017-18 is particularly important. The intentions in the checklists provide an indication that, between 2016-17 and 2017-18, there is an actual increase in the reach. However, these concern intentions and should be assessed further during the course of the period.
- In pre-vocational secondary education, in recent years there has been an increase in participation for most interventions (based on the NPRZ checklist and the survey among schools). The previous efforts of the NPRZ appear visible in this growth. As described above, for BRIDGE itself, it is the transition from 2016-17 to 2017-18 that is important. We can only use the checklist for this transition. In terms of intentions, the effect of BRIDGE appears visible in the strong growth in school participation in several interventions (visits to the port, the mentoring programme, providing information about the CSG and the Empowerment Programme involving parents in Career Orientation and Guidance). However, it should be emphasized that there was no increase, sometimes even a decrease, in other interventions.

- In primary education and pre-vocational secondary education, there is certainly still room to increase the scope of various instruments within BRIDGE.
- The inflow into MBO (secondary vocational education) specialisations with Career Start Guarantees has not increased in recent years.

We have focused somewhat more on the latter intervention in the text, because it is an innovative one and plays a major role in BRIDGE. In terms of implementation, the design of the CSG seems to vary considerably, depending on the employers concerned. This pertains to e.g. the nature (and extent) of the guarantee itself and the support provided during the training. Some employers or sectors use a physical document, while others do not or no longer do so. If a physical document exists, this does not guarantee that it is collected by the pupils who are entitled to it. At this stage, there is little insight into the extent to which those from specialisations with a Career Start Guarantee found a job with the employers that issued the guarantees, or if they found work at all. This is partly unavoidable, since many of the pupils have not yet finished their education (such as in healthcare). A second reason is the fact that employers do not systematically monitor these pupils.

The gaps in current knowledge – e.g. about the exact scope of the reach, the practical implementation and preconditions for interventions, and the actual careers of the participants – mean that the planned fieldwork in BRIDGE offers considerable added value.



RESULTS FOR EDUCATION

3 RESULTS FOR EDUCATION

3.1 INTRODUCTION

Two of the main objectives of BRIDGE involve increasing the chance that young people opt for a specialisation in technology, the port or healthcare, and reducing the number of pupils who drop out of school. This chapter uses microdata from Statistics Netherlands (CBS) to examine the trend in educational choices of pupils (aged from 12 to 30 years) in South Rotterdam, both in VMBO (pre-vocational secondary education) and in MBO (secondary vocational education). This trend is compared with North Rotterdam, the three other large cities in the Netherlands (G3: Amsterdam, The Hague and Utrecht) and the Netherlands as a whole. This enables us to ascertain whether education in South Rotterdam is lagging behind, and whether it has caught up in recent years.

The developments provide a first image of the effect that BRIDGE has had to date on the educational choices of young people in South Rotterdam. However, it is also possible that these developments result from factors other than the interventions that are part of BRIDGE. Therefore, we cannot draw any conclusions about the effects of BRIDGE based on these descriptive results.³⁷

3.2 SECONDARY EDUCATION

The sector or profile choice pupils make in secondary education has a major impact on the choice of further specialisation. For example, previous research (De Koning et al., 2011) reveals that only a limited number of young people who followed a non-technical specialisation in VMBO (pre-vocational secondary education) subsequently opted for a technical specialisation in MBO (secondary vocational education). Of the young people who specialised in technology in VMBO, a large share also followed a technical specialisation later in MBO. Hence, in order to influence the choice of specialisation, pupils' interest in technology, the port or healthcare needs to be encouraged at an early stage. Therefore, BRIDGE focuses on pupils in and above group 6 in primary education (i.e. from the age of 9-10 years). Interventions in primary education and the first stage of secondary education could have an impact on the sector or profile choice in the third year of secondary education, and thus an indirect effect on pupils' subsequent choices.

Figure 3.1 shows the share of the different sectors in the third year of VMBO (the year during which pupils choose a sector to specialise in) in South Rotterdam. This only concerns the more practically-oriented learning pathways (VMBO BKG). Pupils following the theoretical learning pathway (VMBO-TL) select a curriculum that consists of general theoretical subjects, though the curriculum is still sector-oriented. However, no data is available about the sectors in VMBO-TL.

In school year 2016-2017, the four sectors (technology, healthcare and social work, economics and agriculture) were further divided into branches that focus specifically on one or several professions. For example, in the technology sector branches such as construction and electrotechnology were distinguished. In addition, there were intrasectoral and intersectoral programmes, in which branches or sectors were combined.

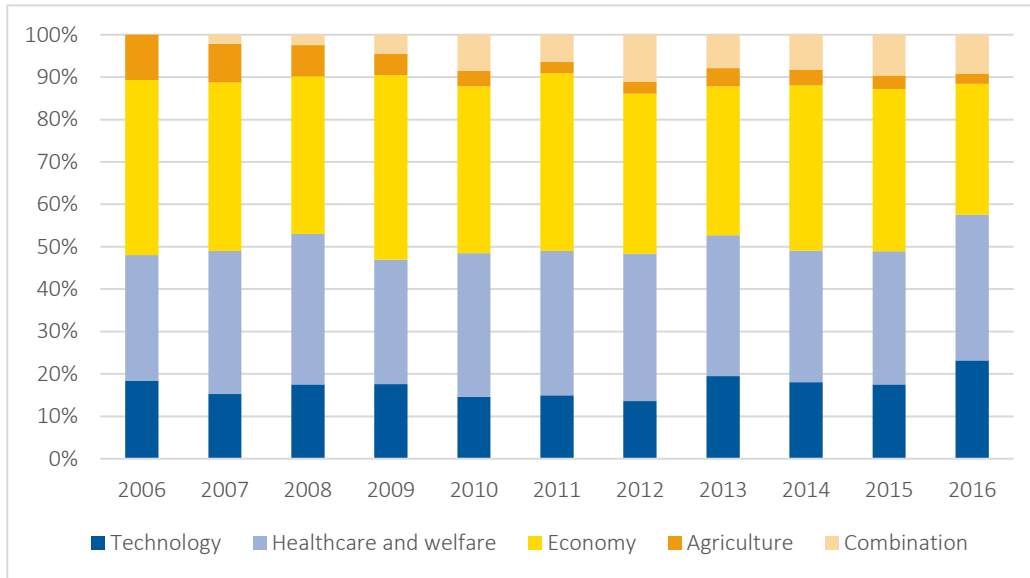
During the school year 2016-2017, the renewed VMBO was introduced, which is characterised by a broadening of the professional specialisations.³⁸ Since August 2016, schools are able to convert their branch programmes into profiles. By August 2017, all VMBO schools will have had to introduce the broader profiles. In the new VMBO, pupils select one of these ten profiles, combined with a number of electives. This change is expected to impact the figures related to the choice of sector in 2016, which makes it more difficult to obtain a good

³⁷ In a later stage, we will therefore use a multinomial model that tests the connection between participation in the interventions and the decision to specialize in a particular sector.

³⁸ See www.nieuwvmbo.nl

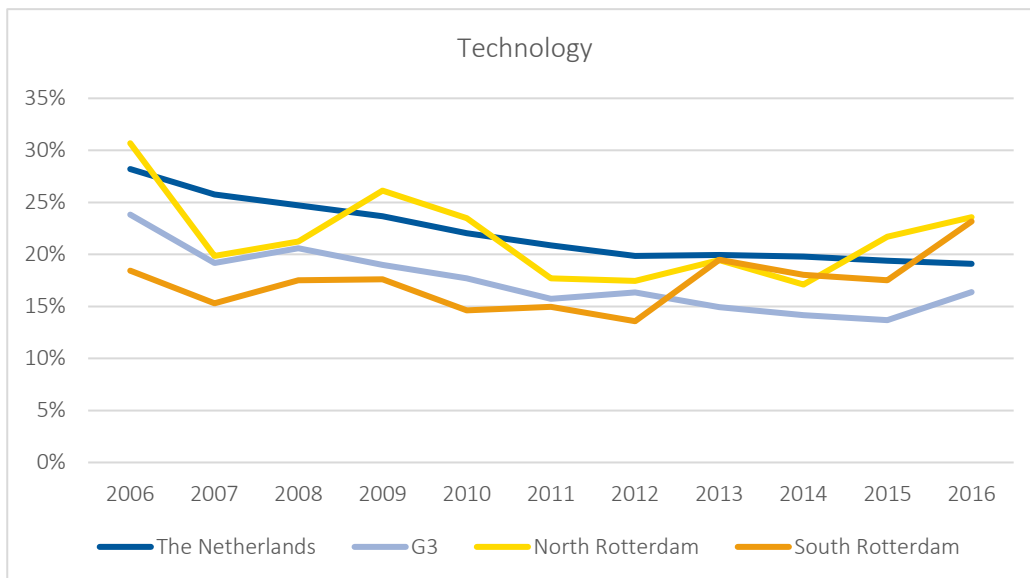
picture of the trend in recent years. The increase in the share of pupils in the technology sector in South Rotterdam could indicate that the BRIDGE interventions have had a positive effect, but could also be related to the change in the VMBO.

Figure 3.1 Percentage of pupils in different sectors (third year of VMBO BKG)



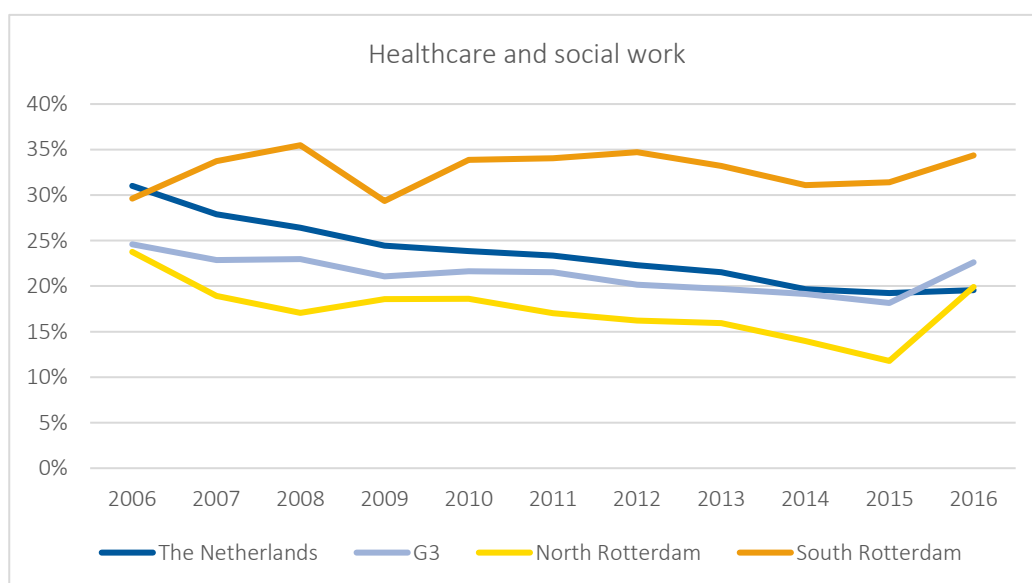
We compare the share of pupils who follow a VMBO course in the technology, or healthcare and social work sector in South Rotterdam, with those in North Rotterdam, the three other large cities in the Netherlands and the Netherlands as a whole. This allows us to examine whether South Rotterdam is lagging behind and, if so, whether it has caught up since BRIDGE was launched. Figure 3.2 shows the percentage of pupils in the third year of VMBO that opted for the technology sector. The figure reveals that South Rotterdam was indeed lagging behind the other regions, but that it has caught up in recent years.

Figure 3.2 Percentage of pupils who opted for the technology sector (third year of VMBO BKG)



The percentage of pupils who opted for the healthcare and social work sector is shown in figure 3.3. In contrast to the technology sector, there is no evidence that South Rotterdam was lagging behind. The percentage is actually higher here than in other regions.³⁹ The difference with North Rotterdam is particularly striking. One possible explanation for this difference is that there are more schools that offer the healthcare and social work sector in South Rotterdam. Moreover, more pupils in North Rotterdam followed an intersectoral programme (such as *sport, services and security*). A distinct shift can be observed in 2016, which can probably be attributed to the changes implemented to the VMBO in that year. In this process, the intersectoral programmes were abolished, as a result of which the percentage of pupils in the healthcare and social work sector increased. This increase is greater in North Rotterdam.

Figure 3.3 Percentage of pupils who opted for the healthcare and social work sector choice (third year of VMBO BKG)



It is possible that some of the differences in educational choices between the regions are due to differences in the composition of the population in these regions. More young people with a migration background live in Rotterdam and in the three other large cities than in the rest of the Netherlands. This is even more the case in South Rotterdam. The literature revealed that these young people are less likely to choose a technological specialisation.⁴⁰ Therefore, we also examined the choice of sector for pupils with a migration background. The results can be found in Appendix III. If we focus solely on these pupils, it appears that they are indeed less likely to specialize in technology compared with the total population. Given that Rotterdam (especially South Rotterdam) is home to a lot of people with a migration background, the picture hardly changes for this region. For the group of young people with a migration background, the degree to which South Rotterdam lags behind in the technology sector is lower than for the group as a whole. There is no clear difference between pupils who do or do not have a migration background among those opting for the healthcare and social work sector.

³⁹ A relatively large share of pupils in the healthcare and social work sector is not necessarily positive for labour market prospects, since a large share of these young people ultimately enroll in a care specialisation at MBO level 2 (which offers limited labour market prospects).

⁴⁰ See, for example the CBS [Jaarrapport Integratie 2016](#) (Annual Integration Report 2016).

3.3 PROGRESSION FROM VMBO TO MBO

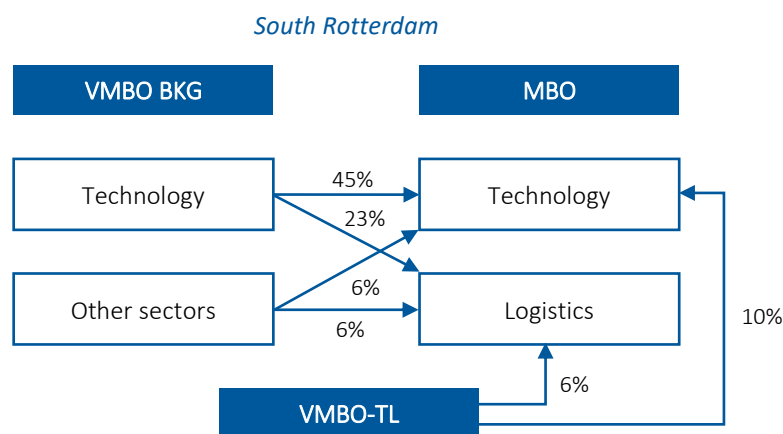
As mentioned in the previous paragraph, the sector opted for by these young people in secondary education is important for their subsequent specialisation. This paragraph discusses the degree of progression from the VMBO sectors of technology and healthcare and social work, to similar sectors in MBO. We also examine how many pupils enter the MBO technology, logistics and healthcare sectors from other VMBO sectors.

Figures 3.4 and 3.5 show the flows from VMBO to the MBO technology and logistics sectors for the different regions. The percentages represent the share of VMBO graduates in the technology sector enrolling in an MBO technology or logistics⁴¹ specialisation, immediately after they graduate. The share from other (non-technical) VMBO specialisations is also shown. It concerns the average percentages for the period from 2012 to 2016.⁴² For example, in South Rotterdam 45 percent of pupils who successfully completed a technical VMBO course during this period continued to follow a technical MBO specialisation. Another 23 percent of these pupils enrolled in a logistics specialisation. The remainder of the pupils (32 percent) chose a different specialisation or do not progress to any MBO specialisation during the year after they graduate. Figure III.2 (in the appendix) also shows the trend of the progression to a technical or logistics MBO specialisation over a ten-year period.

Little differences are found between the Netherlands as a whole and South Rotterdam, when it comes to the share of pupils who continue with a specialisation in either the technology or the logistics sector after following a technical VMBO course. In South Rotterdam, the logistics specialisation is far more common than in other regions. When we compare South Rotterdam with the three other large cities, the progression is relatively more positive: the share of young people who progress to the technical sector is almost equal, while the flow to the logistics sector is higher in South Rotterdam. The flow from the technical VMBO sector to technical MBO specialisations is also slightly higher in South Rotterdam, compared with North Rotterdam.

Only a limited share of the pupils who did not opt for a technical specialisation in secondary education, enrolled in an MBO specialisation in technology or logistics. This applies to all regions.

Figure 3.4 Flows from VMBO to MBO, technology and logistics sector (average over period 2012-2016)

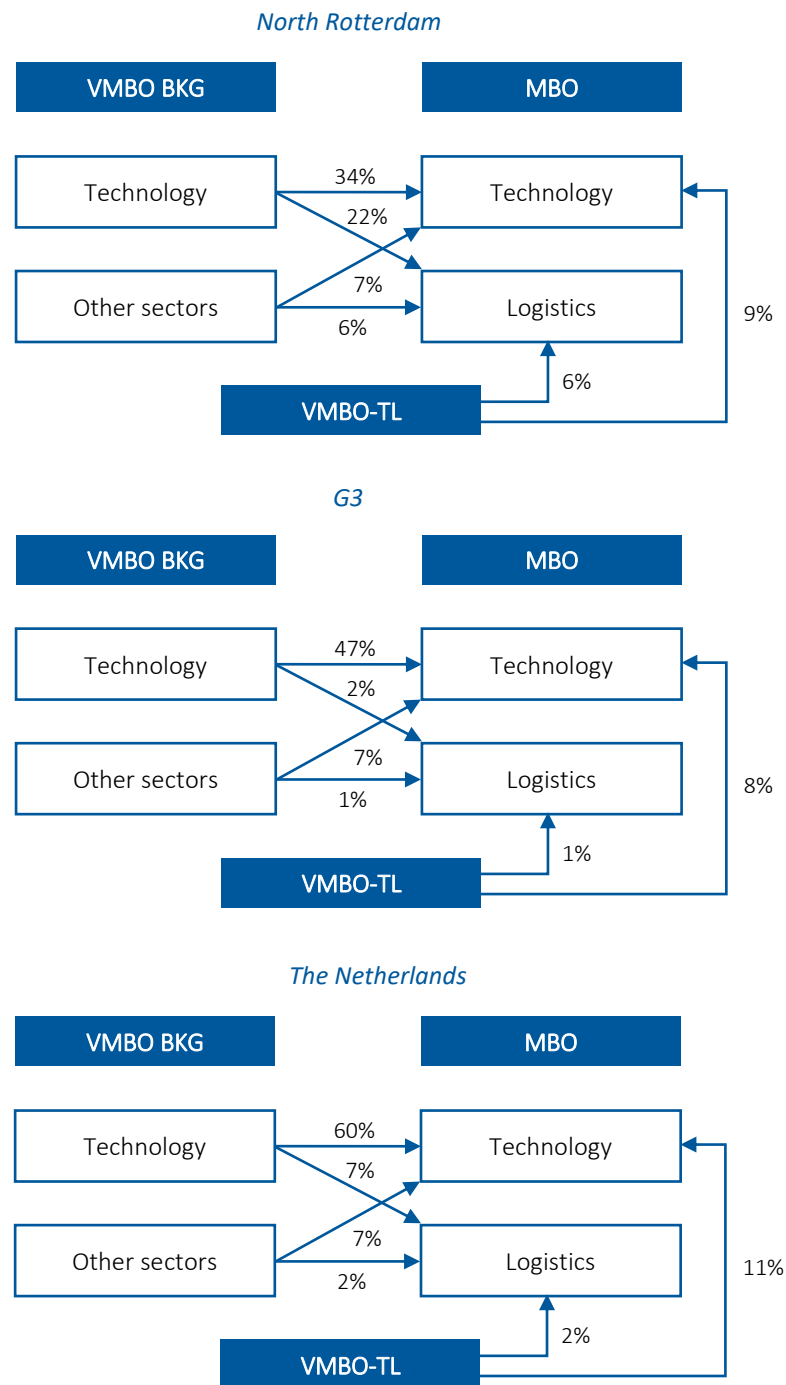


Note: the above percentages do not add up to 100 percent. The remaining share follows an MBO specialisation in different sectors (healthcare or other) or do not follow any MBO specialisation in the academic year after they graduate.

⁴¹ The labour in the port, mainly consists of technological and logistical work. Therefore, we also consider logistics.

⁴² We use an average across a number of years because the percentage can vary significantly from year to year, especially for the smaller regions.

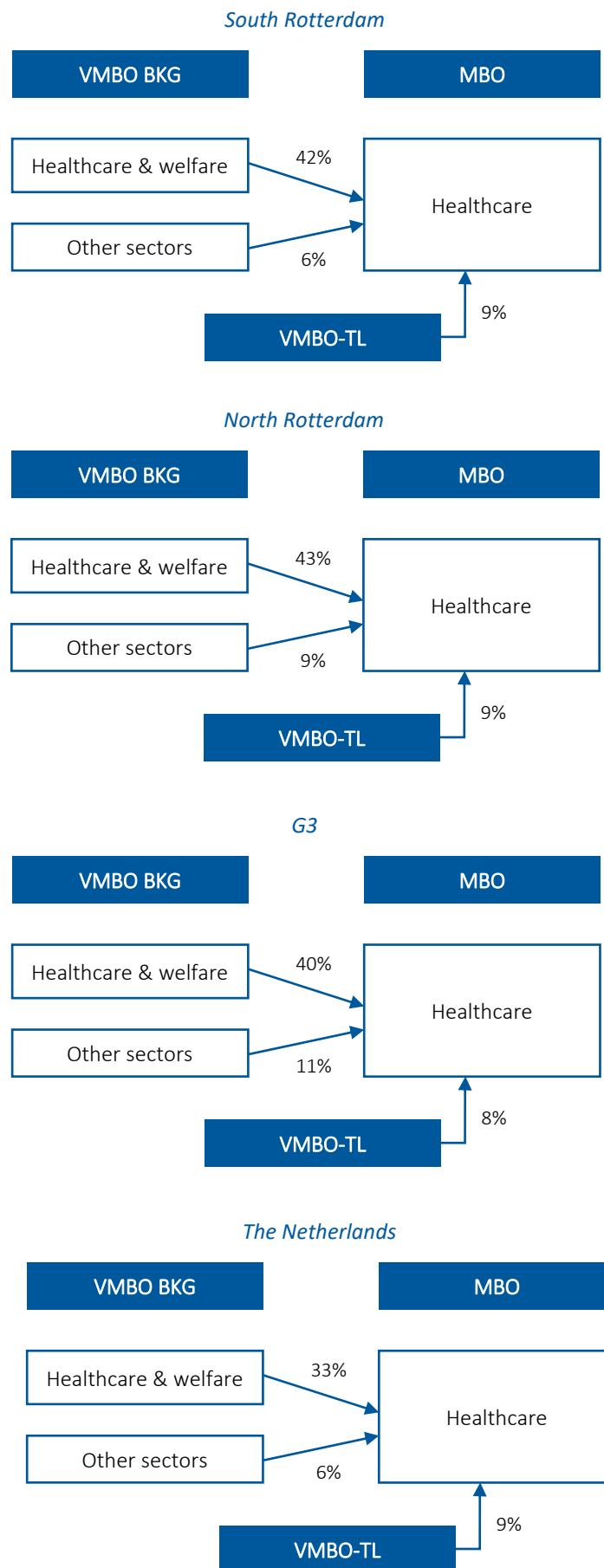
Figure 3.5 Flows from VMBO to MBO, technology and logistics sector (average over period 2012-2016)



Note: the above percentages do not add up to 100 percent. The remaining share follows an MBO specialisation in different sectors (healthcare or other) or do not follow any MBO specialisation in the academic year after they graduate.

The percentage of pupils opting for an MBO specialisation in the same sector is lower for healthcare than for technology, because a relatively high number of young people from VMBO healthcare and social work choose a specialisation in welfare. Of the pupils who graduated from the VMBO healthcare and social work sector in the past five years, the share enrolling in an MBO healthcare specialisation is greater in South Rotterdam than in the Netherlands as a whole (see figure 3.6). The same applies to North Rotterdam and the three other large cities. The number of pupils who progress to a specialisation in the healthcare sector from other VMBO sectors was lower in South Rotterdam than in the G3 and North Rotterdam.

Figure 3.6 Flows from VMBO to MBO, healthcare sector (average over period 2012-2016)



3.4 SECONDARY VOCATIONAL EDUCATION

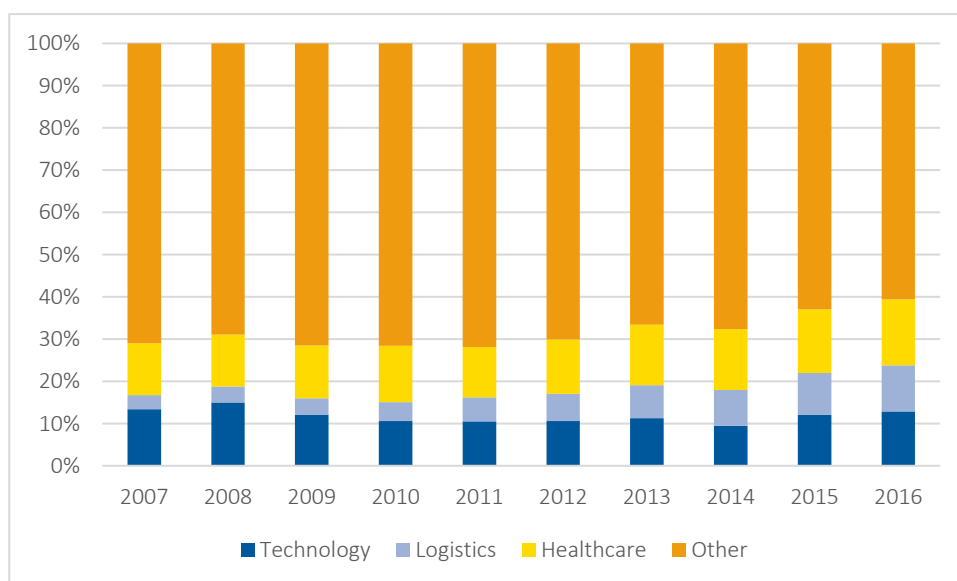
MBO (secondary vocational education) prepares young people for the labour market, but not all MBO studies offer equally favourable prospects. The aim of BRIDGE is to encourage young people from South Rotterdam to opt for a specialisation in one of the sectors offering relatively favourable prospects in the labour market. The focus is on the technology, port and healthcare sectors. In order to establish to which sector an MBO specialisation belongs, we use the National Educational Classification (SOI).

This classification makes it possible to separate sub-sectors offering less favourable labour market prospects from the main sector to which they belong, such as childcare in the healthcare sector. We use this relatively strict demarcation to link them as closely as possible to the BRIDGE interventions (and thus the Career Start Guarantees). Technology and healthcare are relatively straightforward to define using SOI codes.⁴³ This is more difficult for the port-related sector. Since work in the port focuses on technology and logistics, we decided to adopt the latter sector to use as an indication for the port.⁴⁴

3.4.1 Educational choice

Figure 3.7 shows the share of these three specialisations for first-year MBO students from South Rotterdam. The total share of technology, logistics and healthcare has increased in recent years. Especially in logistics there has been a sharp increase, from over three percent in 2007 to approximately eleven percent in 2016. An increase in healthcare is also visible. The share of technological specialisations did not increase when looking at the entire period. As of 2015, it started to increase somewhat, following a period with fewer technology students.

Figure 3.7 Percentage of first-year MBO students in different specialisations, South Rotterdam



When we compare the trend in the percentage of students with a technological specialisation between different regions (figure 3.8), technology appears to be a less popular choice in the large cities than in the Netherlands as a whole. The same applies to both North Rotterdam and South Rotterdam, although the share here is slightly lower overall than that of the other large cities. Furthermore, a downward trend can be observed until 2014, which subsequently stabilised or even increased, especially in Rotterdam.

⁴³ Technology is one of the main sector groups (6) in the SOI. For healthcare, we use both healthcare (SOI: 81) and housekeeping (SOI: 821).

⁴⁴ A combination of transport and logistics (SOI: 92) and transport and logistics with technology (SOI: 974).

Figure 3.8 Percentage of first-year MBO students following specialisations in the technology sector

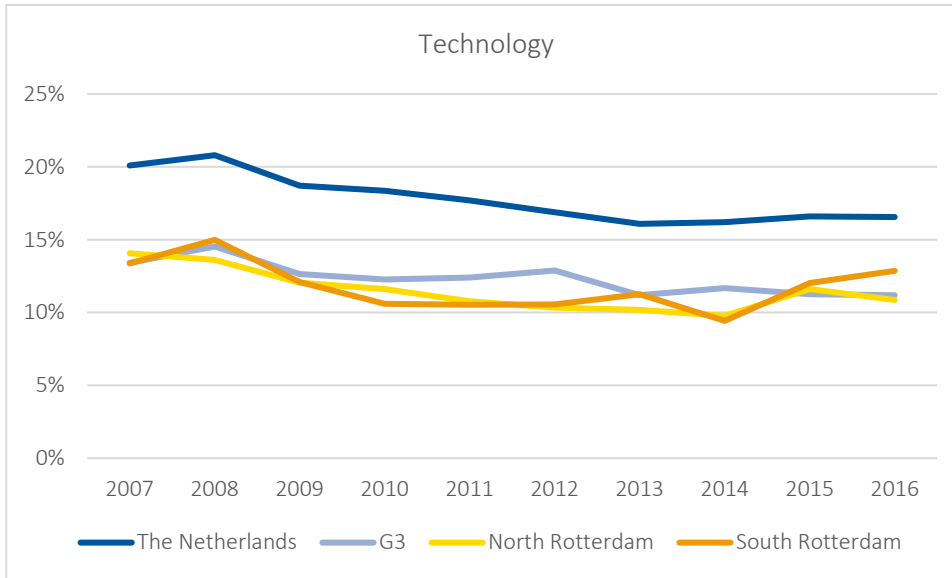
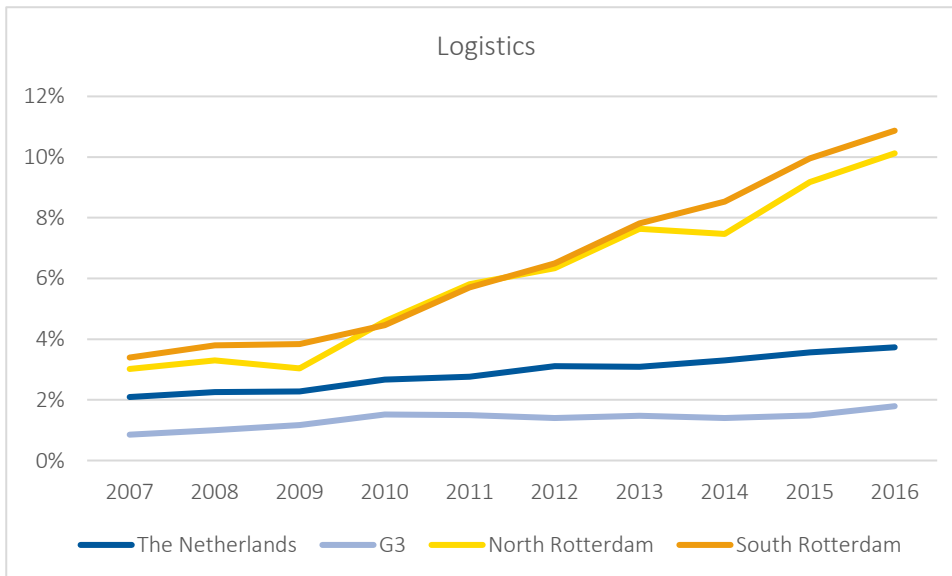


Figure 3.9 shows the development of the logistics sector. The share of these specialisations displays an upward trend. This increase is particularly strong in Rotterdam, which – in line with expectations – is related to the attraction exerted by the Port of Rotterdam.

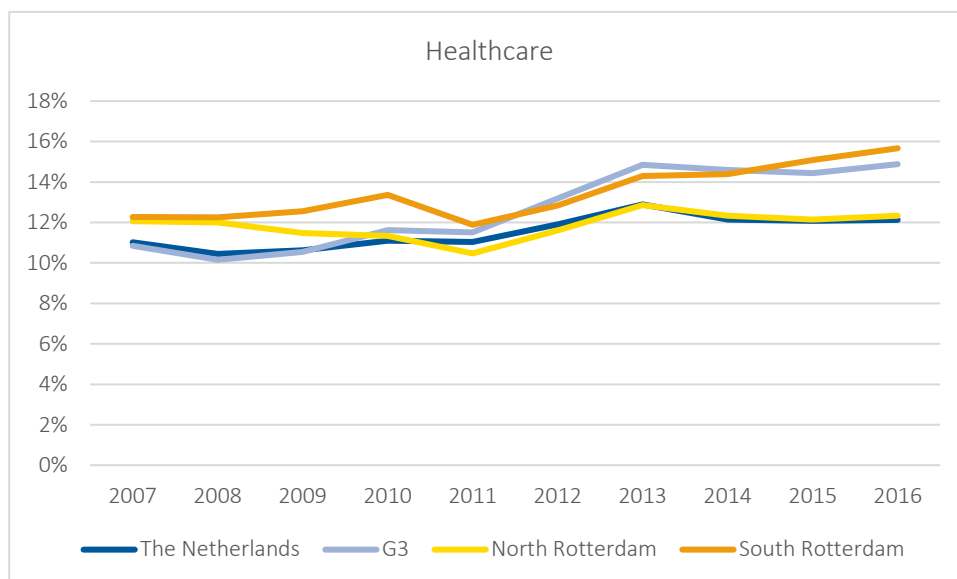
Figure 3.9 Percentage of first-year MBO students following specialisations in the logistics sector



When we examine the healthcare sector in figure 3.10, it appears that in South Rotterdam, a larger share of young people chooses a healthcare specialisation than in North Rotterdam.⁴⁵ This picture is consistent with the sector choices in VMBO, although the percentages for MBO differ considerably less.

⁴⁵ A relatively high number of older students choose a (work-based / BBL) specialisation in the healthcare sector. To control for this, we specifically examined the group of pupils up to the age of 23 years. The image for this group of pupils is consistent with that arising from figure 3.10.

Figure 3.10 Percentage of first-year MBO students following specialisations in the healthcare sector



Just as in VMBO, we specifically looked at young people with a migration background. In MBO this appears to mainly have an effect with regard to the technology sector: while the total population of MBO students in the Netherlands is far more likely to choose for technology than in the large cities, the percentages for students with a migration background are not so far apart. The picture hardly changes in the logistics and healthcare sectors. Similar figures as those shown above, but for the group of young people with a migration background, can be found in Appendix III.

3.4.2 Level of education

The trends above do not point to major differences in the choice of specialisation between South Rotterdam and the other regions. Students from South Rotterdam are even more likely to choose a specialisation in the healthcare sector. Therefore, the weaker labour market position of young people in South Rotterdam does not appear to be caused by the fact that these people are less likely to choose a specialisation that offers more favourable labour market prospects. However, one should also take into account the differences in the level of education within a specialisation.

In fact, CBS figures reveal that the level of education is lower in South Rotterdam than it is in North Rotterdam. In 2016, 40 percent of first-year MBO students from South Rotterdam followed a level 4 (the highest level in MBO) course; this percentage was around 46 percent in North Rotterdam. Appendix III contains figures that display the trends of the level of education for both regions.

The level of education plays a major role in the healthcare sector with regard to opportunities for young people in the labour market: for example, the chance of finding work is low for young people who have followed the level 2 specialisation *'Helpende Zorg en Welzijn'* (healthcare and social work assistant), while similar specialisations at MBO levels 3 and 4 (both carers and nurses) have a good chance of finding a job.⁴⁶ If we specifically look at healthcare, it appears that the level of education is higher in North Rotterdam than in South Rotterdam (see table 3.1). The difference in relation to the Netherlands as a whole is greater still. However, there is a positive trend in the level of education in South Rotterdam.

⁴⁶ See [Kans op stage, leerbaan en werk](#) (Opportunity for internship, apprenticeship and work) by SBB.

Table 3.1 Percentage of first-year MBO pupils following the healthcare specialisation at the different levels

| Region | Level | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------|-------|------|------|------|------|------|------|------|------|------|------|
| The Netherlands | MBO 2 | 39% | 38% | 38% | 38% | 36% | 34% | 32% | 31% | 28% | 29% |
| | MBO 3 | 26% | 27% | 26% | 25% | 27% | 30% | 29% | 28% | 29% | 28% |
| | MBO 4 | 35% | 35% | 37% | 37% | 37% | 36% | 38% | 41% | 43% | 43% |
| G3 | MBO 2 | 56% | 55% | 57% | 58% | 55% | 57% | 53% | 49% | 47% | 51% |
| | MBO 3 | 19% | 19% | 16% | 17% | 18% | 18% | 20% | 22% | 23% | 19% |
| | MBO 4 | 24% | 26% | 26% | 25% | 27% | 25% | 27% | 29% | 31% | 29% |
| North Rotterdam | MBO 2 | 63% | 61% | 57% | 54% | 49% | 47% | 47% | 44% | 36% | 44% |
| | MBO 3 | 16% | 16% | 18% | 16% | 20% | 24% | 21% | 25% | 26% | 21% |
| | MBO 4 | 21% | 23% | 25% | 30% | 31% | 29% | 32% | 31% | 37% | 36% |
| South Rotterdam | MBO 2 | 61% | 63% | 58% | 60% | 59% | 57% | 52% | 49% | 48% | 45% |
| | MBO 3 | 19% | 20% | 18% | 18% | 20% | 20% | 21% | 24% | 22% | 23% |
| | MBO 4 | 20% | 17% | 25% | 23% | 22% | 23% | 27% | 27% | 30% | 32% |

The learning pathway⁴⁷ may also play a role: research reveals that the work-based (BBL) pathway offers better labour market prospects than school-based (BOL) pathway (ROA, 2017). The percentage of pupils following a work-based pathway is similar for North and South Rotterdam, but both lag behind when compared with the Netherlands as a whole (see Table III.4 in the Appendix). Moreover, the percentage has fallen substantially in recent years. This may have a negative impact on young people's labour market possibilities.

3.4.3 Dropout

One of the BRIDGE objectives is to combat the number of young people dropping out of education. Therefore, we do not only examine the educational choices that students make, but also whether they are still following a specialisation in the same sector a year after this choice. Figures 3.11 to 3.13 show the corresponding trends for the technology, logistics and healthcare sectors. With regard to the Netherlands as a whole, the percentage that is still following a specialisation in the same sector a year after starting the MBO specialisation (and thus did not drop out or already obtain a diploma) increased. The only exception at the national level concerns the logistics specialisation. Moreover, this percentage is considerably lower than for technology and healthcare.

When we compare the different regions, we see that the large cities are lagging behind in all specialisations compared with the Netherlands as a whole. There is, however, an upward trend in Rotterdam (both in the North and the South), which means that they have caught up somewhat. This mainly applies to the logistics and healthcare specialisations, for which the percentage is now comparable with the Netherlands. With regard to the technological specialisation, the difference is as yet considerable and there is still room for improvement.

⁴⁷ MBO offers two possible pathways: a school-based pathway (BOL), in which the majority of learning takes place at school and a work-based pathway (BBL), in which the majority of learning takes place at a company, where the student is officially employed

Figure 3.11 Percentage of first-year MBO students who are following the same specialisation a year after starting

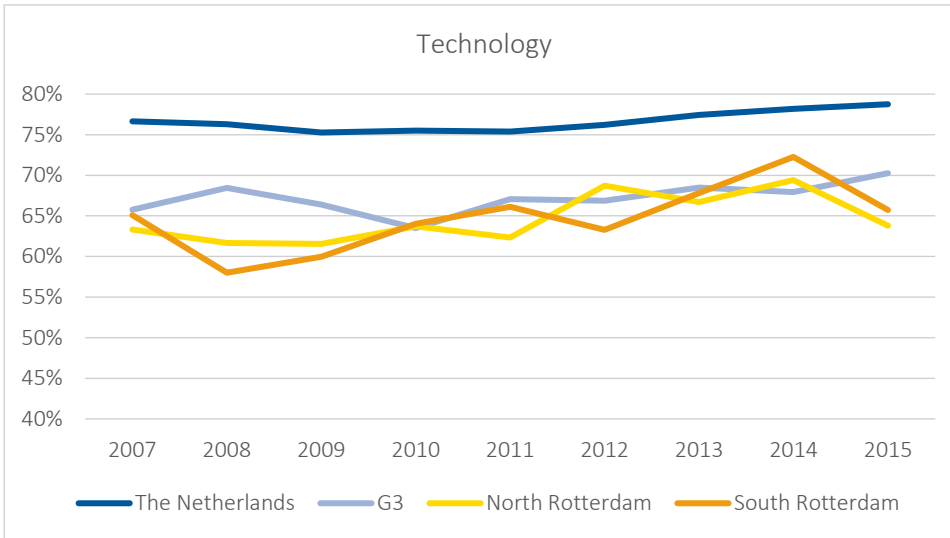


Figure 3.12 Percentage of first-year MBO students who are following the same specialisation a year after starting

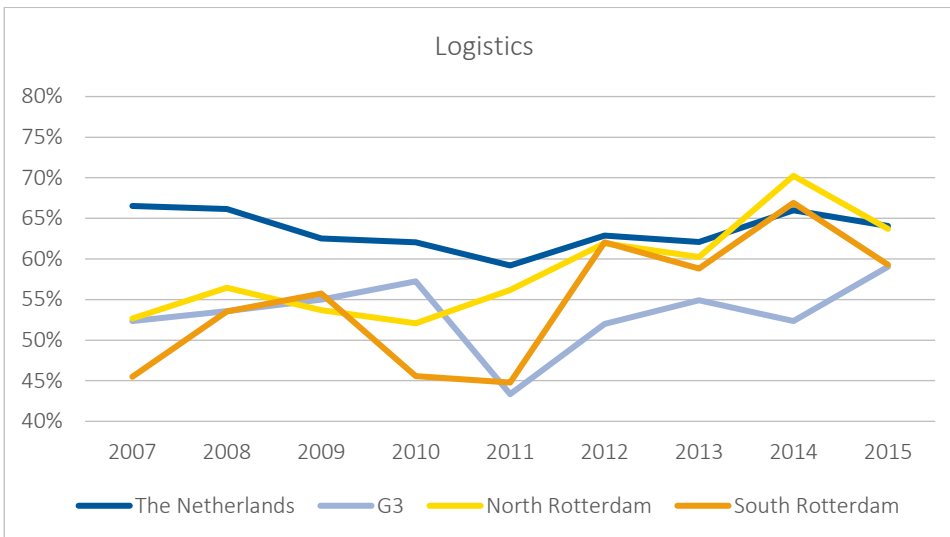
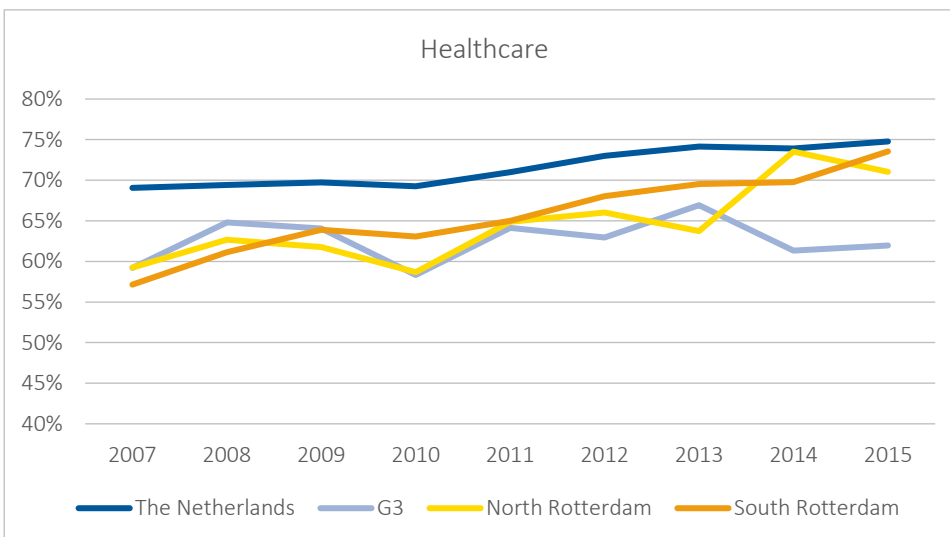


Figure 3.13 Percentage of first-year MBO students who are following the same specialisation a year after starting



3.4.4 Graduation

As far as labour market prospects are concerned, not only the particular MBO specialisation a young person has followed is important, but also whether or not he or she successfully completed it. Therefore, below we examine the percentage of pupils who started an MBO course involving technology, logistics or healthcare⁴⁸ that ultimately obtained a qualification in the same specialisation.⁴⁹ Given that this information is not available for more recent years (these students have only just enrolled), it currently is difficult to say anything about the effect of BRIDGE on the pupils' qualifications. It will be possible to examine the results of pupils who started during the BRIDGE period at a later stage.

Tables 3.2, 3.3 and 3.4 show the percentages of MBO students in South Rotterdam that obtain a diploma in the same specialisation in which they enrolled, for the technology, logistics and healthcare sector respectively. The percentage of graduates in the technological specialisation increased over time; the trend is more complex in the other sectors. Another thing that stands out is that the share of students who graduate in the same sector is lower for those who chose technology than for the other two sectors. With regard to the logistics sector, students obtain a diploma relatively quickly, because on average the level here is slightly lower than in the other specialisations and the study duration of this specialisation is shorter (also at higher levels).

Compared with the Netherlands as a whole, relatively few MBO students in South Rotterdam graduate in the same sector as in which they started. The difference is fairly substantial, especially in the technology sector, although it has decreased somewhat over time. Only for the logistics sector the percentage in South Rotterdam is close to that for the Netherlands as a whole. Appendix III contains figures that represent the percentage three years after the beginning of the specialisations for the different regions.

Table 3.2 Percentage of MBO students in South Rotterdam enrolled in technology who graduate in this sector

| Starting year | Graduated in the technology sector | | | | |
|---------------|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| | 1 year after start | 2 years after start | 3 years after start | 4 years after start | 5 years after start |
| 2007 | 7% | 22% | 31% | 39% | 42% |
| 2008 | 10% | 21% | 31% | 38% | 40% |
| 2009 | 9% | 23% | 34% | 41% | 43% |
| 2010 | 8% | 27% | 34% | 41% | 45% |
| 2011 | 10% | 28% | 38% | 47% | 49% |
| 2012 | 9% | 30% | 42% | 48% | |
| 2013 | 9% | 31% | 40% | | |
| 2014 | 8% | 29% | | | |
| 2015 | 10% | | | | |

Table 3.3 Percentage of MBO pupils in South Rotterdam enrolled in logistics who graduate in this sector

| Starting year | Graduated in the logistics sector | | | | |
|---------------|-----------------------------------|---------------------|---------------------|---------------------|---------------------|
| | 1 year after start | 2 years after start | 3 years after start | 4 years after start | 5 years after start |
| 2007 | 31% | 43% | 50% | 57% | 57% |
| 2008 | 18% | 41% | 48% | 53% | 54% |
| 2009 | 23% | 36% | 48% | 56% | 58% |
| 2010 | 32% | 44% | 52% | 57% | 58% |
| 2011 | 23% | 35% | 43% | 47% | 48% |
| 2012 | 23% | 41% | 54% | 57% | |
| 2013 | 23% | 41% | 52% | | |
| 2014 | 25% | 45% | | | |
| 2015 | 28% | | | | |

⁴⁸ This is the same group as in figures 3.9 to 3.11.

⁴⁹ Only the highest diploma obtained is included; if a young person obtains a diploma below the level that he or she had already achieved, the new diploma is not counted (this is not in the SSB file that we use). As a result, the percentage may be slightly lower.

Table 3.4 Percentage of MBO pupils in South Rotterdam enrolled in healthcare who graduate in this sector

| Starting year | Graduated in the healthcare sector | | | | |
|---------------|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| | 1 year after start | 2 years after start | 3 years after start | 4 years after start | 5 years after start |
| 2007 | 15% | 37% | 47% | 53% | 55% |
| 2008 | 16% | 44% | 55% | 59% | 61% |
| 2009 | 11% | 37% | 48% | 55% | 57% |
| 2010 | 10% | 38% | 48% | 53% | 56% |
| 2011 | 14% | 39% | 50% | 57% | 60% |
| 2012 | 11% | 36% | 49% | 56% | |
| 2013 | 9% | 36% | 51% | | |
| 2014 | 10% | 36% | | | |
| 2015 | 14% | | | | |

3.5 CONCLUSION

The BRIDGE activities are used to reduce the mismatch between educational choices made by young people and the labour market demands in South Rotterdam, and thereby decrease the extent to which the region lags behind North Rotterdam, the other large cities and the rest of the Netherlands. This chapter examined a number of educational indicators in secondary education and secondary vocational education. This provides us with a first image of the effect that BRIDGE has had to date on the educational choices of young people in South Rotterdam. However, it is also possible that these developments result from factors other than those related to the activities that are part of BRIDGE. Hence, it is not possible to draw conclusions about the effects of BRIDGE based on these descriptive results. In a later stage, we will use a multinomial model that tests the connection between participation in the interventions and the decision to specialize in a particular sector.

The general image that emerges from this chapter is that the degree to which South Rotterdam lags behind in terms of educational choices does not appear to be that large, especially if you look at the past few years. The share of pre-vocational secondary education pupils who specialise in the technology sector in their third year has increased, thus reducing the gap. A relatively high number of pupils choose for healthcare and social work in pre-vocational secondary education. Moreover, we should add that this will not always improve labour market prospects; a significant share of these pupils later specialises in welfare or enrol in a healthcare course at MBO level 2, for which there are fewer job opportunities.

In South Rotterdam and North Rotterdam, students in secondary vocational education (MBO) often specialise in logistics. Furthermore, their number has increased dramatically in recent years. South Rotterdam is lagging behind compared with the Netherlands when it comes to technical MBO specialisations, but this applies to all large cities. The share of students specialising in healthcare is quite similar to that of the other regions, even though it has increased more in South Rotterdam than in North Rotterdam. Also for MBO, the results reveal that South Rotterdam no longer really lags behind the other regions in terms of educational choices. Insofar as young people in South Rotterdam still find themselves in a weaker labour market position, this does not appear to be caused by the fact that these people are less likely to choose a specialisation that offers more favourable labour market prospects. It is possible that differences in the level of education do have an impact on young people's labour market position. The MBO level is still lower in South Rotterdam than in other regions. This could have negative consequences, especially in the healthcare sector, because labour market prospects for lower level (MBO level 2) healthcare specialisations are weak.

If we examine the percentage of pupils who are still following a specialisation in the same sector a year after the start, it appears that South Rotterdam is lagging behind the rest of the Netherlands with regard to all three sectors. This gap has been reduced in the logistics and healthcare sectors, but the difference is still substantial for technology. Thus, improvements could still be made in this area.



LABOUR MARKET RESULTS

4 LABOUR MARKET RESULTS

4.1 INTRODUCTION

The educational interventions in BRIDGE focus on helping more young people from South Rotterdam get a job and sustainably enter the employment process. It is currently not yet possible to monitor the young people involved in these interventions in the labour market in the long term. Therefore, this chapter examines the overall effect of different MBO (secondary vocational education) specialisations on the job prospects of the youngsters that followed these specialisations (in different regions). This will enable us to deduce whether a decision to specialise in technology, healthcare or logistics, also improves opportunities of young people from South Rotterdam in the labour market and whether the extent of this effect is the same as in North Rotterdam, the other large cities and the Netherlands.

How do young people from South Rotterdam that opt for an MBO specialisation in technology, healthcare or logistics perform in the labour market compared with young people choosing a different MBO specialisation? Are the effects of these specialisations lower, the same or greater for young people from South Rotterdam than for those from North Rotterdam, the other large cities and the Netherlands as a whole? And how is the labour market position of young people from South Rotterdam developing compared with those from North Rotterdam, the other large cities and the Netherlands as a whole? These questions are key in this chapter on labour market results.

4.2 THE LABOUR MARKET POSITION OF YOUNG PEOPLE IN SOUTH ROTTERDAM

In order to compare the labour market activities of young people who opted for a specific MBO specialisation, we examined when they found a job, received benefits or followed higher education during the period after the specialisation. We did so for all young people who followed an MBO course between 2006 and 2016. For these situations, we calculated so-called fractions: the amount of time a person finds himself in a particular situation. For example, if the benefits fraction is five percent, this means that the person concerned, after completing the MBO specialisation until the end of the observation period, received benefits for five percent of the time.⁵⁰ The MBO specialisations can end in one of two ways: graduation or ending the course prematurely (dropping out). The benefits fraction for an individual is calculated as follows:

$$\text{benefits fraction} = \frac{\text{number of days person } i \text{ receives a benefit}}{\text{total number of days person } i \text{ spent in the observation period}}$$

With regard to the fraction that a person spends working, we differentiate between two fractions, one that does and one that does not take into account part-time work. The 'job' fraction does not take part-time work into account. This means that the fraction indicates the amount of time a person has a job, regardless of the size of the job. The job fraction for an individual is calculated as follows:

$$\text{job fraction} = \frac{\text{number of days person } i \text{ has a job}}{\text{total number of days person } i \text{ spent in the observation period}}$$

⁵⁰ The observation period ends at 31-12-2016.

The '(part-time) job' fraction does take part-time work into account and indicates the amount of time a person actually spends working. The (part-time) job fraction for an individual is calculated as follows:

$$(part-time) \text{ job fraction} = \frac{\text{number of full-time days person } i \text{'s job has}}{\text{total number of days person } i \text{ spent in the observation period}}$$

The number of full-time days is calculated (by Statistics Netherlands) as the number of days of employment * part-time factor. The part-time factor is the ratio between the (weekly) working duration and the usual full-time working duration (per week) according to the CLA or, if the CLA is not known, the most common weekly working duration ≥ 35 hours. The (part-time) job fraction is therefore equal to the job fraction multiplied by the part-time factor. Imagine that a person worked for half of the observation period. The job fraction would be 50 percent. If this job concerned a part-time job, working two days out of five per week (i.e. 40 percent of a full-time job), the (part-time) job fraction would be 50% * 40% = 20%.

The age at the time that the specialisation is completed is restricted from 16 to 25 years (the most common graduation ages). To ensure that the period for which the fraction is calculated is not too short, this period always begins before 2016. This means that the fractions are based on a period of at least one year. Young people who obtained a diploma in *higher* education during the observation period were not included. This means that we consistently refer to young people whose highest qualification is an MBO diploma.

4.2.1 Comparison of labour market positions

We start by comparing the labour market positions of young people who completed their MBO specialisation (obtained a diploma). Tables 4.1 to 4.4 contain the average fractions (job, (part-time) job, benefit and higher education) for MBO graduates in four different regions: South Rotterdam, North Rotterdam, G3 and (the rest of) the Netherlands. The fractions are distinguished into the specialisation (technology, healthcare, logistics and other) and level (MBO 2, MBO 3 and MBO 4) of the graduates.

Table 4.1 shows the job fractions, without taking the size of the job into account. The fraction of time that MBO graduates are employed differs only slightly between South Rotterdam and North Rotterdam. The job fractions in the other large cities (Amsterdam, The Hague and Utrecht) are often slightly higher. For the rest of the Netherlands, the job fractions are structurally higher than in the four large cities.

Table 4.1 Job fractions according to specialisation and level of education – MBO graduates

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|-------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 55.5% | 58.0% | 61.1% | 71.8% |
| MBO 3 | 65.8% | 66.1% | 69.1% | 77.7% |
| MBO 4 | 67.9% | 69.0% | 70.6% | 78.6% |
| <i>Technology</i> | | | | |
| MBO 2 | 68.5% | 67.1% | 69.6% | 81.0% |
| MBO 3 | 82.0% | 82.1% | 81.0% | 87.9% |
| MBO 4 | 77.6% | 75.4% | 75.4% | 83.6% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 48.0% | 50.0% | 54.6% | 65.7% |
| MBO 3 | 85.2% | 82.2% | 86.1% | 93.6% |
| MBO 4 | 85.7% | 84.3% | 84.6% | 91.1% |
| <i>Logistics</i> | | | | |
| MBO 2 | 63.5% | 60.2% | 69.1% | 84.1% |
| MBO 3 | 80.8% | 80.3% | 81.2% | 83.3% |
| MBO 4 | 78.5% | 76.0% | 81.0% | 87.7% |

Table 4.2 (Part-time) job fractions according to specialisation and level of education –graduates

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|-------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 35.0% | 36.4% | 38.0% | 48.7% |
| MBO 3 | 42.3% | 41.4% | 43.2% | 50.5% |
| MBO 4 | 41.5% | 40.8% | 41.8% | 48.5% |
| <i>Technology</i> | | | | |
| MBO 2 | 54.1% | 53.8% | 55.1% | 68.2% |
| MBO 3 | 71.8% | 70.3% | 70.6% | 79.4% |
| MBO 4 | 59.0% | 53.4% | 52.3% | 63.8% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 23.0% | 24.4% | 26.7% | 33.9% |
| MBO 3 | 58.4% | 57.5% | 60.9% | 64.1% |
| MBO 4 | 58.1% | 57.4% | 58.0% | 62.8% |
| <i>Logistics</i> | | | | |
| MBO 2 | 48.9% | 44.7% | 54.0% | 70.6% |
| MBO 3 | 70.2% | 67.9% | 69.1% | 71.6% |
| MBO 4 | 64.7% | 61.6% | 65.7% | 70.5% |

In South Rotterdam, MBO 3 and MBO 4 level technology and healthcare courses do relatively well, while healthcare and other specialisations at MBO 2 level offer relatively poor job prospects. If one also takes into account the size of the jobs (table 4.2), the fractions in South Rotterdam are often slightly higher than those in North Rotterdam. Job prospects are more favourable for the MBO level 4 technological courses in South Rotterdam than in the North and in the three other large cities. The (part-time) job fractions are structurally lower than the job fractions, because this benchmark takes into account the extent to which people work part time. The greatest differences are in healthcare and other specialisations, which is consistent with the choice according to gender for these specialisations: women work part-time more often and are more likely to choose these courses. What is striking is that the correction for part-time work in healthcare has a greater effect at level 2 than at levels 3 and 4.

Table 4.3 contains the fractions of time that young MBO graduates received benefits. These fractions are often slightly higher in Rotterdam than in the three other large cities. In the rest of the Netherlands, the fractions are considerably lower. In South Rotterdam, the chances of receiving benefits in most cases decrease if the specialisation followed is in the technology, healthcare or logistics sector. The only exception in this regard is for MBO level 2 healthcare and logistics.

Table 4.3 Benefit fractions according to specialisation and level of education – MBO graduates

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|-------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 11.0% | 11.1% | 9.7% | 7.9% |
| MBO 3 | 9.2% | 8.5% | 7.7% | 5.0% |
| MBO 4 | 5.9% | 5.4% | 5.3% | 3.4% |
| <i>Technology</i> | | | | |
| MBO 2 | 7.8% | 9.4% | 7.7% | 6.1% |
| MBO 3 | 5.0% | 5.2% | 4.8% | 3.6% |
| MBO 4 | 3.3% | 3.1% | 2.7% | 1.9% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 12.4% | 12.5% | 11.8% | 10.0% |
| MBO 3 | 3.4% | 4.4% | 3.4% | 2.0% |
| MBO 4 | 3.3% | 3.1% | 2.7% | 1.7% |
| <i>Logistics</i> | | | | |
| MBO 2 | 11.1% | 15.0% | 10.7% | 5.5% |
| MBO 3 | 4.7% | 5.6% | 4.7% | 3.1% |
| MBO 4 | 3.4% | 3.8% | 2.8% | 1.5% |

Table 4.4 Higher education fractions according to specialisation and level of education – MBO graduates

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|-------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 0.4% | 0.7% | 0.4% | 0.3% |
| MBO 3 | 4.6% | 6.3% | 6.0% | 6.6% |
| MBO 4 | 34.9% | 36.4% | 34.1% | 27.7% |
| <i>Technology</i> | | | | |
| MBO 2 | 0.3% | 0.4% | 0.3% | 0.2% |
| MBO 3 | 1.5% | 1.1% | 0.7% | 0.3% |
| MBO 4 | 26.9% | 27.7% | 27.8% | 19.7% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 0.1% | 0.4% | 0.3% | 0.2% |
| MBO 3 | 0.3% | 1.2% | 0.5% | 0.2% |
| MBO 4 | 16.4% | 17.3% | 18.6% | 13.0% |
| <i>Logistics</i> | | | | |
| MBO 2 | 0.2% | 0.0% | 0.2% | 0.1% |
| MBO 3 | 0.0% | 0.5% | 0.1% | 0.3% |
| MBO 4 | 15.8% | 20.6% | 18.5% | 14.6% |

The fraction of time that young MBO graduates – especially graduates of MBO 4 – continue to higher education is shown in table 4.4. These fractions are lower in the rest of the Netherlands than in the four largest cities. In South Rotterdam, young MBO graduates in one of the specialisations in technology, healthcare or logistics are less likely to continue to higher education than those from other specialisations. Compared with young people from North Rotterdam or in the three other large cities, young people in South Rotterdam who complete a specialisation in technology, healthcare or logistics are also (slightly) less likely to continue to higher education.

The fractions for young people who have not successfully completed their MBO specialisation and dropped out are considerably lower across the board with regard to work and higher in terms of benefits. See Appendix IV for the relevant tables.

4.2.2 Explanation for the differences in labour market positions

Some of the differences in labour market results between the regions are due to differences in the composition of the population in these regions. For example, the chances of finding a job or of being on benefits depend on gender, age (at the time one leaves school) and ethnic origin (with or without a migration background⁵¹). Educational choices, both in terms of specialisation and level, and whether or not the pupil completes his or her study, also play a role. To gain insight into these differences and the role of the different characteristics herein, we examined the effect of these characteristics on the level of the various fractions for each region.⁵² This allows us to subsequently calculate the level of e.g. the average job fraction for someone with a particular profile. Then, we can compute the average time spent by someone with a particular profile working in South Rotterdam and for a similar person in (the rest of) the Netherlands. The analysis includes the job fractions and benefit fractions for all school leavers, so including pupils who dropped out, with the exception of those who continued to higher education.

⁵¹ For people with a migration background, a differentiation is also made according to generation (first or second generation).

⁵² This is achieved using regression analyses.

Table 4.5 Comparison of job and benefits fractions – MBO (secondary vocational education) school leavers (excl. pupils who went on to higher education)

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|---|-----------------|-----------------|-------|-----------------|
| <i>Actual fractions</i> | | | | |
| Average job fraction | 59.3% | 59.8% | 62.9% | 77.7% |
| Average (part-time) job fraction | 41.2% | 41.0% | 41.9% | 56.9% |
| Average benefit fraction | 11.8% | 11.6% | 10.3% | 6.5% |
| <i>Fictive fractions based on similar populations</i> | | | | |
| Average job fraction | 71.9% | 70.6% | 73.1% | 76.4% |
| Average (part-time) job fraction | 53.4% | 51.1% | 52.0% | 55.2% |
| Average benefit fraction | 8.0% | 7.7% | 7.4% | 7.0% |

Table 4.5 shows this comparison for the four different regions in the case of an ‘average MBO school leaver’ in the Netherlands. An ‘average MBO school leaver’ in the Netherlands means that the average value of all of the characteristics is taken for all MBO school leavers in the Netherlands. Table 4.5 contains the actual job and benefit fractions for MBO school leavers (excluding pupils who continued to higher education) and the fictive fractions based on the average MBO school leaver. It reveals that a large share of the difference between the regions levels out if a similar population (including educational choice and possible dropouts) is assumed. For example, the average MBO school leaver in South Rotterdam has a job for approximately 72 percent of the time. If this person would live in North Rotterdam or in one of the three other large cities, the percentage of time that this person would have a job is similar (approximately 71% and 73%, respectively). In the rest of the Netherlands, this percentage is slightly higher, at 76 percent.

The part-time job fractions and benefit fractions reveal the same picture, in which the fractions based on similar populations in South Rotterdam, North Rotterdam and the G3 come closer to the fraction that applies to the rest of the Netherlands.

Table 4.6 focuses in more detail on the causes of the differences between the actual and fictive fractions in South Rotterdam. What differences in population and education between South Rotterdam and (the rest of) the Netherlands cause the actual fractions to be so much lower (or higher in the case of benefits) than they would be if the population and education were the same as the average in the Netherlands? In the case of the job fraction, the difference between the actual fraction (59.3%) and the fictive fraction (71.9%) is equal to 12.6 percentage points. Table 4.6 shows how large the effects of different characteristics are. The difference in the educational choice in South Rotterdam compared with the average in the Netherlands explains 2.9 percentage points of the difference in the job fraction. In other words, almost 23 percent of the total difference in job fraction is caused by differences in educational choices. The dropout rate, which is higher in South Rotterdam than on average in the Netherlands, also explains part (approximately 17 percent) of the difference in the job fraction. However, the greatest share of the difference in the job fraction is the result of differences in ethnic origin. In South Rotterdam, a far greater share of MBO (secondary vocational education) school leavers has a migration background. Together with the fewer job opportunities available to this group, this explains almost 60 percent of the difference.

Table 4.6 Explanation of the difference between the actual and fictive fractions in South Rotterdam

| | Job | | (Part-time) job | | Benefits | |
|---|-------------------|----------|-------------------|----------|-------------------|----------|
| | Percentage points | Relative | Percentage points | Relative | Percentage points | Relative |
| Educational choice (specialisation + level) | -2.9 | 22.7% | -3.0 | 24.2% | 1.2 | 31.4% |
| Dropouts | -2.1 | 16.9% | -1.6 | 13.1% | 0.9 | 23.3% |
| Gender | -0.2 | 1.7% | -0.4 | 3.0% | 0.1 | 3.1% |
| Economic climate (in school-leaving year) | -0.0 | -0.3% | 0.1 | -0.6% | -0.0 | 0.7% |
| School leaving age | -0.0 | 0.1% | 0.6 | -5.0% | 0.7 | 18.4% |
| Ethnic origin (migration background) | -7.4 | 58.8% | -8.0 | 65.3% | 0.9 | 23.1% |
| Total | -12.6 | | -12.3 | | 3.9 | |

The analysis also takes into account possible effects of the economic climate. The moment in time at which a person enters the labour market, has an impact on his or her chances of finding a job due to the economic climate. This means that differences in the relative size of the cohorts may also have an effect on the difference in the job fraction. However, we find this effect to be minimal.

Also if one takes into account the size of jobs, we see that the greatest share of the difference in job fraction is explained by differences in ethnic origin, followed by the educational choice and dropping out of school. The effect of characteristics on the benefit fraction is different. In this case, educational choices exert the greatest effect, followed by dropping out and ethnic origin (both have approximately the same effect). A fourth factor also plays a role here, which concerns the age at which pupils drop out of school. The older the pupil, the more time he or she spends in an unemployment benefit.⁵³ The average age is slightly higher in South Rotterdam.

Table 4.7 shows how educational choices made by this group of MBO school leavers between 2006 and 2015 are distributed across the different levels and specialisations, in South Rotterdam as well as in the Netherlands. What stands out is that young people in South Rotterdam are more likely to have a lower level at MBO. Almost half followed MBO at level 2 compared with a third in the Netherlands, while the percentage that followed MBO level 4 is clearly lower than the corresponding percentage for the Netherlands. With regard to the MBO specialisation, technology is a less popular choice in South Rotterdam, while healthcare and logistics are more popular.

Table 4.7 Educational choices (MBO) according to level and specialisation

| | | South Rotterdam | | The Netherlands | |
|-------------------|-------|-----------------|-------|-------------------|-------|
| <i>Other</i> | MBO 2 | 25.4% | 18.9% | MBO 2 | 49.1% |
| | MBO 3 | 20.5% | 20.5% | MBO 3 | 27.2% |
| | MBO 4 | 17.6% | 23.6% | MBO 4 | 23.7% |
| <i>Technology</i> | MBO 2 | 8.8% | 9.8% | | |
| | MBO 3 | 2.4% | 5.9% | | |
| | MBO 4 | 2.3% | 4.8% | | |
| <i>Healthcare</i> | MBO 2 | 10.5% | 5.8% | <i>Other</i> | 63.5% |
| | MBO 3 | 2.5% | 3.1% | <i>Technology</i> | 13.5% |
| | MBO 4 | 2.7% | 4.1% | <i>Healthcare</i> | 15.7% |
| <i>Logistics</i> | MBO 2 | 4.4% | 2.3% | <i>Logistics</i> | 7.4% |
| | MBO 3 | 1.9% | 0.7% | | |
| | MBO 4 | 1.1% | 0.6% | | |

4.2.3 Effect of technology, healthcare and logistics

One of the questions that arises is whether the effects of an MBO specialisation in technology, healthcare or port, are lower, the same or greater for young people in South Rotterdam than for those in North Rotterdam, the other large cities and the Netherlands as a whole. Based on the previously cited regression analyses, we can make an estimate of the average effect on the (future) labour market position for a young person following an MBO specialisation in one of these three fields instead of a specialisation in one of the other fields.

Table 4.8 contains the effects of a specialisation in technology, healthcare and logistics, relative to a different specialisation, on the fraction of time that a person spends working. These effects are shown for the four different regions. Let us take, for example, a young person from South Rotterdam who follows a technological specialisation at MBO level 2. The table shows that, on average, this young person will have a job for a longer period of time (8.0 percentage points) than if the same person had followed a different specialisation at MBO level 2. In other words, each of the effects in table 4.8 is the effect compared to the other specialisations.

⁵³ This may be partly caused by the conditions related to obtaining a benefit. To obtain social assistance, an individual must be 18 years or older. For unemployment benefits (WW), one should have been employed first.

Table 4.8 The effect of technology, healthcare and logistics on the job fraction

| | | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-------|-----------------|-----------------|------|-----------------|
| <i>Technology</i> | MBO 2 | 8.0 | 5.7 | 4.1 | 6.5 |
| | MBO 3 | 9.5 | 10.9 | 5.2 | 6.2 |
| | MBO 4 | 3.9 | 5.1 | 1.2 | 2.4 |
| <i>Healthcare</i> | MBO 2 | -4.7 | -8.3 | -6.2 | -6.0 |
| | MBO 3 | 15.4 | 12.7 | 11.0 | 12.2 |
| | MBO 4 | 12.4 | 11.2 | 9.5 | 8.3 |
| <i>Logistics</i> | MBO 2 | 7.9 | 4.4 | 7.9 | 9.9 |
| | MBO 3 | 8.6 | 8.1 | 1.6 | 3.4 |
| | MBO 4 | 2.5 | 3.4 | 5.0 | 5.4 |

The effects of technology, healthcare and logistics specialisations are relatively large in South Rotterdam, when compared with North Rotterdam, the three other large cities and the rest of the Netherlands. Furthermore, they are positive, with the exception of healthcare at MBO level 2. This shows that if young people in secondary vocational education are encouraged to opt for one of the courses in technology, healthcare or logistics, one can expect this to positively influence the position of the young people concerned in the labour market. As previously mentioned, this does not apply to specialisations in healthcare at MBO level 2, for which there are fewer job opportunities than for other MBO level 2 specialisations.

If one takes into account the size of the jobs, the effects are often larger (see table 4.9). In South Rotterdam, the effects of technology and logistics specialisations are larger, while the effects of healthcare are lower. This indicates that in healthcare (that is, in the jobs obtained if a specialisation in healthcare is followed) people are more likely to work part-time, and in the sectors technology and logistics they are more likely to work full-time. The largest effects are at MBO level 3.

The effects of the educational choices on the time that people end up on benefits, are shown in table 4.10. This largely provides the same picture as before.

Table 4.9 The effect of technology, healthcare and logistics on the (part-time) job fraction

| | | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-------|-----------------|-----------------|------|-----------------|
| <i>Technology</i> | MBO 2 | 11.0 | 9.1 | 8.1 | 11.7 |
| | MBO 3 | 18.1 | 19.2 | 15.2 | 16.6 |
| | MBO 4 | 6.7 | 6.6 | 2.6 | 7.3 |
| <i>Healthcare</i> | MBO 2 | -5.4 | -7.9 | -7.1 | -9.8 |
| | MBO 3 | 12.6 | 13.2 | 11.5 | 9.8 |
| | MBO 4 | 11.1 | 10.7 | 10.2 | 8.6 |
| <i>Logistics</i> | MBO 2 | 11.6 | 7.7 | 11.6 | 15.0 |
| | MBO 3 | 17.6 | 15.7 | 8.5 | 11.9 |
| | MBO 4 | 8.2 | 9.3 | 10.0 | 11.2 |

Table 4.10 The effect of technology, healthcare and logistics on the benefit fraction

| | | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-------|-----------------|-----------------|------|-----------------|
| <i>Technology</i> | MBO 2 | -3.1 | -2.0 | -2.1 | -1.6 |
| | MBO 3 | -4.5 | -4.2 | -3.6 | -2.0 |
| | MBO 4 | -1.5 | -3.1 | -2.9 | -1.6 |
| <i>Healthcare</i> | MBO 2 | 1.0 | 2.8 | 2.7 | 1.9 |
| | MBO 3 | -5.5 | -4.0 | -4.3 | -4.7 |
| | MBO 4 | -4.0 | -3.8 | -3.4 | -2.9 |
| <i>Logistics</i> | MBO 2 | 0.1 | 2.2 | -1.0 | -1.9 |
| | MBO 3 | -3.4 | -0.7 | 1.4 | -1.6 |
| | MBO 4 | -0.5 | -0.4 | -1.9 | -1.4 |

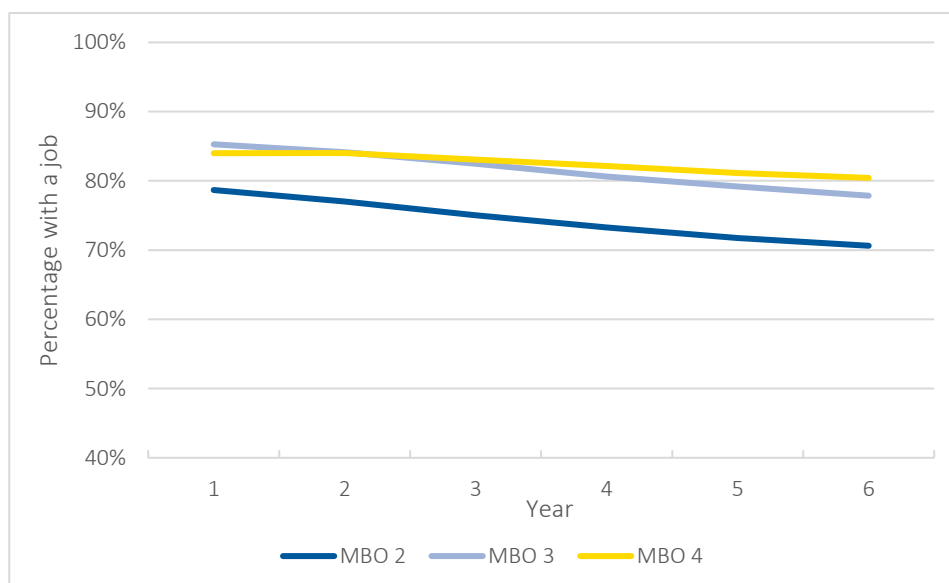
4.3 DEVELOPMENT OF THE LABOUR MARKET POSITION

How does the labour market position of young people from South Rotterdam develop compared with young people from North Rotterdam, the other large cities and the Netherlands as a whole? To answer this question, we follow the development of the share of young people that have a job (or receive benefits) over time.

In doing so, we examine whether a person is working or receives benefits on a specific reference date, each year after ending the MBO specialisation (graduated or dropped out). The individuals are followed for six years. This means that only those people who could be monitored for at least six years are included.⁵⁴

Figure 4.1 shows, for example, the trend over time of the percentage of MBO graduates who have a job for the Netherlands as a whole. After one year, approximately 79 percent of young people with an MBO level 2 diploma have a job. For MBO levels 3 and 4, this percentage is over five percentage points higher: 85 percent for MBO 3 and 84 percent for MBO 4. The number of people with a job decreases over time. This is the result of the general decline in employment during this period. The decrease is lowest among MBO level 4 graduates.

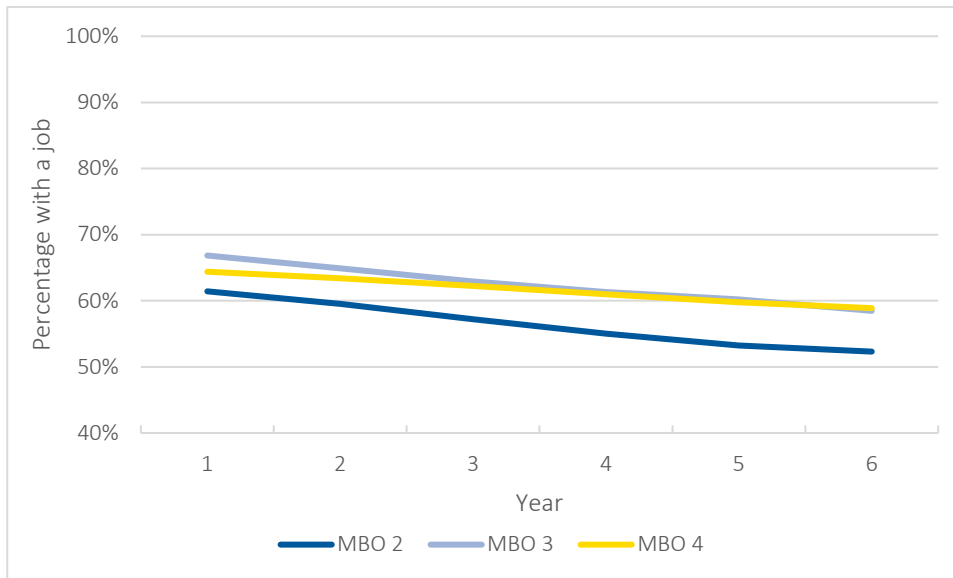
Figure 4.1 Job development of MBO graduates (the Netherlands)



If young people do not complete their MBO course and drop out prematurely, their chances of finding paid work are considerably lower. After one year, the share of young people with a job is 17 to 20 percentage points lower. This difference increases slightly over time. Here, too, the decrease in the percentage of young people with a job over time is lowest among those who dropped out from MBO level 4 (compared with those who dropped out from MBO levels 2 and 3).

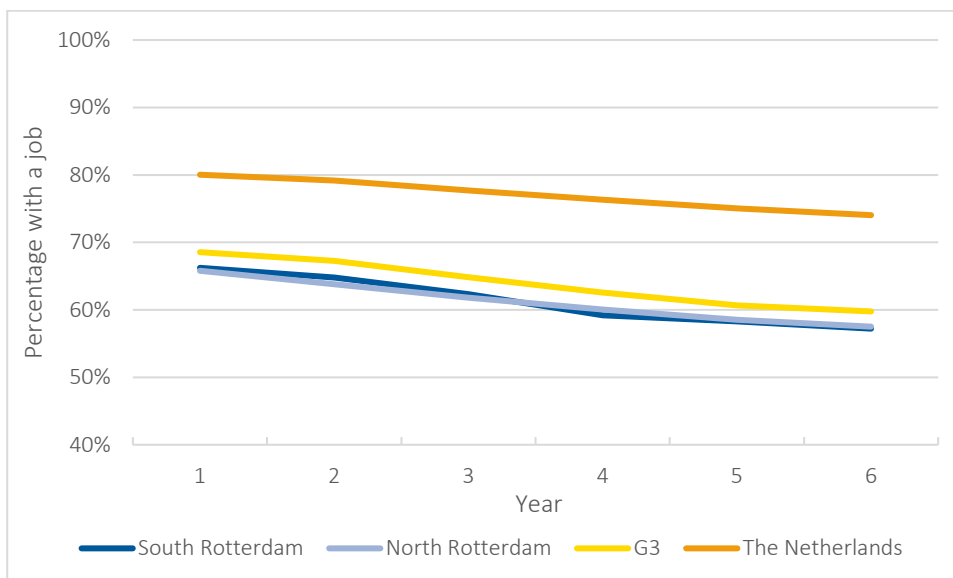
⁵⁴ MBO school leavers who ended their MBO course between 2006 and 2010. Those who completed their education in 2006 were thus monitored until 2012, etc.

Figure 4.2 Job development of dropouts according to the MBO level that they followed last (the Netherlands)



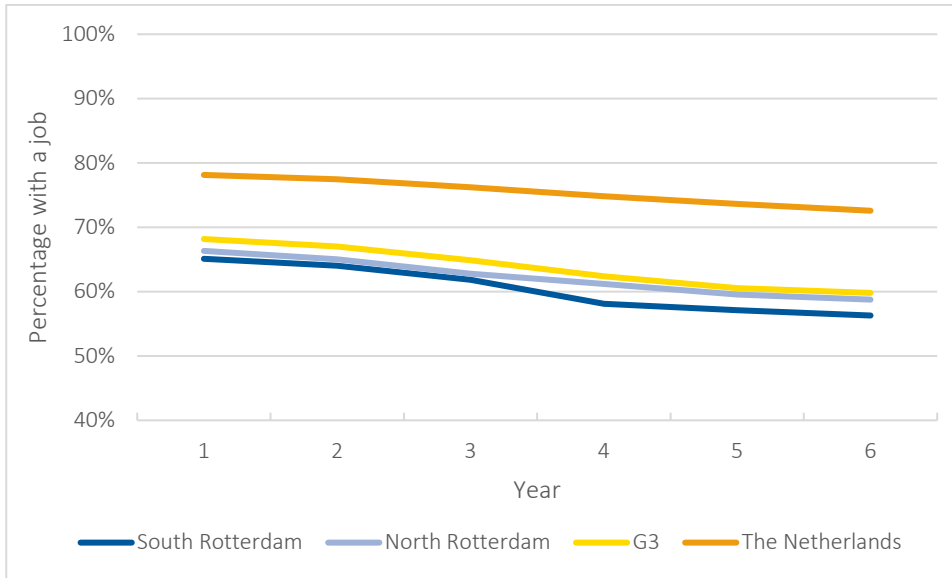
The job development of all MBO school leavers (graduates and those who dropped out, for all three levels together) according to the four different regions, is shown in figure 4.3. This reveals that job development of MBO school leavers in South Rotterdam is relatively similar to that in North Rotterdam. The percentage of school leavers with a job in the three other large cities is still around 2.5 to 3 percentage points higher than in Rotterdam. In the rest of the Netherlands, this percentage is considerably higher and also decreases more slowly.

Figure 4.3 Job development of MBO school leavers according to region



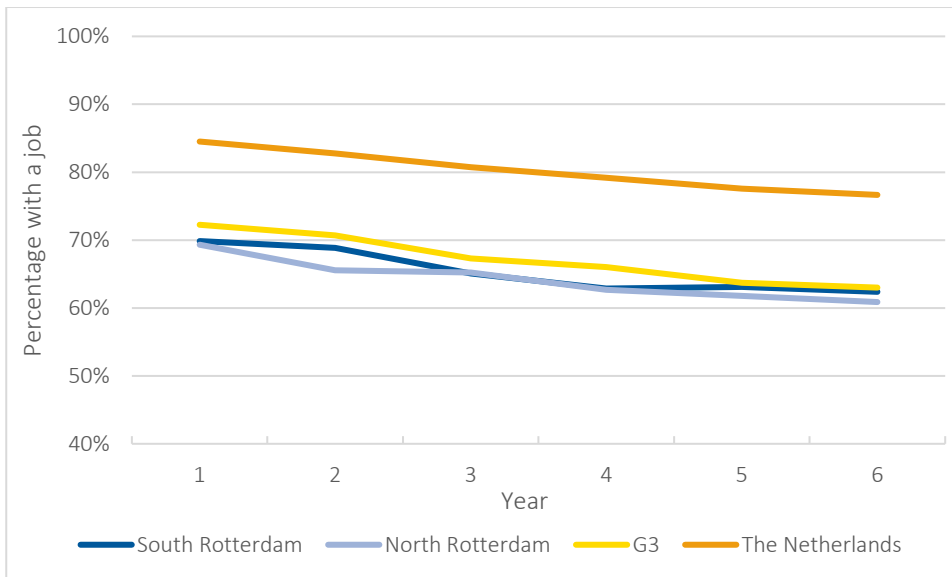
In addition to this general picture, it is also important to specify job development according to the different sectors: technology, healthcare, logistics and others. Let us first examine the other specialisations, as a kind of benchmark in relation to the technology, healthcare and logistics specialisations. The highest number of young people are found in specialisations not belonging to either of these sectors. Job development in the different regions for other specialisations will thus be largely comparable to the general picture. What does stand out here is the fact that after a number of years, development in South Rotterdam declines compared with North Rotterdam, while the share of young people with a job in North Rotterdam increasingly approaches the share in the other large cities over time.

Figure 4.4 Job development of MBO school leavers according to region - other sectors



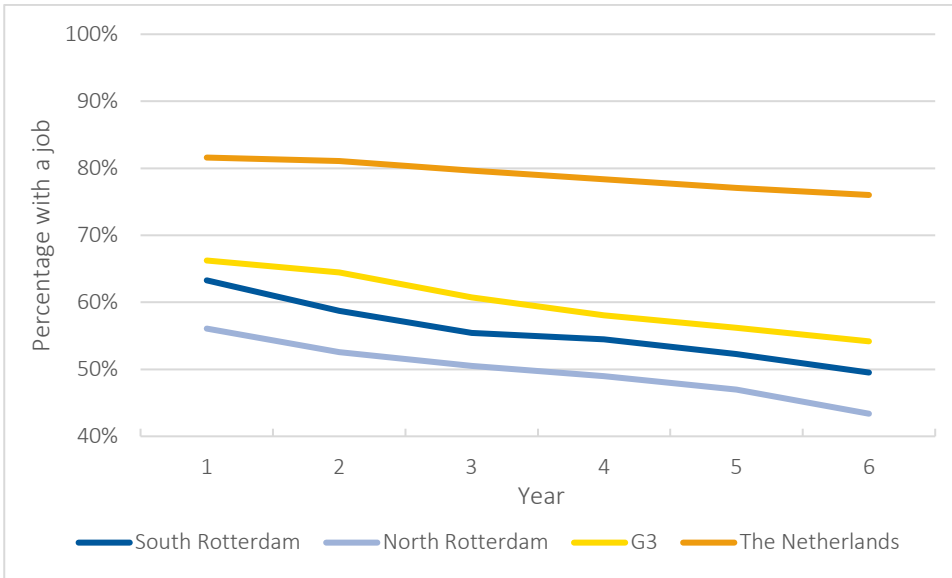
When it comes to the technology sector, job development in South Rotterdam is relatively more positive than for the other specialisations; see figure 4.5. The percentage of young people with a job in South Rotterdam is, overall, slightly higher than in North Rotterdam. In absolute terms, young people with a specialisation in the technology sector have a greater chance of finding a job in all regions than those with a different specialisation.

Figure 4.5 Job development of MBO school leavers according to region - technology sector



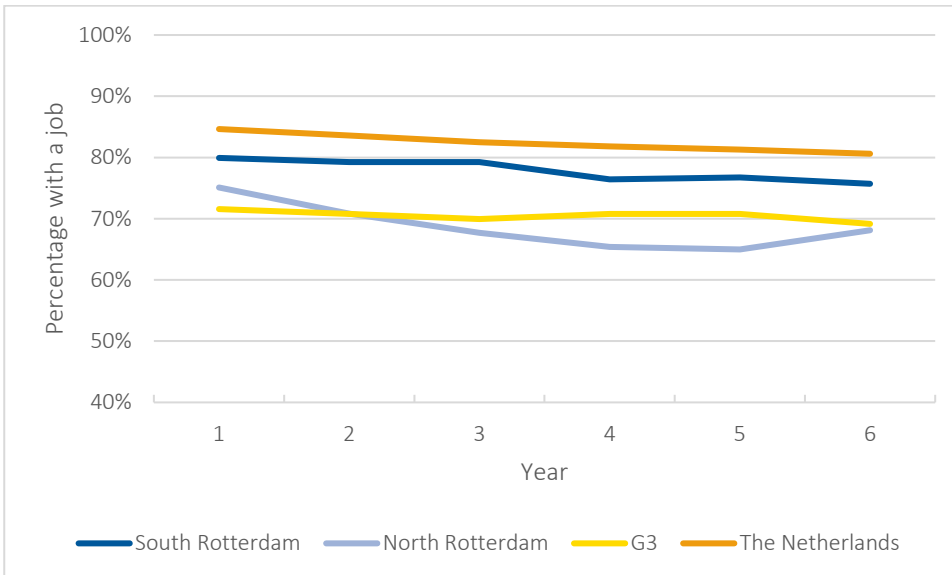
In the healthcare specialisation, the percentages differ more widely. In South Rotterdam, the share of young people with a job is higher than in North Rotterdam and lower than in the three other large cities. Here, too, the percentage for the rest of the Netherlands is considerably higher. The development of the share of young people with a job is more positive, i.e. the decrease is lower, in the rest of the Netherlands. For all regions, the percentage of school leavers with a job in the healthcare sector is lower than for technological specialisations. This is mainly due to fewer job opportunities for young people following the healthcare specialisation at MBO level 2.

Figure 4.6 Job development of MBO school leavers according to region - healthcare sector



Young people from South Rotterdam specialising in logistics have the largest chance of finding a job (compared with the other sectors) in the years after completing the course. Eighty percent of young people have a job one year later. Over the six years period, this fell to around 76 percent as a result of the crisis. This decrease is relatively small compared with the decrease in other specialisations. Job development in South Rotterdam is also greater than that in North Rotterdam and the three other large cities, but still lower than in the rest of the Netherlands.

Figure 4.7 Job development of MBO school leavers according to region - logistics sector



4.4 CONCLUSION

Once young people from South Rotterdam have completed their MBO specialisation, they spend the same amount of time in employment as those from North Rotterdam. Young people who complete their MBO specialisation in one of the other large cities (Amsterdam, The Hague and Utrecht) are employed for a slightly longer period of time. Job opportunities for the rest of the Netherlands are structurally higher than in the four large cities. If young people do not complete their MBO course and drop out in the meantime, their chances of finding paid work are considerably lower.

In South Rotterdam MBO 3 and MBO 4 level technology and healthcare specialisations do relatively well in terms of job prospects, while healthcare and other specialisations at MBO 2 level offer relatively poor job prospects. If we also take into account the size of the jobs, young people in South Rotterdam often spend slightly more time at work than young people in North Rotterdam. Job prospects are more favourable for the MBO level 4 technological specialisations in South Rotterdam than in the North and the three other large cities.

A large share of the differences between the regions levels out if a similar population (including educational choices and possible dropouts) is assumed. This means that the labour market prospects in South Rotterdam, North Rotterdam and the three other large cities are relatively similar. A difference does remain with the rest of the Netherlands, but is reduced considerably.

A large share of the differences in labour market results are, thus, caused by differences in population and education. When we examine the difference in job prospects between South Rotterdam and (the rest of) the Netherlands, we see that the greatest share of the difference in job prospects is explained by differences in ethnic origin (whether or not there is a migration background), followed by differences in educational choices and differences in dropouts. The effect of characteristics on the benefit fraction is different. In this case, educational choices exert the greatest effect, followed by drop-out and ethnic origin (both have approximately the same effect). A fourth factor also plays a role here: the age at which pupils leave school.

The effects of choosing a specialisation in technology, healthcare and logistics on labour market results (better chance of work, smaller chance of being on benefits) are relatively greater in South Rotterdam compared with North Rotterdam, the three other large cities and the rest of the Netherlands. The effects are also positive, with the exception of healthcare at MBO level 2. This means that if young people in secondary vocational education are encouraged to specialise in technology, healthcare or logistics, one can expect this to positively influence their position in the labour market. This does not apply to specialisations in healthcare at MBO level 2, for which there are fewer job opportunities than for other level 2 specialisations.

The development of the labour market position over time reveals the same image. Job prospects for young people who have completed MBO levels 3 or 4 are better than for those who followed a MBO course on level 2. When they fail to complete their secondary vocational education, the labour market perspective becomes considerably less favourable. Generally, the labour market development in South Rotterdam is similar to that in North Rotterdam. The percentage of young people with a job in Rotterdam is slightly lower than in the three other large cities and considerably lower than in the rest of the Netherlands. Job opportunities for young people in South Rotterdam who have opted to specialise in technology, healthcare or logistics are relatively favourable. Young people in South Rotterdam who opt to specialise in logistics in secondary vocational education have the highest chance of finding a job, followed by the technological specialisation.

In conclusion, we can say that the intervention logic of BRIDGE with regard to encouraging specific educational choices, is on the right track. The previous analysis shows that opting for secondary vocational education in the sectors technology, healthcare and logistics generally offers better opportunities in the labour market for young people in South Rotterdam. MBO level 2 courses in healthcare are the exception to this. The latter actually offer young people fewer opportunities in the labour market. Apart from the chosen specialisation, the level of the course also has a major impact on labour market opportunities. Furthermore, it is important that the number of pupils who drop out of their course is reduced as much as possible.



CONCLUSIONS

5 CONCLUSIONS

BRIDGE

This report contains the first results of the BRIDGE project, which is being implemented in South Rotterdam with the financial support of the European Commission. It consists of twenty educational interventions aimed at improving the educational results of children from South Rotterdam, as well as the alignment with the labour market. Children do not always complete their vocational education and too few opt for specialisations that offer good labour market prospects. By improving this situation, more young people in South Rotterdam should be able to find a job and be sustainably integrated in the employment process.

South Rotterdam lags behind North Rotterdam, other large cities and the Netherlands as a whole in socio-economic terms. This is reflected, for example, in the fact that the unemployment in South Rotterdam is considerably higher and labour participation lower than elsewhere. However, there are many other problems, such as an educational disadvantage, poor housing quality and crime. Since all these problems are correlated, there is no easy solution. This is why the National Urgency Programme South Rotterdam (NPRZ) was developed. The programme focuses on three areas: education, housing and employment. BRIDGE is linked to the educational component of the NPRZ and has a duration of three years. It is expected that the NPRZ will continue with educational measures after this period. Experiences from BRIDGE could result in adjustments to the educational interventions that are currently applied.

Interventions and intervention logic

BRIDGE consists of a total of twenty interventions. Some interventions involved in BRIDGE are considered new, while others involve a continuation. What stands out in the analysis of the reach of the interventions is that a number of the 'new' interventions have also been applied previously in schools. From several perspectives, the interventions form a consistent and complete whole, that is more than the sum of its parts:

- Some interventions focus on reducing the number of pupils who drop out of school, others on opting for the technology, the Port of Rotterdam and healthcare specialisations, while others focus more directly on the transition from education to the labour market;
- The interventions cover primary schools, secondary schools and secondary vocational education, and thus a complete educational pillar;
- The interventions are aimed at all actors involved: children/students, teachers, parents and businesses.

With regard to the goals of the interventions, it is unclear whether or not some are aimed at encouraging pupils to specialise in technology, port and healthcare. This sometimes has a more fundamental basis, namely the vision that career guidance (LOB) in general must be improved and that choosing technology, port and healthcare specialisations is just one possible by-product, but not the main objective. Sometimes, it is more practical because obstacles emerge with regard to showcasing these specialisations more (flash visits).

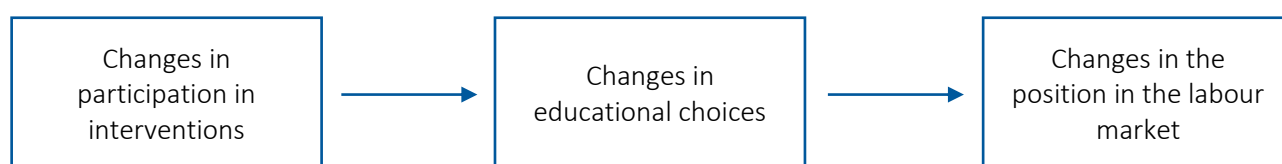
Chapter 2 devotes more attention to the content and practical implementation of the career start guarantee (CSG) because it is an innovative tool that plays a major role in BRIDGE. In terms of implementation, the concept seems to vary considerably, depending on the employers concerned. This pertains to, for example, the nature (and extent) of the guarantee itself and the support provided during the training. Some employers or sectors use a signed physical document stating the guarantee, while others do not (or no longer do so). If a physical document exists, it does not mean that it is actually taken up by the pupils who are entitled to it.

Experience with the interventions elsewhere

Positive effects of interventions are more likely if such interventions have already proven their effectiveness elsewhere, although this offers no guarantee. Experience acquired elsewhere can also teach us about the important preconditions for effective application. Therefore, in this report a literature study was conducted related to the experience with similar interventions elsewhere. This literature review provides indications that most interventions are or could be effective. At the same time, the study reveals that the effectiveness is highly influenced by a range of preconditions. For example, the role of the teacher is crucial in several interventions. The methods used in the existing literature have limitations. Often, the effects are established, for example, on the basis of perceptions, or there is less information about the effects in the long term.

Design and relationship analyses

In the follow-up to these conclusions, we address three correlated aspects. First and foremost, this concerns the reach, i.e. the participation in the interventions. With regard to this participation, we go back further than the BRIDGE period because at least some of the interventions had already been applied and developed before in the context of the NPRZ programme. These earlier figures provide a baseline for the evaluation of BRIDGE. Earlier developments in intervention participation also offer a possible explanation for previous changes in choices made by young people in South Rotterdam opting for technology, port and healthcare specialisations. This provides a first assessment of the effectiveness of the interventions: is the change in participation in interventions reflected in the educational choices? The development of educational choices is therefore the second focal aspect. A follow-up question involves the extent to which opting for technology, port-related and healthcare specialisations actually improves a pupil's position in the labour market. This is the third aspect. Hence, we focus on the following pillar:



Reach

In this report, we examine what is known about the participation in the different measures. In doing so, we also looked at the period previous to the launch of BRIDGE. We did so for the following reasons:

- This data forms a kind of 'baseline measurement' for assessing whether participation in interventions has at least stayed the same or increased since BRIDGE was launched.
- The level of participation in interventions provides an indication of the extent to which problems arise in their implementation.
- Since we have data related to general trends in pupils' educational choices in South Rotterdam in recent years (also in relation to other areas), we can establish whether there is a link between any increase (or decrease) in the participation of an intervention and developments in pupils' educational choices in South Rotterdam. We will return to the developments in educational choices later on.
- As we have data related to participation in individual schools, it is possible to examine links between interventions and educational choices in more detail. Do young people to whom these (particular) interventions apply, choose technology, healthcare or port-related specialisations more often? Since we only have data related to interventions at the school level, we cannot establish whether an intervention actually applies to a specific individual. However, we can use this information to obtain an indication of the likelihood that a specific child has participated in a particular intervention. In this way, we can investigate whether, on average, pupils attending a school where an intervention is applied demonstrate a different pattern of choices than schools at which this is not the case, taking into account the characteristics of these pupils. However, even the quality of the available data at the school level is questionable. We are currently investigating whether such an analysis is feasible, given the limitations of the data.

So, how do we establish the number of schools reached by the interventions? In principle, there are three sources to achieve this: data from certain providers, a checklist from the NPRZ of participating schools based on plans at the beginning of the school year and a survey conducted among schools. Each of the three sources has its limitations. Moreover, it seems that, when compared, the outcomes are not always consistent. The following can be reported, taking the limitations into account:

- In primary education, the picture from recent years with regard to the participation of schools in interventions also used in BRIDGE is relatively complex. The degree of participation varies considerably per intervention and the changes between 2015-16 and 2016-17 are different for every intervention. For BRIDGE, the transition from 2016-17 to 2017-18 is particularly important. The intentions in the checklists provide an indication that between these years, there would have been an actual increase in the reach. However, these checklists only concern intentions from schools, that should be assessed further during the course of the period.
- With regard to pre-vocational secondary education (VMBO), all available sources point to an increase in participation in most interventions in recent years. The previous efforts of the NPRZ appear visible in this. As described above, for BRIDGE itself, it is the transition from 2016-17 to 2017-18 that is important. In terms of intentions (the checklists), BRIDGE appears visible in the strong growth in school participation in various interventions (introduction to the port, mentoring programme, information about Career Start Guarantees and Empowerment Programme involving parents in Career Orientation and Guidance). In other interventions, there was no increase or even a decrease.
- In primary schools and pre-vocational secondary education, there is certainly still room to increase the application of the BRIDGE interventions.
- The inflow of pupils into specialisations within secondary vocational education that are linked to the Career Start Guarantees has not increased in recent years.

Developments in educational choices

Overall, at least for pre-vocational secondary education, the application of the type of interventions adopted in BRIDGE has intensified in recent years. Can we establish whether the choice of study orientation in pre-vocational secondary education and subsequent choices for secondary vocational education made by pupils in South Rotterdam have shifted more in the direction of technology, port-related and healthcare compared with other large cities and the Netherlands as a whole? Of course, such a development cannot automatically be attributed to the growing participation in educational interventions in South Rotterdam, simply because other cities and regions may also apply similar interventions more often than in the past.

How have choices for specialisations within pre-vocational secondary education and secondary vocational education developed? The percentage of students in pre-vocational secondary education in their third year who specialize in the field of technology has increased in recent years. This means that, in this respect, the extent to which South Rotterdam lags behind the rest of the Netherlands is decreasing. The healthcare and social work sector is popular in South Rotterdam, where a relatively high number of pupils choose this specialisation. However, it must be stressed that the labour market prospects of a specialisation in health care and social work depends on the level of the course followed. In secondary vocational education courses on three levels exist. Only the two highest levels (level 3 and 4) are beneficial to job entry chances. Unfortunately, still many students complete a lower level course (level 2).

If we examine secondary vocational education, South Rotterdam still appears to be lagging behind the rest of the Netherlands when it comes to opting a technological specialisation. However, this is not only the case in South Rotterdam; North Rotterdam and the other large cities also lag behind in this respect. Furthermore, between 2014 and 2016 the percentage share of students specialised in technology has developed favourably in South Rotterdam compared to the North Rotterdam and the other big cities in the Netherlands. In Rotterdam as a whole, pupils often specialise in logistics (a sector which plays an important role in the Port of Rotterdam). This has also increased dramatically in recent years. The share of pupils opting for the healthcare sector is quite similar in the different regions of the Netherlands. It has increased somewhat more in South Rotterdam than in North Rotterdam.

The general picture that emerges from the educational results is that young people's choices in South Rotterdam do not differ greatly from the choices made by young people in other regions. However, the level of the courses followed in South Rotterdam tends to be lower compared to other regions.

The importance of specialising in technology, port and healthcare for labour market opportunities

The entire intervention logic of BRIDGE assumes that specialising in technology, port-related courses and healthcare improves the opportunities of young people from South Rotterdam in the labour market. But to what extent is this actually the case? Does this intervention logic make sense?

In general, the labour market developments in South Rotterdam are similar to those in North Rotterdam. The percentage of young people with a job in Rotterdam is slightly lower than in the three other large cities and considerably lower than in the rest of the Netherlands. Job opportunities for young people in South Rotterdam who have specialised in technology, healthcare or logistics are relatively favourable. The positive effects of these specialisations on labour market chances are fairly large for South Rotterdam compared with the other regions. The effects are also positive for courses on all levels (2, 3 and 4), with the exception of level 2 in healthcare. This means that if young people in secondary vocational education are encouraged to specialise in technology, healthcare or logistics, one can expect this to lead to better chances in the labour market (with the only exception for level 2 healthcare courses).

Young people in South Rotterdam following courses in secondary vocational education improve their labour market opportunities the most when they specialise in logistics, followed by a specialisation in technology. Furthermore, courses on level 3 and 4 give better opportunities in the labour market than courses on level 2. For young people who fail to complete their secondary vocational education, the prospects in the labour market are less bright.

In conclusion, we can say that BRIDGE is on the right track by encouraging young people in secondary vocational education to choose courses in technology, healthcare or logistics. Completing a course in one of these specialisations improves a person's chances in the labour market significantly. The positive impact on labour market chances also depends on the level of the courses completed. The higher levels in secondary vocational education (levels 3 and 4) give higher effects than the lower level (level 2). Courses in healthcare on level 2 do not even contribute to better job chances. Finally, we conclude that dropouts have considerably lower chances in the labour market than young people with a diploma. Therefore, it is also important to reduce drop out as much as possible.



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I REFERENCE LIST

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EDUCATIONAL CLASSIFICATION

Based on the National Educational Classification (SOI) 2006

II EDUCATIONAL CLASSIFICATION

To classify MBO courses in the technology, logistics and healthcare sectors, we use the National Educational Classification (SOI). The following table provides an overview of the sector groups in the SOI relevant to this report.

Technology is one of the sector groups (6) in the SOI. Logistics consists of a combination of the *transport and logistics* (92) sector and the classification group of *transport and logistics with technology* (974). For healthcare, we use the sector *healthcare* (81) and the classification group *domestic science* (821).

Table II.1 SOI

| Sector group | Sector | Classification group | Classification | | |
|--------------|--------------------------------------|---|--|-----------------------|--|
| 6 Technology | 61 General technology | 611 General technology | 6111 General technology | | |
| | | | 6112 Applied physics | | |
| | | | 6113 Applied mathematics | | |
| | 62 Electrotechnology | 621 Electrotechnology | 6211 General electrotechnology | | |
| | | | 6212 Electrical energy technology | | |
| | | | 6213 General electronics | | |
| | | | 6214 Computer engineering | | |
| | | | 6215 Consumer and office electronics | | |
| | | | 6216 Telecommunication, data communication | | |
| | | | 6217 Industrial process automation | | |
| | | | 63 Architecture | 631 Civil engineering | 6311 General civil engineering |
| | | | | | 6312 Placing (sewerage) pipes and cables |
| | | | | | 6313 Road construction |
| | 6314 Traffic engineering | | | | |
| | 6315 Hydraulic engineering, dredging | | | | |
| | 632 Construction | 6321 Architectural engineering, urban planning | | | |
| | | 6322 General architecture (no design) | | | |
| | | 6323 Technical engineering draughtsman, constructor | | | |
| | | 6324 Concrete, steel engineering | | | |
| | | 6325 Masonry | | | |
| | 633 Finishing, interior design | 6331 Interior architecture | 6326 Carpentry | | |
| | | | 6329 Other construction | | |
| | | | 6332 Plastering, stonemasonry | | |
| | | | | | |

| Sector group | Sector | Classification group | Classification |
|--------------|--|-----------------------------|--|
| | | | 6333 Painting, decorating (buildings) |
| | | | 6334 Interior finishing for buildings |
| | | | 6335 Woodworking, furniture making (not industrial) |
| | | | 6336 General finishing |
| | | 634 Installation | 6341 General installation |
| | | | 6342 Water pipes, sanitary installation |
| | | | 6343 Gas installation |
| | | | 6344 Electrical installation |
| | | | 6345 Climate control technology |
| | | | 6346 Roofing installation |
| | | | 6349 Other installation engineering |
| 64 | Metalworking, vehicle and mechanical engineering | 641 Metalworking | 6411 General metalworking |
| | | | 6412 Foundry technology, metallurgy |
| | | | 6413 Construction work, welding, forging |
| | | | 6414 Bench work |
| | | | 6415 Precision engineering, metal precision mechanics |
| | | | 6419 Other metalworking |
| | | 642 Vehicle engineering | 6421 General vehicle engineering |
| | | | 6422 Car, motorcycle engineering |
| | | | 6423 Vehicle repair work |
| | | | 6424 Bodywork, vehicle interior construction |
| | | | 6425 Caravan construction, repairs |
| | | | 6426 Naval architecture |
| | | | 6427 Aerospace |
| | | | 6428 Other motor vehicle construction |
| | | | 6429 Bicycle mechanics |
| | | 643 Mechanical engineering | 6431 General mechanical engineering |
| | | | 6432 Fitter, machinist, etc. |
| | | | 6433 Mechanical engineers, repairers not yet specified |
| | | | 6434 Mechanical engineering draughtsman, constructors |
| | | | 6435 Gas engineering |
| | | | 6439 Other mechanical engineering |
| 65 | Process technology | 651 Food process technology | 6511 General food |
| | | | 6512 Meat, fish |
| | | | 6513 Dairy |
| | | | 6514 Bread, pastries |

| Sector group | Sector | Classification group | Classification |
|--------------|---|--|--|
| | | | 6519 Other food |
| | | 652 Biotechnology | 6521 Biotechnology |
| | | 653 Process technology (not food) | 6531 General process technology |
| | | | 6532 Metallurgy |
| | | | 6533 Ceramics |
| | | | 6534 Paper, strawboard, rubber |
| | | | 6535 Textiles, leather |
| | | | 6536 Industrial woodworking, furniture making |
| | | | 6537 Petrochemicals, plastics |
| | | | 6538 Other chemical technology |
| | | | 6539 Other process technology |
| | 66 Textiles, leather processing and other | 661 Textiles and leather processing | 6611 Tailor-made clothing, bespoke apparel |
| | | | 6612 Shoemaking, repairs |
| | | | 6619 Other textiles, leather processing |
| | | 669 Other technology | 6691 Industrial design |
| | | | 6692 Musical instrument construction |
| | | | 6693 Mineral extraction |
| | | | 6694 Other precision engineering (not metal) |
| | | | 6695 Lacquer processing (excl. construction, car spraying) |
| | | | 6699 Other technology not yet specified |
| | 67 Technology with differentiation | 671 Technology with management/economy/sales | 6711 General technology |
| | | | 6712 Architecture |
| | | | 6713 Civil engineering |
| | | | 6714 Metalworking |
| | | | 6715 Mechanical engineering |
| | | | 6716 Vehicle engineering |
| | | | 6717 Electrical engineering |
| | | | 6718 Process technology |
| | | | 6719 Textiles and leather processing |
| | | 672 Technology with informatics | 6721 Technology with informatics |
| 8 Healthcare | 81 Healthcare | 811 General healthcare | 8111 General healthcare |
| | | 812 Medicine | 8121 Doctor, general practitioner, specialist, medicine |
| | | | 8122 Obstetrics |
| | | | 8123 Medical assistance |
| | | 813 Nursing, care | 8131 Nursing |
| | | | 8132 Care of patients |
| | | 814 Dentistry | 8141 Dentist |
| | | | 8142 Dental hygienist |
| | | | 8143 Dental assistant |
| | | 815 Therapy | 8151 Physiotherapist, kinematics |

| Sector group | Sector | Classification group | Classification |
|--|--|--|---|
| | | | 8152 Occupational therapy, ergotherapy |
| | | | 8153 Psychotherapy |
| | | | 8154 Alternative medicine, therapies |
| | | | 8159 Other therapy |
| | | 816 Nutrition and dietetics | 8161 Nutrition |
| | | | 8162 Dietetics |
| | | 817 Speech therapy, acoupedics, orthoptics | 8171 Speech therapy, acoupedics |
| | | | 8172 Orthoptics |
| | | 818 Veterinary medicine | 8181 Veterinary medicine |
| | 82 Care, social services | 821 Housekeeping | 8211 General housekeeping, care |
| | | | 8212 Facility management |
| | | | 8213 Home care, elderly care |
| 9 Catering & hospitality, tourism, recreation, transport and logistics | 92 Transport and logistics | 921 General transport and logistics | 9211 (Transport and) general logistics |
| | | | 9212 General transport |
| | | 922 Road, rail transport | 9221 Road transport |
| | | | 9222 Rail transport |
| | | 923 Aviation | 9231 Pilot |
| | | | 9232 Traffic control |
| | | | 9239 General aviation |
| | | 924 Shipping | 9241 General shipping, sailing |
| | | | 9249 Other shipping |
| | | 925 Cargo handling | 9251 General cargo handling |
| | | | 9252 Internal transport |
| | | | 9253 Hazardous substances transport |
| | 97 Catering & hospitality, tourism, recreation, transport and logistics with differentiation | 974 Transport and logistics with technology | 9741 Aviation |
| | | | 9742 Marine engineer/maritime officer |
| | | | 9743 Skipper |
| | | | 9744 Ship's communication/radio communication |
| | | | 9747 Other shipping |

Source: National Educational Classification (SOI) 2006

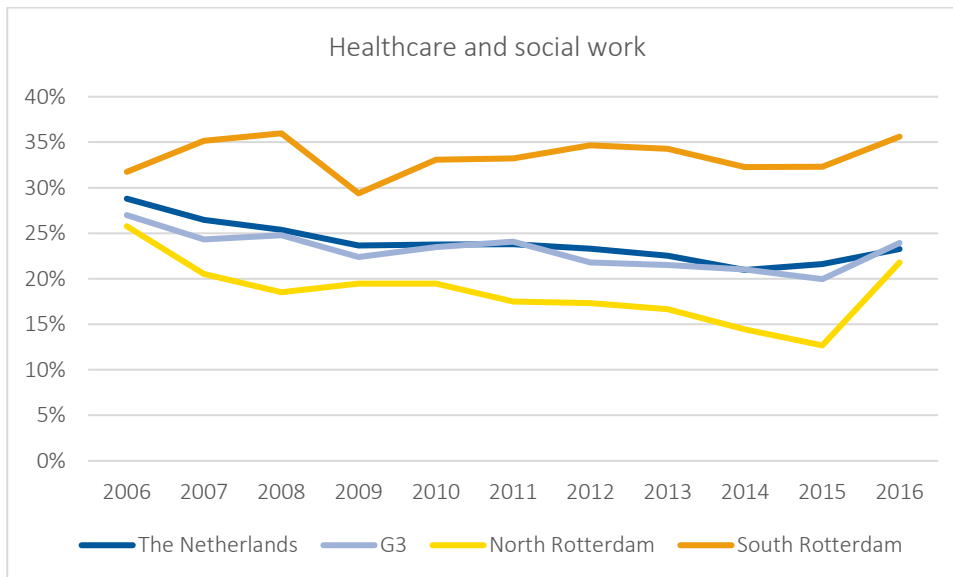
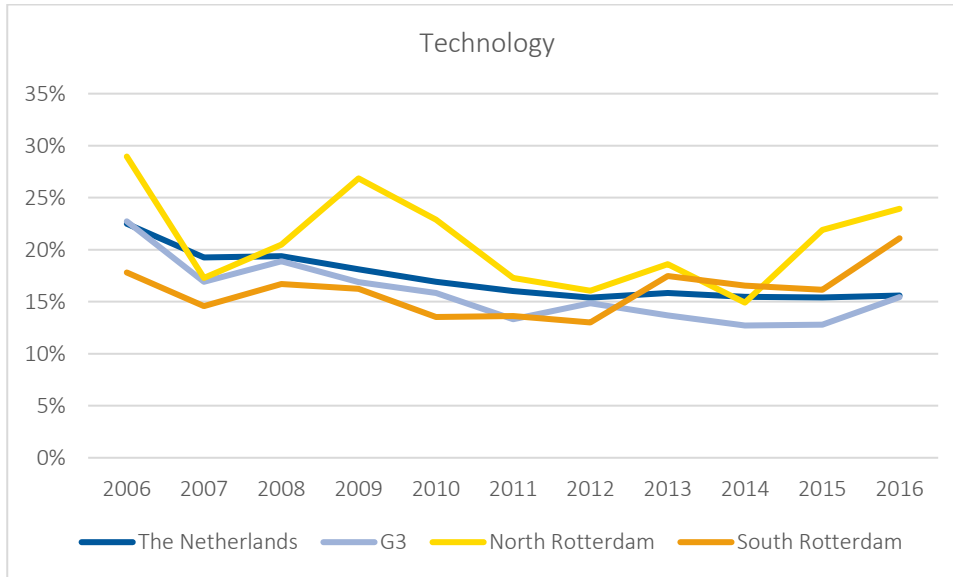


APPENDIX OF EDUCATIONAL RESULTS

III APPENDIX OF EDUCATIONAL RESULTS

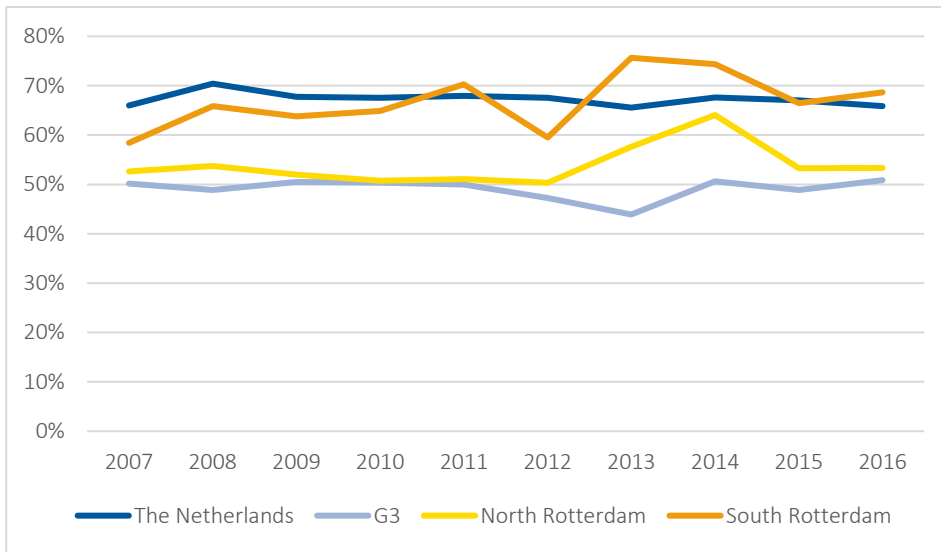
III.1 SECONDARY EDUCATION

Figure III.1 Percentage of pupils with a migration background specializing in technology or healthcare and social work (VMBO BKG, third year)



III.2 PROGRESSION FROM VMBO TO MBO

Figure III.2 Progression from VMBO technology to MBO technology or logistics



III.3 SECONDARY VOCATIONAL EDUCATION

Figure III.3 Percentage of first-year MBO students with a migration background specialising in technology, logistics or healthcare

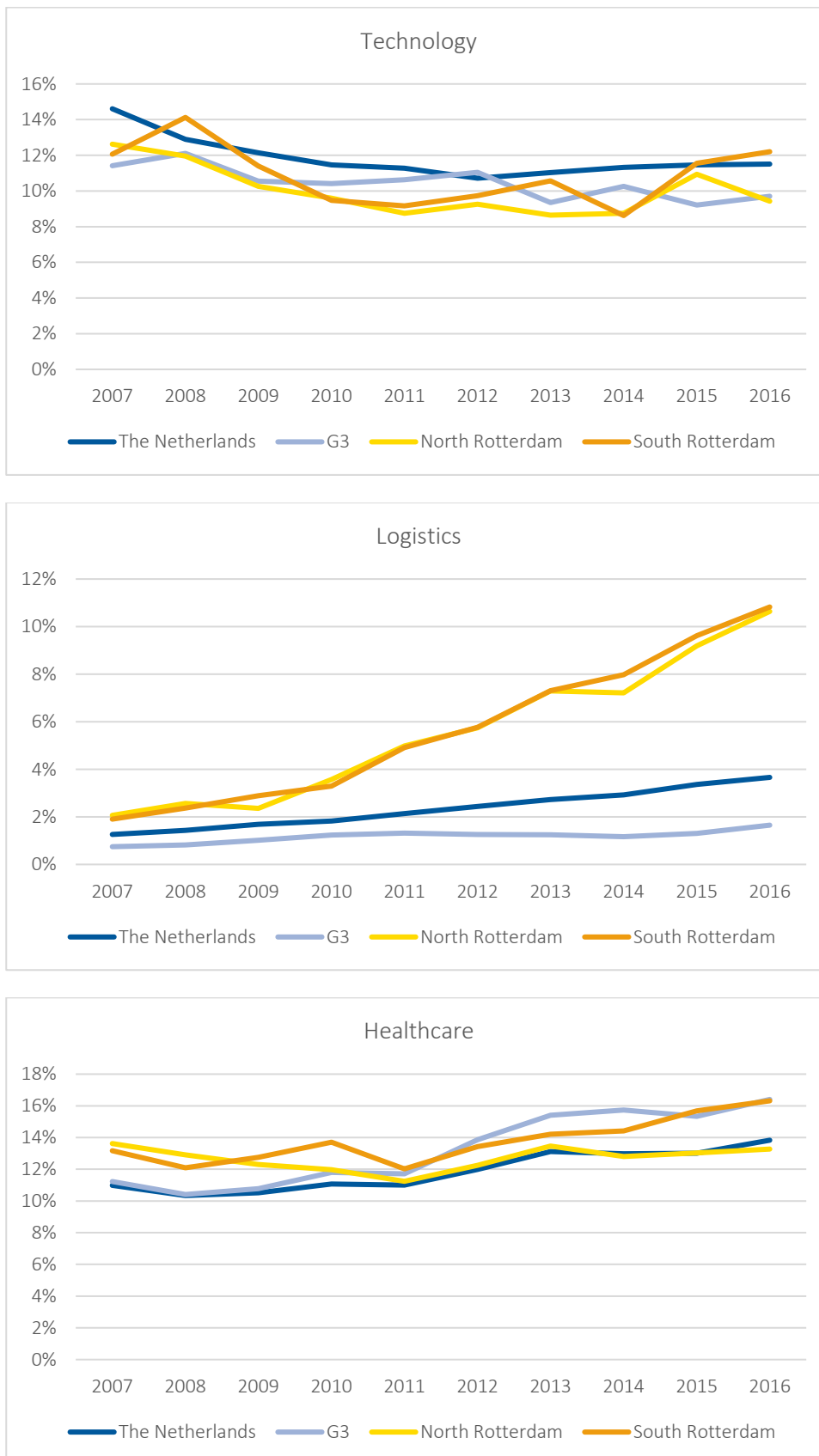


Figure III.4 Percentage of first-year MBO students according to the level of education

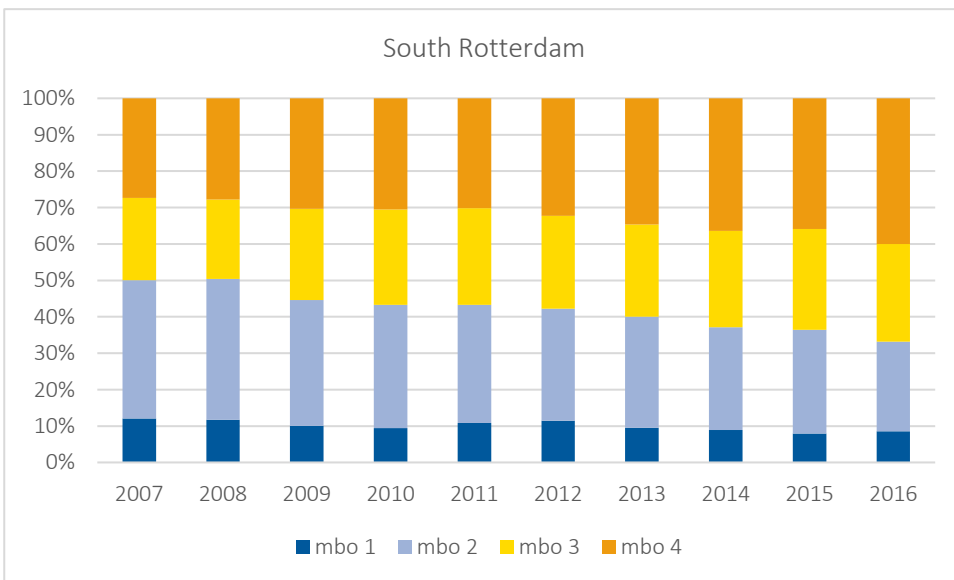
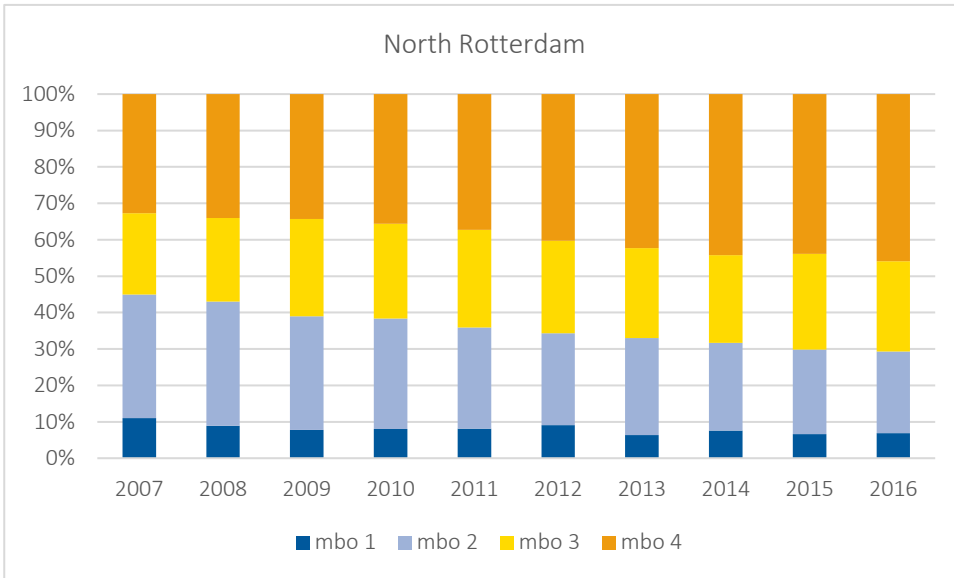


Figure III.5 Percentage of first-year MBO students in work-based pathways (BBL)

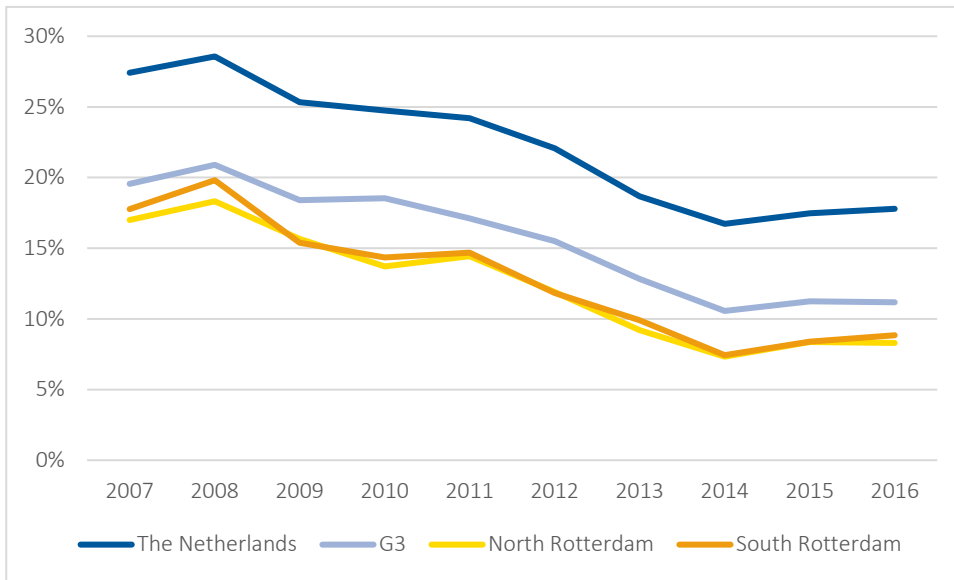
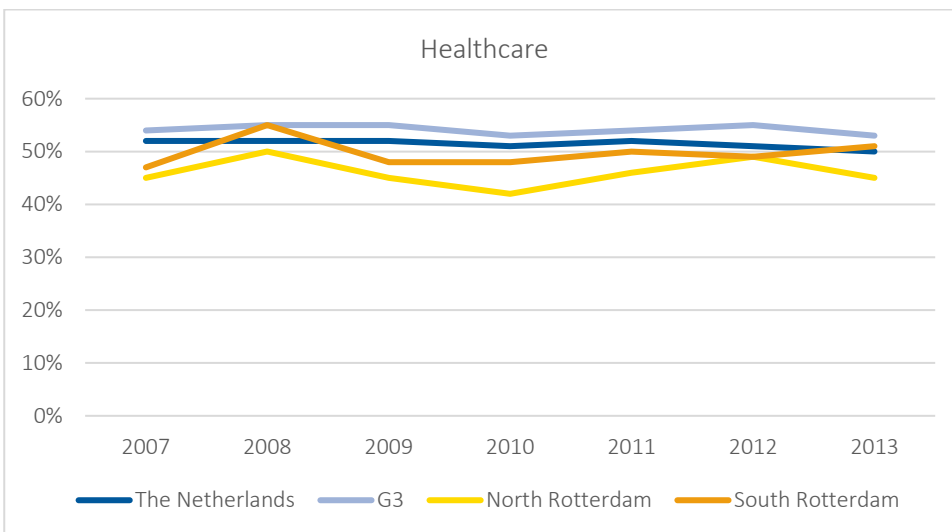
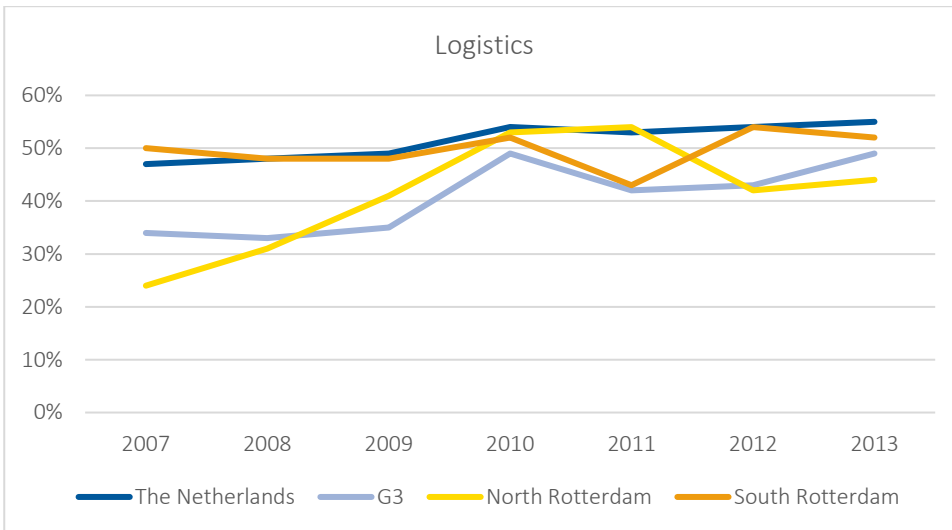
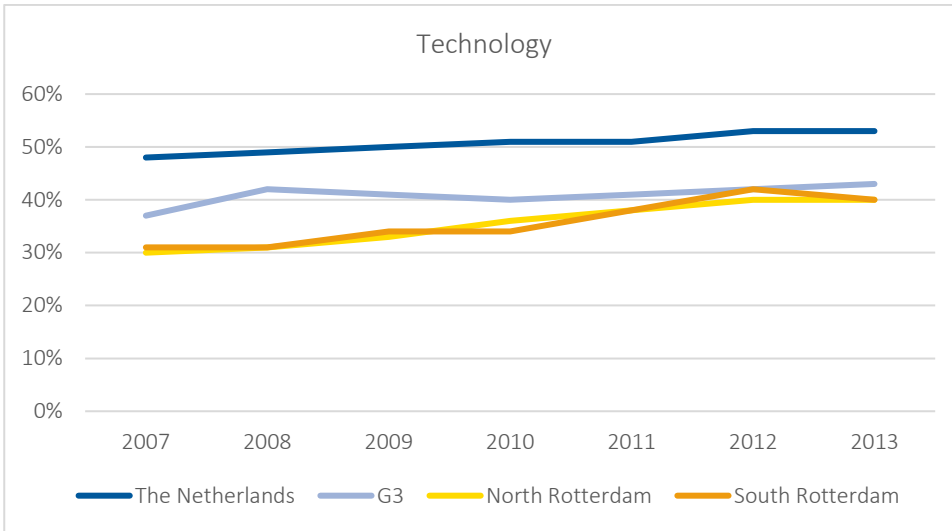


Figure III.6 Percentage of MBO students graduating in the same sector within three years after enrolling





APPENDIX OF LABOUR MARKET RESULTS

IV APPENDIX OF LABOUR MARKET RESULTS

Table IV.1 Job fractions according to specialisation and level of education – MBO dropouts

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|--------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 39.64% | 40.32% | 44.36% | 53.04% |
| MBO 3 | 46.42% | 48.49% | 50.53% | 59.90% |
| MBO 4 | 44.64% | 47.85% | 50.77% | 57.83% |
| <i>Technology</i> | | | | |
| MBO 2 | 48.14% | 47.13% | 50.73% | 62.09% |
| MBO 3 | 50.86% | 50.87% | 53.08% | 68.46% |
| MBO 4 | 52.29% | 57.68% | 55.05% | 62.32% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 25.65% | 21.05% | 28.02% | 38.49% |
| MBO 3 | 40.09% | 44.20% | 47.57% | 60.94% |
| MBO 4 | 48.28% | 50.80% | 52.96% | 59.68% |
| <i>Logistics</i> | | | | |
| MBO 2 | 57.86% | 50.22% | 54.02% | 65.72% |
| MBO 3 | 64.61% | 44.37% | 52.83% | 68.64% |
| MBO 4 | 42.54% | 45.83% | 48.72% | 61.90% |

Table IV.2 (Part-time) job fractions according to specialisation and level of education – MBO dropouts

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|--------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 27.13% | 27.39% | 29.78% | 36.80% |
| MBO 3 | 31.40% | 31.33% | 33.46% | 41.54% |
| MBO 4 | 29.45% | 30.53% | 32.07% | 38.45% |
| <i>Technology</i> | | | | |
| MBO 2 | 38.06% | 36.40% | 38.58% | 50.68% |
| MBO 3 | 39.10% | 40.99% | 40.45% | 56.65% |
| MBO 4 | 35.83% | 39.35% | 36.33% | 44.85% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 14.18% | 11.38% | 15.60% | 21.79% |
| MBO 3 | 23.10% | 27.90% | 29.73% | 39.02% |
| MBO 4 | 30.89% | 32.68% | 32.47% | 37.69% |
| <i>Logistics</i> | | | | |
| MBO 2 | 45.70% | 38.37% | 41.88% | 52.94% |
| MBO 3 | 54.90% | 31.43% | 42.20% | 55.21% |
| MBO 4 | 26.83% | 27.98% | 31.41% | 46.25% |

Table IV.3 Benefits fractions according to specialisation and level of education – MBO dropouts

| | South Rotterdam | North Rotterdam | G3 | The Netherlands |
|-------------------|-----------------|-----------------|--------|-----------------|
| <i>Other</i> | | | | |
| MBO 2 | 22.09% | 20.00% | 19.03% | 16.34% |
| MBO 3 | 17.18% | 14.97% | 14.29% | 12.04% |
| MBO 4 | 13.40% | 11.87% | 11.94% | 10.37% |
| <i>Technology</i> | | | | |
| MBO 2 | 17.08% | 16.83% | 15.00% | 13.09% |
| MBO 3 | 13.34% | 9.70% | 9.51% | 8.10% |
| MBO 4 | 11.84% | 8.68% | 8.90% | 7.66% |
| <i>Healthcare</i> | | | | |
| MBO 2 | 26.44% | 32.41% | 28.56% | 24.50% |
| MBO 3 | 26.84% | 24.04% | 22.94% | 15.37% |
| MBO 4 | 13.96% | 11.32% | 12.06% | 10.66% |
| <i>Logistics</i> | | | | |
| MBO 2 | 15.81% | 19.18% | 16.86% | 13.21% |
| MBO 3 | 7.05% | 20.36% | 14.94% | 9.17% |
| MBO 4 | 11.56% | 9.22% | 9.39% | 6.70% |

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