Shadow education in the Netherlands
The position of shadow education in the educational landscape and students’ school careers
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Chapter 1

Introduction
INTRODUCTION

“Well, something happened that made tutoring so big. Supplementary or shadow education, whatever you want to call it. Something has happened here because otherwise, it would not be like it is. Every city or school has it in some form or another. I find it interesting; what happened? And what do we as a school do in response to that?” (Tutor at a secondary school; focus group participant)

Over decades and across countries, there have been indications of increasing demand for and supply of fee-based, organized learning activities that “shadow” formal schooling in terms of content and objectives (Bray, 1999, 2020; Zhang & Bray, 2020). The goal of this “shadow education” is to assist students in subjects that are part of the formal curriculum. Shadow education is increasingly gaining a prominent and visible position in students’ school careers. In South Korea, for example, students study in mass tutoring centers (hagwons) late into the night (Dawson, 2010). In Cambodia, school teachers may leave formal education for a more profitable job in the tutoring market (Brehm & Silova). Tutoring has been long prevalent in Southern and Eastern Europe (Bray, 2021; Šťastný, 2021a; Šťastný et al., 2021), and the topic is increasingly being studied in Northern (Hallsén & Karlsson, 2019; Karlsson, 2020) and Western Europe as well (Guill & Lintorf, 2019; Guill et al., 2020a, 2020b; Otto & Karbach, 2019). Despite this expanding research base, little is known about shadow education in the latter region. This dissertation addresses this unexplored area by examining the position and function of shadow education in the Netherlands. As Figure 1 demonstrates, household expenditures on shadow education — especially in secondary education — have increased substantially over the past 24 years. In 1995, Dutch households spent 26 million euros on shadow education; that number grew to 320 million euros in 2019.

![Figure 1. Household expenditures on shadow education in the Netherlands (Statistics Netherlands, 2021)](image_url)
Dutch educators and policy makers have raised several questions about these growing participation rates. For example, which institutional features of the Dutch educational system relate to students opting for additional education on top of their regular schooling program? Also, although some researchers note that parents in the Netherlands mainly use tutoring to counter student underperformance (Bisschop et al., 2019; Education Inspectorate, 2021), there is no clarity on the functions fulfilled by shadow education for individual students, and on whether these functions overlap, compete or are different from those fulfilled by families and schools. As shadow education takes up a more prominent and visible position in students’ daily lives, it becomes important to study this position, particularly as tutoring may affect students’ educational trajectories, giving rise to diverging pathways (Kerckhoff, 1993) between students who can afford shadow education and those who cannot. Thus, a better understanding of the position and function of shadow education in the Dutch context is needed.

In this dissertation, I aim to contribute to this understanding by asking: what position does shadow education take in the Dutch educational landscape and students’ school careers? Using the umbrella term “position,” I refer to both the function of shadow education in the educational landscape and the role of shadow education in students’ school careers. This includes studying the constellation of key players responsible for students’ learning and development, both at school and home (Bray & Kobakhidze, 2015; Renzulli, 2014), as well as exploring students’ goals and intentions. In the following chapters, I first set the scene by reviewing international empirical literature on shadow education (Study 1). Then, I study the relationship between tutoring use and the selective design of the Dutch educational system (Study 2). I also examine student reflections on their tutoring use (Study 3), and the reflections of secondary schools, families, and tutors regarding their educational roles and responsibilities (Study 4). These four studies broaden the scope of international education literature by shedding light on the prevalence and functioning of shadow education in contexts other than East Asia. With these four interrelated studies, I aim to contribute to the literature on shadow education by expanding the scope of research beyond East Asia, Southern and Eastern European, Sweden, and Germany. I do so by providing a detailed explanation of the perceptions of students, schools, parents, and tutors about the phenomenon of shadow education in the well-funded Dutch educational system.

The remainder of this introductory chapter provides background information on shadow education, its history and use in the Netherlands. I also detail prior research on tutoring’s relation to families and the school system, and potential functions in students’ school careers in other countries, where more research on shadow education is available.
BACKGROUND

What is shadow education?
In my research, I adopt Bray’s (1999) definition of shadow education: organized out-of-school learning activities that provide students with instruction or guidance in school subjects, supplementing what students learn in formal schooling in exchange for a fee. As the shadow metaphor suggests, the premise of shadow education is that it mimics formal schooling. As school curricula evolve, shadow education follows by supporting students in their classroom learning (Bray, 2020, 2021). Many scholars define shadow education using three criteria laid out by Bray (1999). The first two criteria, supplementation and academic subjects, emphasize that shadow education involves activities that assist students with subjects covered in school, thus excluding extracurricular activities or subjects that focus on non-academic forms of personal development (e.g., after-school dance class). The third criterion, privateness, refers to the condition that shadow education is provided in exchange for a fee, thereby excluding activities in the public domain, such as free after-school programs, in-school remedial teaching, or other school-based programs.

What does shadow education look like in Dutch educational practice?
Attention to shadow education has only recently become prevalent in Dutch policy and public debates (Education Inspectorate, 2021; Elffers & Jansen, 2019). In 2016, the Dutch Inspectorate of Education mentioned fee-based tutoring in their annual report, identifying it as one of the potential causes of rising performance inequality in Dutch education (Education Inspectorate, 2016). Following this report, in January 2017, the Dutch House of Representatives organized a roundtable discussion with various education stakeholders (Elffers & Jansen, 2019). The government then commissioned two consecutive studies regarding the prevalence of shadow education and parents’ motives in employing it. The results were published in 2017.

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1 The shadow terminology can have a negative connotation among educators, policy makers, and tutors (Zhang & Bray, 2020), as it gives the impression that shadow education entails activities that cannot bear the daylight and, in some way, threatens the body it imitates: formal schooling (Bray, 2021). In the Dutch case, the term is sensitive among educational practitioners as well, and the more neutral term ‘supplementary education’ is preferred (Dutch: aanvullend onderwijs) (Elffers et al., 2021). In this dissertation, I will use the term shadow education, but I consistently and solely used the term supplementary education in my conversations with respondents.
Introduction

(De Geus & Bisschop, 2017) and 2019 (Bisschop et al., 2019). It is from these studies that we have some indications of who uses shadow education in the Dutch context.

Parents with children in secondary education are the primary purchasers of shadow education (see Figure 1). Primary school students also receive some shadow education, mostly via online platforms, which require a relatively low monthly subscription fee or are, in some cases, offered for free by schools (which, strictly speaking, does not fit Bray’s definition of shadow education). Training for the standardized achievement test at the end of primary school (Cito Test) is also common. Additionally, shadow education is becoming increasingly widespread in Dutch post-secondary education. A recent study shows that one in five college students pays for some form of shadow education, mostly in support of thesis writing or tutoring for a certain exam (Education Inspectorate, 2021).

The format of shadow education families purchase mainly consists of one-on-one tutoring (Dutch: bijles) and homework support classes (Dutch: huiswerkbegeleiding). In the latter case, which is also common in other European countries such as Sweden (Hallsén & Karlsson, 2019), students can work on their homework in a space with few distractions. An on-site tutor may occasionally answer questions about the homework. Other forms of shadow education in the Netherlands include exam preparation and support for specific learning needs, such as dyslexia. Next to one-on-one tutoring and homework support, training is also offered for primary and secondary education students who have a fear of failure. Tutoring forms also exist for those students who are in the first year of secondary schooling (Dutch: brugklas) and need to adjust to practical issues such as organizing their agendas, which they did not have to do when they were in primary school. This dissertation is mainly focused on one-on-one tutoring and homework support classes in secondary education, as these are the most prevalent forms of shadow education in the Netherlands.

There are significant differences among and within shadow education offerings and their providers in the Netherlands (Elffers et al., 2019). Whereas some tutors are strictly focused on academic subjects, others offer services related to academic performance, such as boosting self-confidence or learning academic planning skills. Many tutoring services are provided through physical meetings (either individually or in small groups), and some offer online activities to augment physical meetings (Elffers et al., 2019, 2021). Shadow education is provided by private organizations or individual tutors, who are often university students. This is different from other countries, such as Greece and Cambodia, where regular school teachers provide most after-school tutoring (Bray, 1999; Manzon & Areepattamannil, 2014).
In the Dutch context, shadow education can also be offered by a combination of private and public providers. For instance, community centers, libraries, foundations, and other volunteer organizations offer free forms of tutoring. While these forms of support do not comply with the fee-based criterion defined by Bray (1999), a government subsidy or a private fund is generally used to provide these services at a discounted or free rate to students and parents. These hybrid forms will therefore also be included under the term “shadow education” here.

**Shadow education as a new player in the educational landscape: its relationship to families and the school system**

As academic research on shadow education in the Netherlands remains scarce, this section and the next summarizes the key findings of prior research elsewhere, focusing on which factors predict the use of shadow education and on the potential functions of shadow education in students’ school careers.

Regarding what predicts the use of shadow education, most researchers agree that, on the individual level, shadow education use mainly varies by social class (Byun et al., 2018; Choi & Park, 2016; Entrich, 2020; Kang & Park, 2021; Park et al., 2016), even though family investments in shadow education may vary according to various characteristics (Guill et al., 2020b; Liu & Bray, 2017), such as a student’s gender (Entrich & Lauterbach, 2020), or whether the household lives in an urban or rural area (Zhang & Xie, 2016). Parents in the upper socioeconomic strata, who are most able to afford shadow education, may resort to tutoring to increase the chances of higher education attainment of their children (Byun & Baker, 2015; Byun et al., 2018; Choi & Park, 2016; Entrich, 2020; Park et al., 2016). Hence, the characteristic that researchers most often use to explain tutoring rates is students’ socioeconomic status (SES). One indicator of SES is parental income, which is likely to have a positive relationship with shadow education use. Parents with greater financial resources can more easily afford these services compared to their less affluent counterparts. However, income may not be the sole factor, as ambitions and preferences regarding students’ school careers are also shaped by parental educational level (Byun et al., 2018; Entrich, 2015).

As a second major determinant, prior research discusses how the institutional structure of the education system may affect the use of shadow education. The argument that institutional structure may affect the relationship between SES and tutoring is mainly applied in research on educational transitions (Guill & Lintorf, 2019; Ireson & Rushforth, 2011): key moments in students’ school careers when the risk of downward social mobility may occur (cf. Byun et al., 2018; Entrich, 2020). Whereas general descriptive reviews on shadow education already exist (Bray & Thomas, 1995; Manzon & Areepattamannil, 2014; Park et al., 2016),
meta-analyses are missing, particularly on relationships between SES, shadow education use, and the most studied outcome of tutoring use: achievement (Bray, 2014; Byun, 2014; Dang & Rogers, 2008; Guil et al., 2020a; Ha & Harpham, 2005; Ha & Park, 2017; Han & Lee, 2016; He et al., 2021; Huang, 2013; Lee, 2013; Lee et al., 2014; Park et al., 2016; Ömeroğulları et al., 2020; Seo, 2018; Sohn et al., 2010; Suter & Győri, 2021; Tansel & Bircan, 2006; Zhang et al., 2021). Little is also known about the role of the institutional context in strengthening or weakening these relationships.

In Study 1, I explore to what extent students’ social background (especially parental education and income) is associated with their use of shadow education, to what extent this use mediates the relationship between SES and achievement, and whether these relationships vary according to indicators of institutional structure and quality.

If shadow education indeed peaks at critical moments in the education system, such as a branching point from one level to the other, this suggests that parents are using it as a tool to improve their children’s future opportunities (Byun et al., 2018; Davies, 2004; Ireson & Rushforth, 2011; Zwier et al., 2020). However, proving this hypothesis is empirically challenging, as it requires detailed data on shadow education use, as well as a longitudinal design with a control group of students who do not go through such a branching point. Researchers to date have used the next-best strategy: large-scale assessment data among 15-year-old-students to study the relationship between institutional differentiation (i.e., early tracking) and shadow education use (Entrich, 2020; Zwier et al., 2020).

Using Programme for International Student Assessment (PISA) data, Byun et al. (2018) found no relationship between institutional differentiation and shadow education use. However, the authors pointed towards another relevant institutional feature that potentially relates to tutoring: the existence of selective school exams. As teachers and administrators often use scores on these exams to (partly) inform educational decisions about who obtains access to a more prestigious educational track or institution, these tests can place high levels of pressure on students to perform. As a result, families use tutoring services to improve student performance on these key exams (Exley, 2020, 2021; Zwier et al., 2020). In a recent study that also draws on large-scale assessment data to study the relationship between institutional factors and shadow education use, Entrich (2020) argues that such data cannot capture an effect from the design of the educational system on shadow education use, as the timing of and the types of exams vary too much across countries. Thus, a country-specific study exploring the design of one system and its relationship to shadow education use can significantly contribute to the field. I focus on a relatively small change to the examination structure in Dutch upper secondary school, discussed and detailed later in the dissertation. Studying the specific Dutch
examination structure can be more informative than the proxies used for exams in studies that compare countries (Baker et al., 2001; Zwier et al., 2020). Given the research opportunity to conduct a study on selection and tutoring use in the Netherlands, Study 2 explores whether students’ likelihood to utilize shadow education relates to the selectivity of the school system.

The potential functions of shadow education in students’ school careers
Prior research argues that by choosing shadow education, some students and parents aim to counter underperformance, indicating that shadow education can fulfill a remedial role in providing additional instruction and support on top of the regular school curriculum for those students who would otherwise lag behind their peers (Baker et al., 2001). In other cases, shadow education primarily provides an enrichment function, boosting the academic performance of students who are already performing well. In cases of an enrichment function, but also to some extent in case of a remedial function, tutoring can be used as a tool in the educational competition, providing students with the extra training needed to outrank other students (Byun, 2014; Entrich, 2020; Exley, 2020, 2021; Ghosh & Bray, 2020).

Next to remediation and enrichment, some students ascribe other functions to their use of shadow education, such as tutoring being a tool to boost their self-esteem (Hajar, 2018). Similarly, parents’ motives for using shadow education may not only relate to their children’s achievement, but also to their beliefs in their own or the school’s capability to provide the educational support that their child needs (Ireson & Rushforth, 2014; Jokić et al., 2013). Such considerations point to a third, compensatory function of shadow education: it provides more or better instruction and support than is provided by schools or families.

In the Dutch context, we know little about the specific functions shadow education fulfills. The function of a social phenomenon can be deduced by studying agents’ behavior, such as students’, parents’, or educators’ educational decisions and strategies (Ballantine et al., 2017). Functions may align with the intentions or goals of agents, but they may also capture unintentional or unwanted effects. Therefore, in Study 3, I interviewed the most prominent users of shadow education in the Netherlands: secondary education students, both those from a specific academic track and those from a more vocationally-oriented track. In line with existing student-level studies elsewhere (Bray & Kobakhidze, 2015; Hajar, 2018; Yung, 2020), I deduce the function of shadow education by inquiring about what students come to tutoring for (i.e., their goals) and what that specific choice offers them (i.e., the benefits they experience). I explore students’ goals when attending shadow education and benefits they experience from doing so. Also, I explore how students relate these goals and benefits to their home and school context.
As shadow education assists student learning, it may also (perhaps unintentionally) grant some students a considerable edge over others. As a result, educators can feel ambivalent or uncomfortable with the intentional or unintentional functions of shadow education. Tutoring may help individual students succeed while simultaneously threatening equality of educational opportunities (Addi-Raccah, 2019; Luo & Forbes, 2019; Šťastný, 2021a, 2021b). In the Netherlands, too, there are sentiments that a “good” education system should render shadow education unnecessary (Education Inspectorate, 2021; Elffers & Jansen, 2019). In Study 4, I focus on analyzing what is happening among key players in shadow education – tutors, teachers, school leaders, and parents – and detailing what they consider shadow education’s role to be in student learning. To deduce the position of shadow education from the perspective of these key players, I engaged in a conversation with them about their own and mutual pedagogical and educational responsibilities. I explored what distribution of educational responsibilities teachers, tutors, and parents consider as ideal, and what this distribution of educational responsibilities looks like in practice.

RESEARCH DESIGN

To explore the guiding research questions, which are also summarized in Table 1, I conducted four separate studies: two were quantitative and two were qualitative. Rather than a sequential design, in which different data types build upon each other, I applied a concurrent design (Schoonenboom & Johnson, 2017), where the data for each study was analyzed separately, and then jointly discussed to contribute to answering the overarching research question.

In Study 1, I explored the extent to which SES functions as a predictor of shadow education use, where I conducted a systematic review of 62 existing empirical studies on shadow education. I applied meta-analytical structural equation modeling (MASEM) (Cheung & Chan, 2005; Jak, 2015) to test a model in which SES predicts students’ achievement, directly and indirectly, by using shadow education. The second study was focused on the Dutch upper secondary school context, where performance standards on the nationwide secondary education exit exam were raised in 2011. By applying Propensity Score Matching (PSM) (Rosenbaum & Rubin, 1983; Rubin, 1987) on two cohorts (n = 2,502) from a national representative cohort study (COOL 5-18), I explored whether increasing performance standards increased the likelihood of attending tutoring.

For the third study, I conducted semi-structured interviews with 37 secondary education students currently using tutoring services to ask them why they, or their parents turned to shadow education (i.e., what were their goals) and
what they perceived the benefits of tutoring to be. In the fourth study, through five school-based mixed focus groups, I explored the negotiation of educational responsibilities among Dutch secondary schools, tutors, and parents, centering on their mutual roles and responsibilities regarding student learning. In line with my research questions, I differentiated the practices that respondents considered ideal (the should) from their actual (the is) practices. Through these two qualitative studies, I explored the potential functions of shadow education in the Dutch context.

DISSERTATION OUTLINE

The dissertation is organized as follows. Chapter 2 contains the cross-national meta-analysis. The following chapters present findings for the Dutch context. Chapter 3 comprises the propensity score matching study on the relationship between increased graduation requirements and shadow education use. In Chapter 4, I present findings on students’ goals and perceived benefits of attending shadow education. Chapter 5 describes the reflections of teachers, school leaders, tutors, and parents on their mutual roles and responsibilities. In Chapter 6, I synthesize the main findings. I reflect on the conceptual contribution of the dissertation, on its limitations, its practical implications, and on potential directions for future research on shadow education. Table 1 provides an overview of the studies included in this dissertation.
Table 1. Overview of Dissertation Chapters: Scope, Research Questions, Design, and Sample Included

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Scope</th>
<th>Research question(s)</th>
<th>Design</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Cross-national</td>
<td>1) To what extent is students’ social background, in terms of parental education and income, associated with their use of shadow education?: 2) To what extent does the use of shadow education mediate the relationship between SES and achievement?: 3) Do these relationships vary according to indicators of institutional structure and quality?</td>
<td>Meta-analysis on correlations from empirical studies</td>
<td>62 (studies)</td>
</tr>
<tr>
<td>3</td>
<td>The Netherlands</td>
<td>1) Does the likelihood of attending shadow education increase when selectivity, in this case stricter requirements to graduate, in the educational system increases?</td>
<td>Propensity score matching with COOL 5-18 data</td>
<td>2,502</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1) What are students’ goals when attending shadow education?: 2) What benefits do students experience from attending shadow education?: 3) How do students relate their goals and experienced benefits to their home and school context?</td>
<td>Semi-structured interviews with tutored secondary education students</td>
<td>37</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1) What distribution of educational responsibilities do teachers, tutors, and parents consider ideal?: 2) What does the distribution of educational responsibilities look like in practice?</td>
<td>Five school-based mixed focus groups with teachers, tutors, and parents</td>
<td>43</td>
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