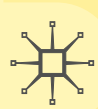

CURRICULUM STUDIES WORLDWIDE

Shadow Education as Worldwide Curriculum Studies

Young Chun Kim · Jung-Hoon Jung

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CHAPTER 1

Global Learning Fever Beyond Schooling: Calling It as Shadow Education Enough?

The field of curriculum studies is devoted to understanding the role of curriculum in education. Yet, traditionally it has emphasized ways to improve school curricula (Pinar, 2011). This preoccupation has left the field with an excessive focus on the structure of school curricula, both internally (school subjects, assessment, and curriculum reforms) and externally (economic expectations of the society and individual job preparation). Following scholarly critiques of the field for its narrow focus, in the 1970s curriculum studies began to be reconceptualized. Since then, it has expanded to incorporate a 'cacophony of voices' (Pinar, Reynolds, Slattery, & Taubman, 1995). As a result, 'curriculum' can now be defined in many ways.

As 'the term *curriculum* [emphasis original] is many things to many people' (Aoki, 2005a, p. 94), some have bemoaned the conceptual complexity brought about by the resulting variety in how people define and conceptualize curriculum. Yet Jung and Pinar (2016) wrote that 'we do not see this as a terrible problem to be immediately fixed, but as the character of curriculum to be acknowledged, and celebrated' (p. 33). Vague concepts can be highly problematic in the so-called hard sciences such as physics—but in social sciences, including curriculum studies, they may signal the 'aliveness of the field' (Jung & Pinar, 2016) and even be considered 'inevitable' in order for the field to develop (Pinar et al., 1995). In this sense, our intellectual efforts to understand curriculum are 'unruly'—what Pinar (2015) referred to as a 'complicated conversation.'

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This book celebrates the unruliness of curriculum by focusing on a new type of curriculum: shadow curriculum, which is an individually based supplementary or enrichment curriculum provided to encourage academic success. Importantly, we consider shadow education not as a mere product of the 'education fever' affecting schooling in many countries, which drives parents and students to seek any means to improve achievement. But rather, we consider shadow education to be an important educational space where students—as independent agents, rather than passive individuals who merely consume existing culture of education—participate in, understand, and co-produce their learning culture. From this perspective, we endeavor to contribute new concepts and perspectives to understand shadow education without resorting to a definitive and prescriptive conceptualization of shadow education.

Curriculum studies are a complicated field: It takes a 'deterritorialized approach' not only to 'challenge the secular dominant curriculum canon, but simultaneously to address in a timely manner some of the sinkholes with the very counter-dominant perspectives' (Paraskeva & Steinberg, 2016, p. 18). The American Association for the Advancement of Curriculum Studies Canon Project Committee referred to the hope that 'curriculum canon of the future that will represent a plurality of diverse voices, experiences, and ideas' (Whitlock, 2012). How can we, as curriculum scholars from the Far East, contribute to a deterritorialized approach that incorporates a plurality of diverse voices? We believe that by bringing shadow education into curriculum scholarship, we can provide a counter-narrative to dominant perspectives.

By suggesting that shadow curriculum should be incorporated into our understanding of curriculum, this book contributes to the development of curriculum studies, which has continually incorporated diverse ideas, cultures, and the phenomenon of education in different places, and is informed by various disciplines (Gough, 2003; Malewski, 2010; Slattery, 2012). Over the last few decades, the proliferation of theories and definitions of curriculum has contributed to the development of the field. The reconceptualization movement of the 1970s challenged the traditional idea of curriculum and ushered in a multi-discursive academic effort to understand curriculum (Pinar et al., 1995).

For the sake of brevity, this introduction discusses only a few of the more influential definitions of curriculum. Ellis (2004) categorized curriculum as prescriptive, descriptive, or both, while Jackson (1992) defined curriculum as 'all experiences planned and unplanned, that occur

under the auspices of the school' including 'unwanted outcomes of schooling' (p. 8) that might be associated with the hidden curriculum (Apple, 1990; Jackson, 1968; McLaren, 1994), the unstudied curriculum (Overly, 1970), the unwritten curriculum (Dreeben, 1976), the null curriculum (i.e., what is not offered, or what is sacrificed in favor of what is offered; Eisner, 1979; Flinders, Noddings, & Thornton, 1986), and the out-of-school curriculum (Schubert, 1981).

Beginning in the USA in the 1970s, various conceptualizations of curriculum became associated with political aspects of society, especially the concept of the hidden curriculum (Apple, 1979a, 1979b, 1990; Giroux, 1981a, 1981b; Liston, 1986). This began with neo-Marxist theories associated with class, hegemony, and ideology. By the 1980s, conceptualizations began to incorporate race (especially in the USA), culture (especially in Canada), gender (Grumet, 1988), and sexuality (Pinar, 1994); by the 1990s, theories began to focus on identity politics and continue to do so (Jung & Pinar, 2016). This diversity of interpretations illustrates that curriculum cannot be understood in isolation: Curriculum involves multiple elements and contexts. It is political, cultural, and gendered (Grumet, 1988; Hendry, 2011), and incorporates psychological (Britzman, 2011; Taubman, 2011) and historical elements (Simon, 2005).

Aoki (2005b), a renowned Canadian curriculum theorist, divided curriculum into two main components: curriculum-as-plan and curriculum-as-lived-experience. The former refers to the bureaucratic and institutional structure of curriculum content and the structures of schooling; the latter refers to the unique experiences in the daily lives of individual teachers and students. He noted that when curriculum is defined in abstract terms, the distinctiveness of individuals 'disappears into the shadow' (Aoki, 2005b, p. 160). He also stressed the need to focus on the bridge between the two components of curriculum and referred to this as dwelling in the 'creative tensionality' (Aoki, 2005b, p. 232), i.e., being attuned to the aliveness and immediacy of each unique situation.

Starting in the 2000s, curriculum theories began to incorporate postcolonial (Kim, Lee, & Joo, 2014; Takayama, 2017) and transnational perspectives (Gough, 2003; Pinar, 2007, 2014). Gough (2003) wrote that curriculum studies 'might best be understood as a process of creating transnational spaces in which scholars from different localities collaborate in reframing and decentering their own knowledge traditions and negotiate trust in each other's contributions to their collective works' (p. 68).

This kind of internationalization is in stark contrast to globalization, which Pinar defined as economic and educational standardization that can erode the uniqueness of different contexts; to Pinar, internationalization is an 'ethical engagement with difference' (Pinar, 2015, p. 50; also see Pinar, 2014).

Curriculum scholars in various countries have also tried to incorporate historical and cultural elements. Zhang and Zhenyu (2014), for example, have revived the Chinese term *ke-cheng*, historically associated with Confucianism, Taoism, and Buddhism, to highlight the importance of keeping a pure and tranquil mind with the goal of 'purifying' today's curriculum. Autio (2006, 2014) recontextualized the concept of curriculum using German-Scandinavian concepts such as *bildung*, which can be understood as 'what remains if we forget everything that we ever learned in school' (Tenorth, 2011, cited in Tröhler, 2014, p. 61). As the concept of curriculum expands and changes depending on 'cultural' contexts (including historical, geographical, economic, and political realities; Macedo, 2011), twenty-first-century conceptions are emerging from the 'playful' (Slattery, 2012) postmodern scholarship (Jung & Pinar, 2016).

Metaphorically, this proliferation of the conceptions of curriculum could be considered a palimpsest characteristic with lenticular images: It carries present, past, and future ideas that are informed by multi-layered elements related to what we see, experience, and imagine. Framing curriculum as a palimpsest helps us understand it in historical, political, cultural, gendered, racial, phenomenological, existential, and institutional terms. At the same time, each layer of a palimpsest may be read differently depending on the angle from which it is viewed. This metaphor can help broaden our understanding and reveal aspects that we, perhaps habitually, have ignored or have not been able to see. In a similar vein, the concept of shadow curriculum can also broaden our understanding of curriculum.

Understanding Students' Learning Beyond Schooling

Shadow curriculum is a new concept of curriculum that focuses attention to student learning outside schooling. Educators know that the better they understand students, the better they can teach them. The need to study students' experiences outside school has long been emphasized. Bronfenbrenner (1976) referred to the 'ecological structure' of the educational environment, arguing that education involves micro-, meso-,

exo-, macro-, and chronosystemic forces. Building on his work, we argue that curriculum research cannot be restricted to schools, but must be carried out in informal, real-world educational settings. By real world, we mean both public education and shadow education practices.

In *The Politics of American Education*, Spring (2010) wrote that 'human capital' education policies motivate 'parents to use the shadow education systems to aid their children to achieve academic and economic success' (p. 241). In the South Korean context, private tutoring is becoming increasingly common. Seth (2002) observed that 'by the early 1990s private tutoring and after-school lessons were the fastest growing of South Korea's many booming industries' (p. 186) which he conceives it as 'education fever.' Kyung-Nyun Kim (2017) defines education fever in Korea as 'a projection of parents' educational solicitude' that makes considerable investment on shadow education for children's learning and academic success. The prevalence of shadow education has even forced the South Korean Ministry of Education to incorporate after-school programs provided by private tutoring institutes (Choi & Cho, 2016), and in Japan, the Ministry of Education provides funds for high-school students who need private tutoring (Entrich, 2014). Extending on Bronfenbrenner's (1976) ecological systems theory of child development, Bray and Kobakhidze (2015) argued that 'the rise of tutoring in Hong Kong has significantly changed the ecosystem' (p. 477). Shadow education is a real part of students' lives and education: It is a microsystem of education that interacts with other constituents of the ecology of education such as family, schools, communities, and larger social structures (Lao, 2014; Lee, J. Y., 2013; Lee, S. K., 2014; Lee & Zhou, 2015; Zhou & Wang, 2015). Understanding shadow education is crucial for grasping the whole picture of education and more importantly student development. This is especially so as shadow education becomes increasingly 'school-like' (Aurini & Davis, 2004) in that it has its own classrooms, buildings, curriculum contents, instruction, evaluation, and class organization, which are similar to those of public schools (Bray, 2011; Kim, 2016) and is indispensable to many students.

Although shadow education has not received attention from curriculum theorists, it has been the focus of much attention in the fields of comparative education (Mori & Baker, 2010; Ventura & Jang, 2010), education and policy (Bray & Kwo, 2014; de Castro & de Guzman, 2014; Ireson, 2004; Park, Buchmann, Choi, & Merry, 2016), sociology

of education (Byun, 2010; Yamamoto & Brinton, 2010), education and economics (Entrich, 2014; Zhang, 2013), and lifelong education (Ozaki, 2015). Findings have been mixed about its effects at various levels, but the dominant discourse about shadow education is negative. The assertion and reassertion of a negative 'fixed identity' (Said, 1993) have relied on descriptions about the 'evils of private tuition' (Foondun, 2002, p. 509), accusations that shadow education exacerbates 'educational fever' (Seth, 2002), and images of it as an 'invasive species' (Bray & Kobakhidze, 2015). Such discourse is perpetuated by mainstream teachers, administrators, educational researchers, the public, and even mass media (Bray, 1999; de Silva et al., 1991; Kim, 2016; Marimuthu et al., 1991; Park, Lim, & Choi, 2015; Park et al., 2016; Yamamoto & Brinton, 2010). Some scholars have also accused shadow education of having 'backwash' effects (Bray, 2011), such as increasing the workloads of students (Yamamoto & Brinton, 2010) or increasing the financial burden of families (Park, Buchmann, et al., 2016; Park, Lim, et al., 2015) and thereby reproducing existing educational inequalities (Bray & Kwo, 2014; Burch, 2009; Stevenson & Baker, 1992). Even the term 'shadow education' was politically constructed, negatively framing it as subordinate or inferior to public education (Bray, 1999; de Silva et al., 1991; Marimuthu et al., 1991).

While this negative framing may seem almost 'natural' given the long-standing prioritization of public schooling in curriculum studies, counter-narratives have shown that shadow education can be helpful and can have positive effects on student learning and society (Entrich, 2014; Kim, 2016; Yamamoto & Brinton, 2010). For example, research has shown that it plays a crucial role in preserving ethnicity and culture in some diasporic communities (Sun & Braeye, 2012; Zhou, 2008; Zhou & Kim, 2006) and can reduce inequality in educational opportunities (Kim, 2016; Mori, 2012). Scholars who focus exclusively on the 'backwash' effects cannot understand why many students now 'follow the private tutors not the teachers' (Paramita, 2015, p. 819), why and how shadow education is becoming 'school-like' (Aurini & Davies, 2004), and why and how the 'phenomenon of inverted roles' (Yang & Kim, 2010) has emerged between schools and shadow education institutes. It is also not clear how students study in the shadow education spaces; what characteristics of shadow education curricula attract students and parents; what forms of shadow education emerge in different contexts; and how shadow education affects student identity formation and

development. We submit that a balanced and critical approach is needed to understand the relationship between children's academic development and other elements of development such as intellectual, psychological, and social.

Shadow Education as a Valid Topic of Curriculum Studies

Many curriculum scholars have focused on elements outside school curriculum. Even the traditionalists accept this. For example, Tyler (1949) directed attention beyond curricular elements to the study of individual learners when he referred to 'studies of the learners themselves as a source of educational objectives' (p. 5), although he did not put much value on the individuality of students. Schubert (1981) argued that complex industrial societies involve many educative forces that greatly influence the education of students. Consistent with the ecology of education, he argued that 'the character of the students' homes, families, communities and peers play profound roles in their evolving conception of the world, how it works, and their relation to it' (Schubert, 1981, p. 185). Later, he advocated for 'detailed exploration of diverse venues in which teaching and learning transpire' (Schubert, 2010, p. 14), including spaces such as home, family, culture, community, language, and media. Melnick (1992) also invited researchers, teachers, and learners to inquire more fully into the 'life-scapes' of others. Curiously, Schubert, Melnick, and others have not shown any interest in shadow education. Shouldn't the 'diverse venues in which teaching and learning transpire' referred to by Schubert (1981) include shadow education? The following discussion explores why shadow education should not be disregarded as a valid research topic of curriculum studies.

First, shadow education is a global educational phenomenon. It is now an unavoidable learning space for many students, so it should not be ignored by curriculum studies researchers who work to understand where, how, what, and with whom students learn. We suggest that curriculum cannot be understood without rigorous study of shadow education given how many students worldwide engage in it regularly or even daily (Bray, 1999; Kim, 2016; Mori & Baker, 2010). Over the last few decades, shadow education has become a major activity (Aurini & Davies, 2004; Bray, 2017; Bray, Kwo, & Jokić, 2016; Lee J., 2007;

Mori & Baker, 2010; Ventura & Jang, 2010), and the 'massive growth in shadow education meant to supplement formal schooling can be found in worldwide countries and will be increasingly incorporated into broader culture of education' (Mori & Baker, 2010, p. 36).

Historically, this form of education has been most prevalent in East Asian countries including South Korea, Japan, Hong Kong, Taiwan, and Singapore (Dawson, 2010; Kim, 2016; Mori & Baker, 2010). Since the 1980s, South Korea has had one of the highest rates of participation in shadow education (Kim, 2016). According to Statistics Korea (2016), 70% of Korean students take various forms of shadow education classes. In South Korea, shadow education is closely associated with the educational culture that emphasizes *hakbeol*, which can be defined as the value of being admitted into prestigious schools and universities (Jung, 2016). Shadow education has also been used and rigorously studied in Hong Kong. In 2010, 73.5% of secondary students received private tutoring (Bray & Kwo, 2014). Kwok (2001) reported that participation in private tutoring increased with the level of schooling: 35% for grade 1 to grade 3 students, 47% for grade 4 to grade 5 students, and 70% for grade 6 to grade 7 students. He also reported that individual tutoring involving home visits is more common among junior secondary students, while examination-oriented mass tutoring is more common among senior secondary students. Tutors in Hong Kong were found to take on various supportive roles with their students beyond normative educational relationships including: knowledge disseminator, motivator, role model, preacher, adviser, elder sibling, cousin, friend, mediator, listener, parent, and babysitter (Ho, 2010).

In Japan, shadow education is referred to as *juku*. Dawson (2010) reported that in 2007, 25.9 and 53.5% of elementary and lower secondary students, respectively, engaged in *juku*. In 2007, Japan had approximately 50,000 *juku*—more than all traditional schools combined (39,000) (Benesee, 2007). The Japanese *juku* industry generates USD$12 billion annually, and the monthly cost to families has steadily increased. A world-famous franchise tutoring company, Kumon, originated in Japan in the 1950s. It is now widespread in East Asia and beyond: As of 2004, it operated in 49 countries including North America (Aurini & Davies, 2004). Once described as an 'exotic' or 'secret' ingredient (Leestma & Bennett, 1987) in the educational cultures of some countries (Cummings, 1997; Mori & Baker, 2010), shadow education is quickly becoming a basic part of the educational landscape worldwide.

Shadow education has expanded dramatically worldwide since the beginning of the twenty-first century (Bray, 2017; Kim, 2016; Park et al., 2016). Currently, shadow education is prevalent in South Asia, Southern Europe, and parts of North Africa; it is also growing in other regions such as sub-Saharan Africa, North America, South America, and Western Europe (see Bray & Kwo, 2014). Private tutoring is a large and growing industry in India, estimated by the Asian Development Bank to be worth USD$6.4 billion per year and growing at an annual rate of 15%. India is also leading the way in online tutoring by offering professional linguistic and academic coaching at an affordable cost. Approximately one-fifth of rural Indian children in grades one to eight receive private tutoring (ASER, 2013). Almost three-quarters of children at the elementary level in rural West Bengal and Tripura, and close to half of the children in rural Bihar and Odisha, receive private tutoring. On average, these children receive nine hours per week of private tutoring, which is equivalent to one and a half school days. On average, their families pay Rs. 170 per month or slightly more than Rs. 2000 per year (ASER, 2013).

There has also been rapid growth of shadow education in other regions such as Europe and North America (Dang & Rogers, 2008; Tansel & Bircan, 2006). Southern, Central, and Eastern Europe have particularly high rates of shadow education, and rates are increasing in Western Europe (Bray, 2011). In Germany, shadow education has greatly increased since the 1990s (Entrich, 2014; Guill & Bonsen, 2011). Entrich (2014) reported an increase of about 5% for 12–21-year-olds in Germany over a four-year period (18% in 2002:23% in 2006) and argued that 'the German shadow education system thus became an influential factor educationally as well as economically' (p. 77). Every year, approximately 1.1 million German students engage in shadow education or *Nachhilfe*. The industry already has a profit of nearly 1.5 billion euros (approximately USD$1.96 billion) per year. Although most research on shadow education in Germany has been conducted in single cities or individual *Nachhilfe* companies, studies have reported predominantly positive effects based on changes in school grades (e.g., Haag, 2001; Hosenfeld, 2011). Schneider (2006) conducted a nationwide analysis and found that students living in the former West Germany were more likely to engage in shadow education and also that participation rates did not differ significantly between urban and rural areas. However, Entrich (2014) argued that due to the limitations of available data,

'no statements about the effect on academic achievement could be made. Until now, it is not clear if out-of-school lessons in Germany contribute to students' performance on a national level in international comparison' (p. 77).

Shadow education is still less prevalent in the USA compared with East Asia, but it is growing (Park et al., 2016). According to some researchers, the growing emphasis on standardized testing in American education under the rhetoric of accountability (Dworkin, 2005; Grodsky, Warren, & Felts, 2008) is leading to more pressure and competition among students and is therefore increasing demand for shadow education (Buchmann, Condron, & Roscigno, 2010). Commercial SAT test preparation companies, such as the Princeton Review, Kaplan, Daekyo Co., JEI Corporation, Kumon, and Woongjin Thinkbig Co., have increasingly expanded in the USA (Buchmann et al., 2010). These share key features of private educational institutes in East Asia (Buchmann et al., 2010; Kuan, 2008). Buchmann et al. (2010) referred to a variety of SAT test preparation activities as 'American-style shadow education.' In Canada, shadow education is also in great demand and becoming increasingly formalized, providing 'a fuller alternative to regular public schooling' (Aurini & Davies, 2004, p. 419). Chapter 2 will provide more information about shadow education worldwide, but clearly, student learning is expanding beyond the boundaries of traditional schooling.

The second reason why shadow education qualifies as a research topic of curriculum studies is that what students learn in shadow education is not exclusive to what they learn at public schools: Students supplement their learning through taking private education (Bray, 1999; Kim, 2016; Ozaki, 2015). In other words, the content and subjects taught in shadow education are mostly related to what is taught at public schools, but go beyond in terms of the depth of subject contents, and exam and admission preparations.

While the primary purpose of shadow education is to remedy or enrich students' academic success at schools (Bray, 1999; Bray & Kwo, 2014; Kim, 2016; Ozaki, 2015; Park et al., 2016), there are some exceptions: For example, as noted above, shadow education plays a crucial role in preserving ethnic identity among various diasporic communities, e.g., preserving Korean and Chinese languages and cultures in the USA and Canada (Sun & Braeye, 2012; Zhou, 2008; Zhou & Kim, 2006).

Shadow education provides various curricula and materials to enrich or supplement schooling (Kim, 2008, 2016; Ozaki, 2015). While most public education provides single-level curriculum and learning materials with limited usefulness for supplemental and accelerated learning, shadow education has developed materials such as workbooks, reference books, textbooks, and other teaching and learning materials that are welcomed by many students (Aurini & Davies, 2004; Kim, 2016). Major franchised companies such as Kumon and Sylvan offer much more systematic and subdivided programs than those used in public education, e.g., reading comprehension, speed reading, study skills, note-taking, test-taking strategies, and public speaking, with the goal of promoting self-esteem among students and helping them develop talents and sometimes even find their career path (Kim & Kim, 2012). These materials are not designed merely for rote learning based on repetition; they are systematically and meticulously designed to guide learning (Aurini & Davies, 2004; Kim, 2008; Kim & Kim, 2012). Sylvan's programs related to reading, writing, and studying were developed with the goal of helping students acquire basic skills, rather than simply helping them improve their grades. Yang and Kim (2010) observed that in South Korea, students study using materials from private tutoring institutes even within public schools: This illustrates the usefulness of the materials. Chapter 5 will provide concrete examples of shadow education mathematics curricula, and Chapter 6 will focus on curricula for gifted and highly motivated learners.

The third reason why shadow education qualifies as a research topic of curriculum studies is that it has direct and indirect effects on academic achievement. Some researchers have explored the effects of shadow education on learning, especially academic achievement, in countries including South Korea (Lee J., 2007; Park, 2008), Japan (Mori & Baker, 2010), Bangladesh (Nath, 2008), Sri Lanka (Pallegedara, 2011), and Canada (Davies & Guppy, 2010; also see Ireson, 2004; OECD, 2012; Park et al., 2016). In the USA, Bloom (1984) observed that students who received private tutoring outperformed 98% of the students in a control group. Carr and Wang (2015) found that after-school programs in South Korea have a positive effect by 'improving students' academic outcomes, promoting a more equitable school system without sacrificing the mental wellbeing of students' (p. 1). Bray and Lykins (2012) also observed the benefits of shadow education among students in Hong Kong.

Some researchers have focused on the effectiveness of shadow education in specific subjects; for example, Askew et al. (2010) found that shadow education contributes to high levels of achievement in mathematics. A Programme for International Student Assessment (PISA) report acknowledged the contributions of shadow education to student achievement in countries including Japan, Singapore, and Canada, stating that 'private education plays an important role in mobilizing resources from a wider range of funding sources and is sometimes also considered a way of making education more cost-effective' (OECD, 2012, p. 70). Student achievement is not limited to what schools do for them, and it would be misleading to attribute academic success solely to school teachers or school systems. Curriculum scholars need to investigate learning and academic success by focusing on both public schooling and shadow education practices.

Equally important to further explore are the findings from research focusing specifically on how shadow education influences child development, which is largely negative. Scholars have reported that extended studying time and excessive involvement in private tutoring have negative consequences on student development (Mori & Baker, 2010) because students sacrifice sleep for study (Gillen-O'Neel, Huynh, & Fuligni, 2013). Some have even argued that it functions as a form of child abuse (Patton, 2014). However, these interpretations do not consider students' desire to learn more or their willingness to sacrifice sleep for their future (Carr & Wang, 2015; Kim 2016). These are important areas for consideration by curriculum scholars so that a nuanced perspective can be developed that considers student agency, performance, and the evolving nature of education.

The fourth reason why shadow education qualifies as a research topic of curriculum studies is that rigorous study on shadow education in East Asia can provide another perspective in understanding why student performance in these countries is 'on the rise again' (Takayama, 2017, p. 262). East Asian regions such as Singapore, Japan, South Korea, Shanghai, Hong Kong, and Taiwan dominated the top rankings in the recent three rounds of PISA, which attracted considerable scholarly and media attention (Sellar & Lingard, 2013; Waldow, Takayama, & Sung, 2014). In analyzing the reaction to the test results, Takayama (2017) correctly argued that the dominant discourse framing the educational systems of these countries as a 'magic bullet' (Kamens, 2013, p. 137) can be misleading or stereotyped. The danger, he argued, is that

'the particular policy discourse of PISA where education is subordinated to the needs for national competitiveness and where a set of policies and programmes are abstracted out of the complex interplays of socio-cultural and institutional contexts' (Takayama, 2017, p. 263). We should not assume that one country's schools are better than those of another (LeTendre, 1999), but it is also important not to overlook shadow education in measures of academic performance so that decisions are not made based on limited or biased information.

The fifth reason why shadow education qualifies as a research topic of curriculum studies is that the emergence and development of shadow education in many countries have changed learning cultures (see Kim, 2016; Park et al., 2016) and students' ideas of where and how to learn (Kim, 2016). Chapter 7 will address this highly understudied research topic in more detail. Many studies have acknowledged that shadow education is an important space in which students actively participate, but few have explored how shadow education changes learning cultures and how students experience it.

Traditionally, education has been based solely on formal schooling or has been conceived as being so. Student learning is now crossing the boundary of school walls and being shaped and influenced by the shadow curriculum. In contrast to the common perception that shadow education is a societal 'evil' (Foondun, 2002) and 'harmful' (Bray, 2017) to student education and society, students are now combining two curricula—those of schooling and shadow education—for their personal educational purposes. Students and parents are actively searching for educational opportunities that best meet their needs and goals. In many situations, public school is no longer the most preferred place.

The various types of shadow education (private tutoring institutes, home-visit private tutoring, Internet-based private tutoring, subscribed learning programs, after-school programs discussed in detail in Chapter 3) allow students and parents to make choices about learning space, time, methods, and even teachers; Chapter 8 will discuss this in detail. For example, Internet-based private tutoring combines the advantages of private tutoring institutes and technologies to overcome barriers such as geographical and temporal confines to meet the learning needs and paces of individual students. While it mainly provides online lectures in subject areas that students can choose based on their needs and academic levels, it also offers sample lectures for students to test out possible curricula and sometimes includes downloadable lessons. It can also allow instant

online communication between students and instructors (Dierkes, 2010; Ventura & Jang, 2010). Some private institutes hire top instructors, who sometimes gain icon status, referred to as 'God Tutors' in Hong Kong (Cheng, 2007). One of these is the $4 million-dollar instructor who surprised Amanda Ripley (2013), the author of *Smartest Kids in the World*. Some hire a team of junior instructors to support the iconic instructor in monitoring lectures, answering students' questions, and responding to other inquiries. With its relatively low tuition and its ubiquity, this type of shadow education is growing exponentially around the world in countries such as India, the USA, Japan, Singapore, and many others (Cairncross, 1997; Cheng, 2007).

Traditionally, public schooling was regarded as the ideal, but with the growth of shadow education and curricula, students and parents are exposed to numerous possibilities. Within this context, many parents are desperate to find the very best curriculum and teachers for their children, as evidenced by 'helicopter moms' in the USA (Hunt, 2008), 'tiger moms' in Chinese communities in the USA (Chua, 2011), and 'gangnam moms' in South Korea (Park, Byun, & Kim, 2011; Park et al., 2015).

Our sixth and final reason why shadow education qualifies as a research topic of curriculum studies is that the phenomenon can help us critically question the historically 'sacred' status of public schooling. Research about shadow education is increasingly raising questions about public schooling. Why do more and more students prefer shadow education over public schools? Why do many students today follow private tutors not the school teachers? Why and how has shadow education become school-like? Why and how is the phenomenon of inverted roles occurring between schools and shadow education institutes? Why are parents willingly sacrificing their financial security for the education of their children? One way to address such questions is to question or even challenge the traditional notion of factory-like one-size-fits-all education, which Freire (1970) criticized as 'banking education.' Many parents and students are moving away from this model, often to obtain more personalized learning which will be discussed in more detail throughout the chapters.

Decanonizing the Curriculum

The previous discussion may appear to advocate for shadow education over public education. This is not the case: What we are simply suggesting that shadow education practices require rigorous study by curriculum

CHAPTER 2

Worldwide Shadow Education Epidemic: From East Asia to Western Hemisphere

Shadow education has been described as both familiar and mysterious (Aurini & Davies, 2013, p. xi). More studies worldwide are focusing on the phenomenon, but its scope, character, history, and functionality in various countries remain underexplored. This chapter explores the current landscape of shadow education worldwide and demonstrates that shadow education should not continue to be framed as a 'shadow' of education, but rather as another legitimate form of education that cannot be ignored. The chapter begins by discussing the origin of the phenomenon, as well as the terms used to describe it, which tend to be limited and ambiguous. Second, it discusses current discourse regarding the phenomenon. Finally, it explores how shadow education has emerged in different countries and contexts.

The Concept of Shadow Education

The idea of shadow education was introduced to academia in the early 1990s, when de Silva et al. (1991) used the term 'private supplementary tutoring' when referring to the phenomenon. Soon after, Stevenson and Baker defined shadow education as 'a set of educational activities that occur outside formal schooling and are designed to enhance the student's formal school career' (1992, p. 1639). Later, Buchmann, Condron, and Roscigno defined shadow education as 'educational activities, such as tutoring and extra classes, occurring outside of formal

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schooling designed to improve a student's chance of successfully moving through high school graduation and into a college of their choice' (2010, p. 436).

The metaphor of 'shadow' first emerged in discourse about shadow education in Malaysia (Marimuthu et al., 1991), Singapore (George, 1992), and Japan (Stevenson & Baker, 1992). Mark Bray popularized the term 'shadow education' with his 1999 book *The Shadow Education System: Private Tutoring and Its Implications for Planners*, emphasizing the mimicry character of shadow education, while framing mainstream schooling as the source of light. He wrote:

> First, private supplementary tutoring only exists because the mainstream education exists; second, as the size and shape of the mainstream system change, so do the size and shape of supplementary tutoring; third, in almost all societies much more public attention focuses on the mainstream than on its shadow; and fourth, the features of the shadow system are much less distinct than those of the mainstream system. (Bray, 1999, p. 17)

The 'shadow' metaphor helped researchers and readers understand the overall implications of the phenomenon. Soon after Bray's book was published, Baker, Akiba, LeTendre, and Wiseman defined shadow education as 'outside-school learning activities paralleling features of formal schooling used by students to increase their own educational opportunities' (2001, p. 2).

Scholars have used other terms to refer shadow education, including 'private supplementary tutoring,' as noted above (de Silva et al., 1991; also see Aspinall & Roesgaard, 2008; Baker et al., 2001; Bray, 1999, 2010; Dawson, 2010; Liu, 2012; Marimuthu et al., 1991; Seth, 2002; Stevenson & Baker, 1992), 'supplementary education' (Aurini & Davies, 2013; Bray, 2017; Wiseman, 2013), 'private tutoring centers' (Tansel & Bircan, 2006), and 'cram schools' (Liu, 2012). Other terms have been used in various countries, including *hakwon* and *sagyoyuk* in South Korea (Kim, 2016), *juku* in Japan (Mori, 2015), *buxiban* in Taiwan (Kuan, 2011; Liu, 2012), and *sishu* in China (Zhang, 2011).

In his 2017 book, *Shadow Education: Evolution Flaws and Further Development of the Term*, Malik explored the confusion and ambiguity surrounding the phenomenon, especially with regard to the issues of 'supplementation' and 'privateness' both important elements of shadow education. Malik argued that there are two main lines of argument with

regard to defining shadow education: Baker followers and Bray followers. Those who follow Baker tend to define shadow education as 'activities which mean not only tutoring, but also other activities for this purpose such as solved and unsolved exercises, prerecorded lectures (via CDs or websites), guide books and notes (paperback and online) and other helping materials' (2017, p. 20). Those who follow Bray define shadow education as, 'those activities which are organized by public schools or government [such as after-school-programs] to help improve the academically weak students in their studies even when teachers are paid for those extra classes … by public schools or government' (ibid., p. 20). According to Malik's analysis, Baker's followers restrict their definition to 'paid and private' activities, while the Bray definition eliminates the elements of 'privateness.' Incorporating aspects of both, Malik defines shadow education as 'activities that are meant to help the students to improve their school learning in examinable subjects' (ibid., p. 20).

In an effort to reduce ambiguity, Malik also identified subcategories of shadow education, including 'shadow teaching, shadow curriculum, and prerecorded academic aids' (2017, p. 21). These subcategories are quite helpful, because they can incorporate possible research categories of shadow education. However, according to Malik, shadow curriculum refers to 'all help books, eBooks, guides, helping materials, notes, solved and unsolved materials. Both paperback and electronic versions are part of it, but they must be textual' (ibid., p. 22). We find this definition to be restrictive, because it conceives curriculum only in a narrow sense, as a static entity.

We do not necessarily see ambiguous definitions as problematic. The different terminologies and concepts that have emerged in different contexts are linked with unique histories and cultures of education. Here, we discuss possible ways to add to the discourse regarding definitions of shadow education and related concepts. First, we can consider the functionalities of shadow education in defining or conceptualizing terminologies. Shadow education is not limited to remedial mainstream schooling: It also functions for enrichment or acceleration purposes. For example, in Hong Kong and Taiwan, far more students in high-ranking schools engage in tutoring compared with those in low-ranking schools (Bray, 2017, p. 97).

Second, the types of shadow education need to be considered; the next chapter explores five types of shadow education. Here, it is important to note that different terms are used to refer to different types of

shadow education in nations such as South Korea and Japan. For instance, South Korea has eight types of *hakwons* based on their focus: (1) English language; (2) mathematics; (3) logical writing; (4) comprehensive education; (5) special purpose high school education; (6) gifted students; (7) Internet-based education; and (8) boarding school education (Kim, 2016). Ozaki (2015) similarly identified various forms of *juku* in Japan. In this respect, finding and developing specific terminologies that explain specific forms of shadow education would help us broaden our understanding of the phenomenon.

Third, shadow education differs in various ethnic and cultural settings. Within North America, some ethnic communities (diasporas) actively employ shadow education: Scholars have explored this phenomenon among Chinese and Korean communities in Los Angeles (Zhou, 2008; Zhou & Kim, 2006) and Chinese communities in Quebec, Canada, and Flanders, Belgium (Sun & Braeye, 2012). In the New Zealand setting, Ai-Hsin Ho and Yu Wang (2016) described Chinese community schools in Auckland as a 'new wave' of education, tracing their histories from the 1960s. Cummings (1997) described shadow education outside East Asia as an 'exotic' cultural practice of education. Other researchers, in trying to explain why shadow education is so successful in ethnic communities, especially East Asian communities, have often attributed student success to the Confucian values of respect for learning, diligence, and effort (e.g., Sun & Braeye, 2012). These findings illustrate the need to preserve and study culturally and ethnically relevant terminologies.

Finally, it is important to question the idea that shadow education has a subordinate status to public education. The metaphor on which shadow education was initially based signals its subordinate or inferior status to public education. Shadow curricula have even been considered an antagonist of public education (Jung, 2018), and some have suggested that these curricula should be tightly controlled or eliminated (Bray, 2011; de Castro & de Guzman, 2014). According to Tsuneyoshi (2001), these perceptions are erroneous: Private tutoring goes beyond shadowing the formal system and in effect holds a mirror up to the formal system to reveal its shortcomings. Similarly, Kim (2016) argued that the negative representation of shadow education serves to limit our understanding of it. Borrowing from Deleuze's (1987 [1980]) idea of a 'body without organs,' Kim suggested that shadow education should be discussed with a more open and progressive attitude, because it is not traditional or predictable. Kim went on to question the current

perception of shadow education, because 'better answers and ideas are made without predetermined beliefs, prejudices, and theories or hypotheses' (2016, p. 198).

This chapter will seek to categorize and clarify the various terminologies used to describe shadow education, while simultaneously embracing the diverse characteristics and functionalities of the practices in different countries and contexts.

Contemporary Discourse About Shadow Education

Over the past two decades, shadow education has gradually received more attention in research areas such as comparative education (Mori & Baker, 2010; Ventura & Jang, 2010), educational policy studies (Bray & Kwo, 2014; Ireson, 2004; Park, Buchmann, Choi, & Merry, 2016), sociology of education (Byun, 2010; Yamamoto & Brinton, 2010), education and economics (Entrich, 2014; Zhang, 2013), and lifelong education (Ozaki, 2015). Most scholars agree that shadow education should be regarded as an important educational phenomenon worldwide (Bray, 1999, 2009; Kim, 2016; Lee, Park, & Lee, 2009; Mori & Baker, 2010; Spring, 2010). Spring (2010) argued that shadow education is a vital element in understanding the global politics of education and neoliberal competition among capitalist countries. This section reviews the contemporary discourse about shadow education.

Conceptualization and Characterization of Shadow Education

How shadow education can be conceptualized and characterized is an important topic as such effort provides the fields with conceptual and theoretical foundation for conducting research on shadow education. There have been three sub-interests under this research topic. To begin with, from the beginning of the 1990s, scholars have introduced terms used in different countries and defined it with various terminologies as we provided the diverse terminologies in both English and other languages in the previous section. The most common in English language is private supplementary tutoring; it is called private tuition and coaching in Bangladesh, India, and Pakistan; juku in Japan; hakwons and sagyoyuk in South Korea; Buxiban in Taiwan; Nachhilfe in Germany.

Second, there have been efforts to characterize shadow education, providing the fields with definitions and characteristics of shadow

education (Bary, 1999; Heyneman, 2011; Kim, 2016; Malik, 2017; Stevenson & Baker, 1992). Mark Bray's contribution in this topic shall be acknowledged as he popularized the term of shadow education and provided the characteristics of shadow education in his 1999 book. Using *shadow* metaphor in that shadow education only exists because the mainstream education exists and the former mimics the latter, he characterized shadow education with three perspectives such as supplementation, privateness, and academic subjects (Bray, 1999, p. 17). Supplementation refers to the point that shadow education helps students for remedial and enrichment of their learning. Privateness means that shadow education only concerns with tutoring provided by private entrepreneurs and individuals for profit making with an exemption of the supplementary help at public expense. Academic subjects indicate that shadow education covers the academic subjects that are taught in public education.

Third, there is research to develop subcategories or subsidiary concepts of shadow education (Bray, 1999; Kim, 2016; Malik, 2017). First of all, Bray (1999) provides the forms of shadow education such as one-to-one tutoring, tutoring in small, medium, or large groups, or through the mail, Internet, telephone. Young Chun Kim (2016) reports eight subcategories of hakwon education that exists in South Korea. From the perspectives of academic subjects and purposes of hakwons, Kim's categories include (1) English language hakwons; (2) mathematics hakwons; (3) logical writing hakwons; (4) comprehensive hakwons; (5) special purpose high school hakwons; (6) gifted student-centered hakwons; (7) Internet-based hakwons; and (8) boarding hakwons. Malik's (2017) work is also worth to mention in that he suggests three subcategories of shadow education which include shadow teaching (face to face, through distance education means; but has to be real time), shadow curriculum (guidebooks, ebooks, notes helping books, etc.), and prerecorded academic aids (CDs, audio, and video material, prerecorded online lessons, etc.) (Malik, 2017, p. 21). Such efforts to define what shadow education is and to categorize the forms of shadow education provide us conceptual framework for further research on shadow education. As we conceive the types that Bray provide incomplete, we will provide our categorization of shadow education in the next chapter. Also, as we see Malik's subcategories are limiting in terms of the uses of curriculum terminologies, we directly address our criticism on it in Chapter 7, Theorizing Shadow Curriculum; Its Definition and Characteristics.

Effectiveness and Roles of Shadow Education

Shadow education is intended to help students increase or maintain their academic achievement, and this has been a central topic of research about shadow education. The findings have been inconsistent: Some scholars argue that it directly and indirectly contributes to academic achievements (Bray & Lykins, 2012; Buchmann et al., 2010; Kim, 2016), while others argue that shadow education does not have much of an effect on student achievement (Baker & LeTendre, 2005; Bray, 1999). This debate appears to be ending: Research is increasingly supporting the former line of argument. As Liu noted, 'cram schooling does matter' (2012, p. 46) in terms of helping students build learning skills and habits, as well as increasing academic achievement.

Considerable research has revealed the positive effects of shadow education on students (Byun, 2010; Entrich, 2018; Kim, 2016; Schacter, 2000). Schacter (2000) found that students in southern California who have been tutored tend to learn and achieve more. Similar results have been reported in other countries including Vietnam (Dang, 2007), Japan (Mori, 2015), South Korea (Kim, 2016), China (Zhang, 2011), Hong Kong (Bray & Kwok, 2003), Taiwan (Kuan, 2011; Liu, 2012), Bangladesh (Nath, 2007), Sri Lanka (Gunasekara, 2009), Russia (Loyalka & Zakharov, 2014), England (Ireson, 2004), and Canada (Davies & Guppy, 2010). Some scholars in the USA have explored the academic influence of SAT prep courses and private tutoring, the so-called American-style shadow education (Buchmann et al., 2010; Byun & Park, 2012). Bray and Lykins (2012) found that shadow education is beneficial because it can help both students who learn at a slower pace to catch up and also help high achievers reach greater levels of success. Baker et al. (2001) also confirmed that shadow education has positive effects on academic achievement and helps students, in terms of both remediation and enrichment (Baker et al., 2001). Baily commented that 'the benefit of private tutoring is unarguable' (2012, p. 382), and Crotty found that shadow education is 'a highly effective way to ensure academic excellence' (2012, para. 1). Finally, an OECD report acknowledged the benefits of shadow education, stating that 'private education plays an important role in mobilizing resources from a wider range of funding sources and is sometimes also considered a way of making education more cost-effective' (2012, p. 70).

However, some researchers disagree: Lee (2007a) found that private tutoring had no effects on student achievement, and Cheo and Quah (2005) found that shadow education actually had negative effects on students in Singapore. Based on quantitative research, Byun and Park (2012) found that cram schooling in South Korea had a significant positive effect on student achievement, but that other forms of shadow education (e.g., mail-based correspondence courses and Internet tutoring) did not. These different findings could be related to how students participate in shadow education, the time frame or duration, and the personalities of students and their intellectual abilities (Bae, Oh, Kim, Lee, & Oh, 2010). Clearly, the effectiveness of shadow education needs more scrutiny (Bray, 2009; Byun & Park, 2012). It is important to investigate various factors including the types of shadow education, the quality and quantity of tutoring, and the duration, intensity, and backup supports provided.

Educational (In)Equality and Shadow Education

Whether shadow education increases or reduces educational inequality has been a subject of heated debate. Many scholars have argued that shadow education exacerbates educational inequality in countries and regions including Hong Kong (Bray & Lykins, 2012), India (Pallegedara, 2011), and South Korea (Byun & Kim, 2010). Many have compared participation rates and familial expenditure, academic achievement, and other parameters such as location, gender, ethnicity, parental income, and social class. They have reported a positive relationship between the widening socio-economic gap in terms of academic achievement and shadow education expenses (Anderson & Kohler, 2013; Byun & Kim, 2010; Choi & Park, 2016). For example, Bukowski (2017) focused on the relationship between socio-economic status and participation in shadow education among European students; he found that unequal access to shadow education creates an additional gap between students of differing socio-economic status. Bray (2009) and Bray and Kwo (2014) found that statistical data from many countries support Bukowski's claim, and suggested that the shadow education sector should be more regulated for the 'public good.' Other scholars have also explored the implications of shadow education in terms of educational inequality (e.g., Baker & LeTendre, 2005; Byun, 2010; Choi & Park, 2016; Dang, 2007). As a result, many scholars have made suggestions

about strategies to control and regulate shadow education and have explored their effectiveness (Heyneman, 2011; Lee, 2013; Lee & Brinton, 2014; Lee & Shouse, 2011; Park, 2008).

However, other scholars have found that shadow education can also act as a social compensatory factor. Entrich (2014) found that the *juku* industry in Japan enabled all Japanese students to achieve more, regardless of their social status, arguing that shadow education has a neutralizing effect on disadvantaged family background by providing various educational opportunities. Guill and Bonsen (2011, cited in Bukowski, 2017) detected positive significant effects of shadow education on the learning outcomes of students in Hamburg, Germany, and found that students with a lower family income attended more out-of-school classes than those with a higher family income.

Shadow Education as Ethnic and Cultural Asset

Shadow education has been studied with regard to ethnic capital (Byun, 2010; Cummings, 1997; Ho & Wang, 2016; Lee & Zhou, 2015; Schneider & Lee, 1990; Sun & Braeye, 2012; Zhou, 2008; Zhou & Kim, 2006). Some researchers have sought to understand why students from certain ethnic groups, especially East Asian immigrants and students in Asian American communities, outperform other ethnic groups in the USA, Canada, Australia, and New Zealand. They have found that shadow education is a crucial factor not only in outperforming other ethnic groups in terms of achieving higher grades and admission to better universities or colleges, but also in maintaining their ethnicity.

For example, in their book *The Asian American Achievement Paradox,* Lee and Zhou (2015) found that students from Asian immigrant families can attain high achievement via college preparation courses and tutoring. In doing so, the authors argued, these students reproduce 'ethnic capital,' which they defined as a degree from an elite university and working in a high-status field. Byun and Park (2012) examined how East Asian American students differ from students of other races/ethnicities in terms of the prevalence, purpose, and effects of using shadow education, especially commercial test preparation service and one-on-one tutoring. They found that East Asian American students appear to benefit most from accessing a commercial SAT test preparation course for enrichment purposes, while Black students are most likely to use private tutoring for remedial purposes. With respect to identity, some scholars

have argued that the educational environment supported by ethnic communities serves not only to improve students' academic success, but also 'to nurture ethnic identities and pride that may otherwise be rejected by the children because of the pressure to assimilate' (Zhou, 2008, p. 242).

Shadow Education as a New Learning Space

Recently, academic efforts have been made to conceive shadow education as a new learning space and to explore the phenomenon from the perspectives of students (e.g., Cayubit et al., 2014; Kim, 2016; Ozaki, 2015). For example, one of the authors of this book, Young Chun Kim (2016), conducted an in-depth study of the daily lives of Korean students in shadow education. His ethnographic study involved a chronological analysis that framed the lives of students from elementary to high school, revealing how they develop their study habits, logical/abstract thinking, practical language competencies, and preparatory skills for exam with the help of personalized/subdivided differentiated curriculum, systematic textbook, and diverse instructional methodologies.

Ozaki (2015) explored the *juku* phenomenon in Japan and found that school and *juku* are complementary practices that benefit students: School provides a community, and *juku* fills educational gaps. Cayubit et al. (2014) used a 'qualiquantilogical' approach to explore how private tutoring has affected the academic life—specifically the psychological effects—of high school students in the Philippines, by exploring and analyzing their subjective experiences in relation to being part of shadow education. Their findings revealed that exposure to shadow education has both positive and negative effects on academic performance, as well as attitudes about learning and self.

Internet-based shadow education is becoming a research area as a new learning space. According to Ventura and Jang (2010), this kind of private tutoring has created a 'new paradigm.' Associating it with the globalization of education, they noted that today, education 'can be divided into off-line education and online education' (p. 60). They also noted that Internet-based shadow education is growing exponentially in many countries around the world as 'we are watching a true explosion both on the level of the offer and on the level of demand' (p. 62). Although research in this area is progressing, we still do not know much about

how these technological developments will affect students' experience and their learning in the virtual space.

This section has identified some research foci involving shadow education. To date, researchers have focused on these issues at varying depths. Some, such as the effectiveness and (in)equality of shadow education, have been rigorously studied; others, such as shadow education as a new learning space and shadow education as ethnic/cultural capital, remain understudied. It is promising that the discourse has begun to bring different understandings and perspectives that challenge the predominant representation of shadow education; it is also promising that research is becoming more focused, considering contextualized specificities such as how individual students experience shadow education, as well as ethnic/cultural elements. The next section will explore shadow education in specific nations and regions around the world.

Shadow Education as a Global Educational Phenomenon

This section focuses on the current trend of shadow education, specifically how active and important a role it plays in student learning and daily life worldwide. When shadow education emerged within international academic discourse, it was portrayed as a somewhat 'exotic' cultural practice limited to East Asian nations (Cummings, 1997) or a 'secret ingredient' leading to high performance among students in some Asian nations (US Department of Education, 1987). Shadow education has traditionally been prominent in East Asian countries such as Japan, South Korea, Hong Kong, China, Singapore, and Taiwan, but it is now expanding in other regions including South Asia, Southern Europe, North America, South America, and Western Europe. It has dramatically expanded since the turn of the twenty-first century.

Asia

Some Asian countries (Hong Kong, Singapore, South Korea, and Taiwan) are called *Asian Dragons* due to their exceptionally high economic growth. Similarly, the countries discussed in this section could be called *Shadow Education Dragons* due to their historically pervasive and prevalent shadow education.

South Korea South Korea has the most intense shadow education: It has the most forms of shadow education, and the relationship between shadow education and public education has undergone a dramatic change. Within this context, many possible consequences of shadow education can be found—both positive and negative. South Korea has the highest participation rates in shadow education worldwide: In 2016, approximately 67.8% of Korean students participated: 80% of elementary school students, 63.8% of middle school students, and 52.4% of high school students. In the same year, Korean families spent 18.1 trillion won (USD$16.6 billion; Statistics Korea, 2016), which is more than twice the average annual expenditure on shadow education among OECD countries (OECD, 2018).

The popularity of shadow education in South Korea is related to Korean sociocultural values and the educational system. Koreans respect the Confucian values of study and diligence (Sun & Braeye, 2012), and consider education to be highly important. In the modern context, these Confucian values are joined by a relatively new cultural value called *hakbeol*—being a graduate of a prestigious school or college (Jung, 2016). *Hakbeol* is considered a powerful conduit of social mobility (Lee & Shouse, 2011; Lett, 1991) and requires entering a prestigious university by getting high scores on school exams and the College Scholastic Ability Test. The excessive emphasis on grades and scores for *hakbeol* is commonly called 'education fever' (Seth, 2002), which has led to intense participation in shadow education (Kim, 2016). As the term, education fever, expresses, shadow education is a space where parental involvement functions strongly in South Korea as Doherty and Dooley (2018) also found in *Responsiblizing parents: the nudge toward shadow tutoring* in Australian context. The term, 'gangnam mom' (Park, Lim, & Choi, 2015), which we used earlier refers to an overly solicitous mother who micromanages her child's academic achievement by engaging in 'dynamic and vigorous pursuit of education-related information that will help their child excel in academics' (Park et al., 2015, p. 1). It is similar to the term 'helicopter mom' in the USA (Hunt, 2008) and 'tiger mom' in China (Chua, 2011). Gangnam mothers collect information for their children's education, especially of shadow education, and make decisions for them.

As discussed above, scholars have documented the positive impact of shadow education on student achievement (Kim, 2005, 2008, 2016;

Lee, 2007b). In addition to research documenting general improvements, some research has reported its effects in specific academic areas. Kim's (2016) longitudinal study on the effects of private tutoring on mathematics and English revealed that shadow education had positive effects on achievement in both subjects. In *Shadow Education and the Curriculum and Culture of Schooling in South Korea*, Kim (2016) argues that hakwons meet students' individual needs and demands by providing numerous options in terms of what, where, and how to learn (also see Kim, 2016; Park et al., 2015). Hwang and Won (2017) reported that students obtain learning skills through shadow education. Other researchers have documented the effectiveness of different types of shadow education, such as after-school programs (Byun & Kim, 2010).

But some scholars have reported that shadow education affects high-achieving students more than low-achieving students (Kim, 2008, 2016; Kim, & Kim, 2012). Researchers have also argued that shadow education in Korea has increased educational inequality as it provides unequal access to educational opportunities based on familial SES (Byun, 2010; Choi, 2012; Choi & Park, 2016). According to Korean National Statistical Office, in 2005 the upper 10% of income earners spent an average of 292,000 won/month on shadow education, which is 8 times more than the bottom 10% who spend just 36,000 won/month. For this reason, shadow education in South Korea has been conceived as a 'social evil' (Kim, 2016, p. vii) that needs to be tightly controlled. In fact, shadow education was prohibited under the Jung Hee Park government. Yet, the legal eradication policies from the 1980s have been gradually canceled. On April 7, 2000, the Constitutional Court judged that the 1980s legal abolition policies on shadow education were unconstitutional. Despite the overall abolition on regulative policies on shadow education, educational policy-oriented research still considers shadow education to be on periphery of legitimate learning and treat it as something that is undermining the value of public education (Byun & Kim, 2010; Choi & Park, 2016; Park, 2008).

Lastly, there are reports that show that Korean students and parents favor shadow education and shadow educators over public education and school teachers because shadow education provides intensive review of course material, preparation for upcoming courses, patient and encouraging instruction, and individual feedback which is not always met in public schooling (Je, 2002; Kim, 2003). Je's (2002) survey of 500 students attending hakwons located in Gangnam District, Seoul, revealed

that hakwon teachers earned higher scores than school teachers in the following categories: (1) demonstrating teaching ability, (2) communicating scholarly enthusiasm, (3) caring about students, and (4) providing individual guidance and counseling. Similarly, Kim's (2003) survey of 379 Seoul students attending hakwons to prepare for college entrance found that most of these students rated their hakwon teachers higher than their school teachers in every area, including their classroom management and their ability to motivate and provide feedback to students. Even the government-funded KEDI (Korean Educational Development Institute), the major role of which is to support national public education enterprises, found in its study 'Learning environment and culture analysis of high school students' (Choi, 2009) that high school students evaluated hakwons as providing higher-quality education than public schools in every area: (1) demonstrating subject expertise, (2) understanding students' intellectual needs, and (3) providing satisfying classes. In other words, high school students think that hakwon teachers are better communicators and educators than public school teachers, and that hakwon education provides a more useful preparation for their college entrance exams. Given the results of the studies, it is unfortunate but understandable that there is a 'phenomenon of inverted roles between public education and shadow education' in South Korea. Some students they interviewed consider public schooling as secondary to their shadow curriculum (Yang & Kim, 2010, p. 117).

Japan Japanese students consistently perform well in international academic assessments. On the 2015 PISA, Japanese students ranked second in scientific literacy and fifth in mathematical literacy among 72 countries. Many scholars believe that this is the direct result of participation in shadow education (Entrich, 2014; Schümer, 1999; Watanabe, 2013).

Many Japanese students engage in shadow education (Entrich, 2018; Konakayama & Matsui, 2008). In 2008, 20% of primary school students, and more than 65% of ninth-grade students, attended a *juku* (MEXT, 2008). *Jukus* are similar to Korean *hakwons*, providing students with both academic and non-academic supports, including *naraigoto* (private lessons) in swimming, calligraphy, and piano. Japan has about 50,000 *jukus* nationwide: more than all schools combined (39,000) (BERD, 2007, p. 2). They generate USD$12 billion annually and monthly costs are steadily increasing (MEXT, 2008). Some *juku* chains have expanded

internationally; for example, a chain called Kumon has expanded into 49 countries. There are five different types of *juku:* (1) *shingaku juku* to prepare for exams; (2) *hoshu juku* to provide remedial study for slower learners; (3) *kyosai juku* for students who have dropped out of school; (4) *doriru juku* to drill students (e.g., Kumon); and (5) *sogo juku* a comprehensive type of *juku* that incorporates elements from all of the above (Roesgaard, 2006).

Japan has a long history of shadow education. The first *juku* boom occurred in the 1960s, when the baby boom generation reached high school age. At that time, many middle school students failed to advance to high school: In 1954, close to half of applicants failed to advance to the next level. *Juku* schools met the needs of these students. Also, in 1968, the Japanese government changed its curriculum to make it more difficult. Many students fell behind, leading to the emergence of *hoshu juku* and *sogo juku*. After this great *juku* boom (Rohlen, 1980), the Japanese shadow education system expanded steadily throughout the 1980s and 1990s (Dierkes, 2010; Haasch, 2000). This phenomenon is related to deep-rooted cultural beliefs; similar to Koreans, Japanese value academic credentials (Dawson, 2010; Entrich, 2014). In particular, admission to a prestigious college is considered to be closely linked with preferred employment (Schomburg & Teichler, 2002).

Many Japanese believe that mainstream schooling alone cannot prepare students sufficiently to ensure academic and later success (Sato, 2005). A survey distributed by the Cabinet Office of Japan in 2005 revealed that two-thirds of parents attributed the growing role of *juku* to shortcomings in public education, and considered *juku* instructors better than school teachers (MEXT, 2008). Many parents believe that financial investment in shadow education will lead to their child's success, which can foster educational inequality (Becker & Lauterbach, 2010; Boudon, 1974; Breen & Goldthorpe, 1997; Konakayama & Matsui, 2008; Mori, 2015). Families with a higher socio-economic status can invest more in their children, and research has demonstrated that these students are more likely to engage in shadow education and to achieve higher grades (Mori, 2015).

Hong Kong Students in Hong Kong are also likely to engage in shadow education (Bray, 1999, 2009; Fung, 2012). Shadow education first emerged in Hong Kong in the early 1980s in the form of English language schools to help students with public examinations. Later,

these schools expanded to include other subjects. Shadow education blossomed in the 1990s, and as a result, the government began to control it. Regulation reduced participation rates, but it remains highly popular among students in Hong Kong (Fung, 2012). An estimated 72% of lower secondary students, 82% of middle secondary students, and 85% of senior secondary students receive private tutoring (Bray & Lykins, 2012; Caritas, 2010).

Kwok (2004) analyzed the patterns of private tutoring in Hong Kong. He included all kinds of private tutoring: individual, group (2–8 per group), and mass (more than 8 students in a class) at all levels of secondary schooling. He found that individual home tutoring was more common among junior secondary students, while examination-oriented mass tutoring was more popular among the senior secondary students. He also found that students at higher levels of education tended to engage more in private tutoring: Rates were 35% for S.1–S.3 students, 47% for S.4–S.5 students, and 70% for S.6–S.7 students. He also identified the main reasons why families engaged in shadow education ('cram schools'): (1) Education is the major screening device for upward social mobility—credentials are used for elite selection and job allocation; (2) government censorship or monitoring of cram schools is ineffective; (3) cram schools are widely marketed through mass media; (4) cram schools are geographically located in urban areas with convenient transportation access; (5) tutoring fees tend to be affordable; (6) examination-oriented curricula in schools place strong pressure on students at upper secondary and matriculation levels; (7) public schools cannot meet individual learning needs due to rigid school curricula, insufficient academic guidance, questionable pedagogy, and tight study schedules; and (8) family members with heavy daily workloads and inadequate academic qualifications can offer very little academic guidance to students.

Parents and students may also hire private tutors to help students with their emotional, behavioral, physical, and mental needs. Private tutors may play the roles of knowledge disseminator, motivator, role model, preacher, adviser, elder sister/brother, cousin, friend, mediator, listener, mother, and babysitter (Ho, 2010). Many parents hire private tutors to enhance their children's cultural capital, which can be transformed into economic capital (Kwok, 2004).

China Shadow education is rapidly expanding in China (Zhang, 2014; Zhang & Bray, 2015). The country's current education system is very competitive and examination-focused, providing space for the growth of shadow education (Song, 2016; Wang, 2013). In 2009, the *Beijing Evening News* reported that 56% of urban households were investing in private tutoring (Li, 2009). A 2010 survey of junior middle school students in Jinan city, Shandong Province, found that 28.8% were receiving tutoring in mathematics, 29.3% in English, and 11.6% in Chinese (Zhang, 2011). In Beijing, about 80% of students engaged in shadow education in 2013, with families spending on average 100,000 Yuan (USD$16,400) annually, about one-third of their income (Chinese Education Industry Training Report in 2013). In Shanghai, parents annually spend on average 6000 Yuan (USD$960) on English and math tutors.

In China, if students want to advance to next level of education, they must pass the High School Entrance Exam (HEE) and the National College Entrance Exam (NCEE; *gaokao* in Chinese). Many students engage in shadow education to prepare for these exams and others. The overall goal is to enter a good school and earn a degree to access the job market. The official ranking of high schools within provinces ended in the late 1990, but the schools that were previously ranked highly are still more desirable. Getting a degree from top-ranking schools is regarded as ensuring career success in the future (Song, 2016). Some leading companies tend to only hire students graduating from top-ranking universities. Within this context, students need to access shadow education.

Various forms of shadow education are available in China: one-on-one private tutoring, group tutoring, small class size (10–20), and larger class size (about 40). Although each option has pros and cons, the rapid development of technology has led to more students accessing private tutoring online to save time and money on traveling, especially those living in remote areas who could not otherwise access lectures by star tutors (Xue & Ding, 2009).

Taiwan Taiwan, which is known as one of the four 'Asian Tigers' along with Hong Kong, Korea, and Singapore, has high rates of participation in shadow education: 84% of elementary and junior high school students. On average, parents pay approximately NT$2640 (USD$80) per subject per month for their children to attend cram schools. These fees

may add up to NT$7920 (US$240) per month, which is a financial burden for many families (Chou & Yuan, 2011). On average, high school students spend half of their day in school and shadow education (Chou, 2008). Most engage in education-related activities (including exam preparation) at the expense of their personal life. Many ninth and twelfth graders engage in intensive shadow education drilling to achieve higher scores on college entrance examinations (Chou & Ching, 2012).

Shadow education in Taiwan can be generally divided into *buxiban* and *anchinban*. Except for some talent-building classes, most *buxibans* focus on core subjects such as Chinese, English, math, and sciences, which are the main components of high school or college entrance exams; students are provided with materials and instructions to supplement classes at regular schools. In contrast, *anchinbans* (commonly known as daycare centers) ensure children complete their homework and assignments before their parents pick them up.

In the mid-1990s, Taiwan's Ministry of Education (MOE) began implementing a series of education reform programs to reduce examination pressure and encourage creativity among students. These changes have had little effect in reducing stress among students and have actually led to an increase in the number of students attending shadow education. In 2001, Taiwan had 5891 registered *buxibans* in 2001; by 2010, this number had more than tripled, with 80% of *buzibans* focusing on exam preparation (Government Information Office, 2010). Reasons behind this boom in cram schools include: (1) Supplementary instruction tends to improve academic performance and test scores; (2) the overvaluing of credentials has led to enormous pressure for exam-driven learning; (3) parents are very concerned about their children's academic performance; (4) some public schools cannot satisfy academic needs; and (5) there is a gap between what students learn at school and what is included in entrance exams (Chou & Yuan, 2011).

India In India, some students take shadow education very seriously: Paramita observed that some students 'follow the private tutors not the teachers' (2015, p. 819). A large proportion of secondary and post-secondary students in India access private tutoring, but this phenomenon is not restricted to higher grades and urban areas: Approximately one-fifth of rural Indian children in grades one to eight also access private tutoring (ASER, 2009–2013). Almost three-quarters of elementary

school children in rural West Bengal and Tripura, and close to half of children in rural Bihar and Odisha, access private tutoring. On average, they spend about nine hours per week with private tutors, which is equivalent to one and a half school days (Majumdar, 2014). Private tutoring is a large and growing industry in India, estimated by the Asian Development Bank to be worth INR 2370 crore (USD$6.4 billion) per year in 2013 and growing at an annual rate of 15%; it was projected to have reached INR 4000 crore in 2015. India is leading the way in online tutoring by offering professional linguistic and academic coaching at an affordable cost (GIA, 2017).

Some public school teachers have been observed to shirk their responsibilities at school to increase demand for private tutoring (Jayachandran, 2014), which might explain why so many Indian students attend shadow education, even at the elementary level. Additionally, some parents might feel the need to supplement school-based education with private tutoring because 'ambitious' school curricula leave many students behind (Dang & Rogers, 2008).

As in other countries, shadow education in India may have detrimental effects. Paramita (2015) found that shadow education seriously disrupted how higher secondary students felt about their school: It led to more pressure to score higher on exams and pursuing human capital via higher education to secure an advantageous position, as well as perceptions that school teachers are inefficient or indifferent. Based on the literature, shadow education in India is a troubling phenomenon: It is associated not only with educational inequality but also corruption among some school teachers, which has also been reported in Bangladesh (Mahmud & Kenayathulla, 2017; Nath, 2007).

Europe

Although not as intense as in East Asia, there has also been rapid growth of shadow education in Europe (Dang & Rogers, 2008; Tansel, 2013). Participation rates vary widely by country (Bray, 2011; Bukowski, 2017; Jerrim, 2017): It is more prevalent among Southern, Central, and Eastern European countries including Greece, Poland, Latvia, and Spain, and the least prevalent in Western and Northern European countries, especially Scandinavian countries including Denmark, Sweden, and Finland (Bukowski, 2017). Jerrim (2017) investigated participation rates and hours of additional instruction among European students.

He found that shadow education is effective, and that well-off pupils had more access to shadow education. To mitigate the damaging effects of shadow education in reinforcing educational inequality, he suggested governments to increase nonprofit and *pro bono* provision for the most talented pupils from less well-off backgrounds to help them reach their full potential.

England Although England has lower participation rates than other parts of Europe, participation in shadow education has been increasing at a rapid pace. An estimated 27% of English primary and secondary school students had a private tutor for exams and help with daily learning (Ireson & Rushforth, 2004). Kirby (2016) found that students and their families in England spend between £1 and £2 billion (USD$1.3–2.6 billion) annually on shadow education—but also noted that much of the private tuition market is hidden because some tutors and tutees are reluctant to reveal exact figures. Bukowski (2017) found that English students sought shadow education for four main reasons: (1) remedial help with schoolwork, (2) test preparation (e.g., GCSE exam and school entrance exams), (3) poor education quality at school, and (4) to improve confidence in studying. Many middle-class parents seek shadow education to help their children secure competitive places in selective schools or universities, which may be called a 'tutoring arms race' (Boyle, 2015). Interestingly, Tanner et al. (2009) found that students in London are more likely than others to access shadow education, because (1) London is more ethnically diverse than the other regions, and Black and ethnic minority populations are more likely to receive private tutoring than other groups; (2) Londoners have more ability to pay for tuition as some of the wealthiest constituencies in the country; (3) the largest private tuition agencies are based in London; and (4) London has a higher proportion of independent schools.

Hajar (2018) explored the perceptions of grade 6 students from three primary schools in East Kent. In addition to helping students pass the grammar school entrance exam, shadow education provided more intangible benefits such as helping students with self-esteem, boosting their interest in learning, and helping them be more confident when socializing with others.

In England, the most popular subjects taught in shadow education are math and English, and one-on-one private tutoring (78%) is the most

common form (Tanner et al., 2009). Most private tutors work part-time (79%), including university students who work and study at the same time, and many government teachers work as private tutors after school. A survey by the NFER for the Sutton Trust found that about 43% of state teachers in England had worked as a tutor: 200,000 of about 450,000 full-time teachers (Crew, 2016). Ireson and Rushforth (2011) found that more than 50% of parents found tutors through word-of-mouth recommendation, and that parents are most likely to employ tutors when their children approach significant transition points in the education system, and when test and examination scores affect progression. At the time of their study, about 10% of students were receiving private tutoring, and about 27% had received tutoring at some point. Most students (71%) said they worked with tutors to help them do well in examinations and tests. Most parents (71%) said the main reason for hiring a tutor was to help children better understand school content, followed by enhancing self-confidence (69%), and improving examination scores (59%). The authors concluded that shadow education amplifies and reproduces existing educational and social inequalities.

To date, shadow education in England has not been the subject of governmental control or regulation (Kong, Yu, & Zhao, 2017). It can be considered a 'hidden secret' of English education (Kirby, 2016). However, some empirical studies have helped clarify the types and nature of shadow education in the English education system and why parents pay for it. West et al. (1998) investigated different types of involvement by parents in their children's education in London and southeast England, by interviewing parents (mostly mothers) of 107 children aged 10–11 years in both state and private schools. The authors found that 36% of children had received private tutoring; they also found that 37% of parents employed a tutor mainly to help their children prepare for a test, and 21% of parents employed a tutor to supplement what was being taught at school. Tanner et al. (2009) investigated access to shadow education among students at levels 1–4; the authors found that England had 504 shadow education agencies, which were unevenly distributed with greater prevalence in London and the southeast.

Germany Shadow education has been in high demand in Germany, especially since the 1990s (Guill & Bonsen, 2011). Demand tends to peak with the transition from primary to secondary school, because German students must choose one of three secondary school tracks to

attend: *Gymnasium, Realschule*, or *Hauptschule*. A student's social background strongly affects which type of secondary school the student will attend; this contributes to social reproduction and may be related to the decision to access shadow education (Entrich, 2014). According to Schneider (2006), increased investment in shadow education seems to reflect the failure of the compulsory public school system. In Germany, secondary students are most likely to engage in shadow education. About 20–30% of secondary school students participate in shadow education: 19.1% at age 15 and 27% at age 17 (Klemm & Klemm, 2010). About 14.8% of students at age 10 (primary school) attend shadow education (Guill, 2010, cited in Bukowski, 2017).

The *Nachhilfe* industry, the major form of shadow education in Germany, makes about 1.5 billion Euros (USD$1.75 billion) a year (Klemm & Klemm, 2010, p. 20). Although it is still in initial stages of development (4000 *Nachhilfe* institutes compared with almost 50,000 *jukus* in Japan; Benesse, 2007), 30% of SE in Germany takes place at *Nachhilfe* institutes (Dohmen, Erbes, Fuchs, & Günzel, 2008, cited in Entrich, 2018). The two biggest suppliers, with a combined market share of 50% and about 2000 contractors, are Studienkreis and Schülerhilfe. Both were initiated in the 1970s and have at least one office or operate with a contractor in almost every German town.

German parents spend approximately between 1.0 and 1.3 billion Euros (USD$1.17–1.52 billion) on shadow education annually. Estimated annual costs range from 900 to 1500 Euros (USD$1050–1800) per subject and student (Dohmen et al., 2008; Klemm & Klemm, 2010, cited in Entrich, 2014). In 2011, the federal government initiated a law that allows needy families to enroll in state-funded shadow education. This financial help, known as *Bildungspaket* (education package), enables approximately 2.5 million needy students to access shadow education. Entrich (2014) found that shadow education in Germany usually serves a remedial purpose; many students want to improve their academic performance, but may need financial assistance. Entrich also found that family socio-economic status had stronger effects on academic performance in densely populated areas in Germany, compared to rural areas.

Croatia and Bosnia and Herzegovina Croatia and Bosnia and Herzegovina have the highest rates of participation in shadow education

in Europe: More than half of students engage in shadow education during secondary school (Ristić & Jokić, 2013). Despite the long history of shadow education in the two countries, dating back to the days of Yugoslavian socialism, no data were systematically collected before 2006, when a project called 'Monitoring of Private Tutoring' was initiated (Silova, Budienė, & Bray, 2006). Shadow education is most commonly accessed at the end of the school semester or during exams. Mathematics is the most popular subject in both countries. The main functions of shadow education are: (1) to get remedial help to supplement mainstream schooling, (2) to pass exams, and (3) to move on to the next school grade. The main providers of shadow education are pre-service teachers, unemployed teachers, and university professors. Students usually find their tutor based on informal recommendations; a teacher or acquaintance may recommend another teacher or an expert to provide tutoring. Croatia already has a well-established market of organizations providing preparatory courses for final exams in secondary education or university entrance exams; this form of shadow education is still developing in Bosnia and Herzegovina.

The USA and Canada

North Americans previously had low rates of participation in shadow education, but this is changing. Billboards advertising Kumon Learning Centers appear on highways near New York City, and multiple private tutoring providers such as Kumon and Oxford Learning can be seen around Vancouver. Along with the increased rates of participation in shadow education, the forms of shadow education are changing. North Americans are increasingly moving away from traditional private tutoring and toward other forms of shadow education such as private educational institutes, Internet-based private tutoring, and after-school programs. Franchises have become a billion-dollar industry serving more than two million students in North America (Gubernick & Burger, 1997). They have become increasingly popular for investors: Sylvan was named the number one franchise by the American Association of Franchisees and Dealers, ahead of familiar names like McDonalds, Thrifty Car Rental, and Mail BoxesEtc. Many of these franchises are publicly traded and can generate enormous revenues. In the mid-1990s, Sylvan and Kumon reported annual revenues between USD$150 and $400 million (Gubernick & Burger, 1997).

USA Traditionally, American students have had relatively low rates of participation in shadow education, which normally served a remedial role for those who were not performing well and wanted to catch up with supplementary education, usually in the form of private tutoring (Baker et al., 2001; Bray, 1999). Recently, interest in shadow education has increased greatly and has led to intense participation in franchised tutoring companies that effectively prepare students for exams. Interestingly, although American students have had relatively low rates of participation in shadow education compared to students in Asian countries, some of the most prominent scholars in the global academic discussion of shadow education are located in the USA (Byun & Park, 2012; Choi, 2012).

The increased use of shadow education in the USA is related to several changes to the school system. More students now want to enroll in higher education. Non-academic criteria, such as extracurricular activities and recommendation letters, have long played a role in college admissions in addition to cognitive test scores (e.g., SAT). However, educational reform for accountability has led to more emphasis on standardized testing in American schools to evaluate students and educators (Dworkin, 2005; Grodsky, Warren, & Felts, 2008). The increasing reliance on standardized testing for important educational decisions likely increases pressure and competition among students to do better on high-stakes tests and may have led to more demand for shadow education (Buchmann et al., 2010). This is supported by the fact that commercial SAT test preparation companies, such as the Princeton Review, Kaplan, Daekyo Co., JEI Corporation, Kumon, Woongjin Thinkbig Co., have considerably expanded in recent years in the USA (Buchmann et al., 2010). Many of these services share key features with private educational institutes in Asia (Buchmann et al., 2010; Kuan, 2008) called them the 'American-style shadow education.'

Asian ethnic communities within the USA have long engaged in shadow education (Byun & Park, 2012). Asian American students participate in various forms of shadow education outside of school: private tutoring, private learning centers, private test preparation services, and cram schools (Kao & Thompson, 2003; Zhou, 2008; Zhou & Kim, 2006). The number of various shadow education institutions has dramatically increased within Asian communities, especially in Chinese and Korean immigrant communities throughout the USA (Shrake, 2010; Zhou, 2008; Zhou & Kim, 2006). Among these communities, the most

common forms of preparing for the SAT include taking a commercial test preparation course and receiving private one-on-one tutoring (Byun & Park, 2012).

Canada Shadow education is also expanding across Canada. Aurini and Davies (2004) observed that it is becoming increasingly 'school-like,' providing an alternative to regular public schooling. They found that the tutoring industry is expanding and evolving into learning center franchises. Unlike traditional shadow educators who mimic school curricula by offering short-term homework and test preparation, learning centers develop their own curricula and assessment tools and provide comprehensive menus of educational services, with the goal of nurturing long-term skills.

A 2003 survey revealed that about 24% of Ontario parents with school-aged children had recently hired tutors, and 50% of all Canadian parents indicated they would hire a tutor if it was affordable (Livingstone, Hart, & Davie, 2003). Over the last 30 years, the number of formal businesses that offer comprehensive tutoring services has increased by 200–500% in large Canadian cities, and this growth is independent of public school enrollment or economic trends. In Ontario, these businesses grew by 60% from 1996 to 2000 alone (Davies, Aurini, & Quirke, 2002). Once a small and informal market in Canada, tutoring has become a burgeoning industry marked by franchising, marketing, and corporate strategies. Corporations such as Kumon, Sylvan Learning Center, Academy for Mathematics and Science, and Oxford Learning Center have opened hundreds of learning centers across the country.

It is intriguing to analyze demand for tutoring in various international contexts. Scholars typically explore international variations in the market demand for tutoring based on factors such as whether countries have post-secondary entrance exams, major status differences among post-secondary institutions, and direct occupational rewards for entry into those institutions (Baker et al., 2001; Bray, 1999; Stevenson & Baker, 1992). In this chapter, we have discussed the terminologies that refer to shadow education and the ambiguities that exist between them. We also provided an overview of current discourse regarding shadow education. Finally, we explored how shadow education plays out in a few different countries. Overall, our discussion has revealed that shadow education is an important phenomenon in many countries around the world as 'shadow education will be' (Mori & Baker, 2010, p. 36) as it is now,

'increasingly incorporated into the broader culture of education' (p. 36). It is also promising that so many scholars are studying the phenomenon in different contexts with different perspectives.

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CHAPTER 3

Five Forms of Shadow Education Practices

This chapter explores the various forms of shadow education. The previous chapters discussed why shadow education is an important topic for curriculum scholars and provided an overview of shadow education worldwide. This chapter focuses on specific forms of shadow education to help readers understand its reality. Our literature review and our fieldwork in South Korea revealed five main forms of shadow education: (1) home-visit private tutoring, (2) private tutoring institutes, (3) subscribed learning programs, (4) Internet-based private tutoring, and (5) after-school programs. The following sections explore their characteristics in different countries.

Home-Visit Private Tutoring

In home-visit private tutoring (HVPT), a tutor provides face-to-face customized tutoring to a student, usually at the student's home. This is the most traditional form of shadow education: Early examples include the fictional Jane Eyre and the real-life tutor Anne Sullivan, who taught Helen Keller to read and write. Tutors usually work one-on-one with a student, but sometimes have more than one student. They are usually self-employed, with no systemized management system or official connection with other instructors. HVPT is unsystematic and fluid, in that it allows immediate modification of curricula based on the learner's needs. Tutors are not restricted to a structured curriculum, so they meet the

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needs of individual students by supplementing schooling learning (remedial or enhancement) to maintain or improve school grades, providing support with homework, and helping students prepare for university exams (Baker & LeTendre, 2005).

HVPT is one of the most common forms of shadow education and can be found in North America, Europe, and some Asian countries including India, Hong Kong, South Korea, and Japan (Bray, 1999; Davies, Aurini, & Quirke, 2002; Kirby, 2016; Mahmud & Kenayathulla, 2017; Mori & Baker, 2010). It is particularly popular in South Korea, where the college admission criteria are complicated and require students to have individualized guidance. In 2016, about 18.4% of Korean students access HVPT (Statistics Korea, 2016). HVPT can be described as individualized tutoring (Davies & Aurini, 2006), personal tutoring, one-on-one and small-group tutoring (Bray, 2017), private home tuition, home tutoring, private tutoring, and home tuition. It is called 課外 (gwawoe) in South Korea, 家庭教师 (*jiātíng jiàoshī*) or 家教 (*jiājiào*) in China, 家庭教師 (*Kateikyōshi*) in Japan, *die hauslehrer* in Germany, and *tutor de casa* in Spain.

HVPT fees are higher than any other form of shadow education, so students from relatively wealthy families access it. Fees vary based on the student's grade and level of education, as well as the quality of the tutor. In the USA, the average hourly fee is USD$40–60, and some families spend more than USD$100,000 per year to prepare their children for the SAT (Jung, 2011). Some full-time tutors of wealthy families worldwide can earn as much as USD$400,000 annually and may be provided with free housing, cars, chauffeurs, paid travel, and meals (Ellyatt, 2015). In South Korea, monthly fees may range from USD$280 to 380, but in some cases fees are much higher. Fees for *tweezer gwawoe*, which provides students with intensive training to prepare for the College Scholastic Ability Test, can be as high as USD$20,000–30,000 per month. Due to these high fees, HVPT can be considered to reproduce educational inequality.

HVPT includes three main types of tutoring: one-on-one tutoring, group tutoring, and enterprise-type tutoring, as shown in Table 3.1.

One-on-one tutoring is the most basic type of HVPT (Bray, 1999; Kirby, 2016) and provides students with customized lessons (Davies & Aurini, 2006). After a diagnostic test, consultation with the student and parents, and analysis of previous test scores, the tutor selects the most appropriate teaching and learning materials Materials and methods.

Table 3.1 Types of home-visit private tutoring

Type	*Tutor–student ratio*	*Characteristics*
One-on-one tutoring	1:1	Individually tailored The most expensive
Group tutoring	1:small number (2–5)	Less expensive than one-on-one Ability grouping
Enterprise-type home-visit private tutoring	1:1, 1:small number (2–5)	Student–tutor matching platform Tutoring guidance provided by companies Semi-structured teaching/learning materials are sometimes provided

In group tutoring, the tutor–student ratio is usually 2–5 to 1. Because families share fees, group tutoring reduces the financial burden. Groups are usually organized by parents or students who share commonalities in terms of academic needs and abilities, age, test scores, learning style, and home locations. Although group tutoring has limitations in meeting individual needs compared with one-on-one tutoring, tutors can generally provide high-quality and effective lessons because of the academic homogeneity of students.

The newest type of HVPT is enterprise-type HVPT. This form of tutoring is expanding, especially in the USA, Canada, and South Korea, in response to the challenges that students and parents face in finding the most suitable tutors. It usually involves an Internet-based tutor-matching platform where tutors post their profiles and students can search for the most suitable tutor. The agency not only matches suitable tutors with students, but also manages the quality of tutors. In South Korea, popular agencies of this type include Gwawoe Bada, Gwawoe Korea, Orbi Gwawoe, and especially Gwawoe Korea, which has about 130,000 registered tutors.

Characteristics of Home-Visit Private Tutoring

The characteristics of HVPT include personalized learning, flexible curriculum and teaching methods, intimate relationships between tutors and tutees, and diversity of personnel. Personalized learning is the main characteristic of HVPT, as it is in all forms of shadow education, and differentiates it from schooling (Kim, 2016; Kim & Kim, 2012, 2015;

Mawer, 2015; Ozaki, 2015). Without bureaucratic government regulations and rigid censoring structures, HVPT can effectively meet the needs of individual students in a comfortable environment where students feel free to express their preferences (Brian, 2004; Kim, 2016; Yang & Kim, 2010). For example, students might ask tutors to provide lessons focused on preparing for school exams or entering college, developing good learning habits, or increasing or maintaining their GPA.

The second characteristic of HVPT is flexibility in terms of curriculum materials, teaching methods, and time and location. This may be the most distinctive feature of HVPT: Unlike schools, which are often restricted to government-designated timetables, textbooks, and curricula, tutors can use any materials and teaching style to help students. The frequency of lessons and tutoring locations can also change when needed.

The third characteristic of HVPT is that it involves an intimate relationship between a tutor and tutee(s). Research has revealed that students who engage in HVPT are more open to tutors than to school teachers (Kim, 2016; Yang & Kim, 2010). McVeigh (2002) found that HVPT involves more open and honest communication between students and tutors than students and school teachers. In addition to helping students with their academic needs, tutors meet the emotional, affective, and mental needs of students in a close relationship. Nga Hon Ho (2010) found that home-visit private tutor can fill as many as 12 roles, including motivator, role model, advisor, elder sibling, cousin, friend, listener, and parent. They often provide students counseling, mentoring, learning strategies, values, and life stories that can strongly affect student attitudes about learning and their larger worldviews.

Finally, HVPT is diverse in terms of providers (age, experience, and qualifications), curriculum materials, and instruction. There are no formal requirements to become a HVPT, so tutors can range from secondary or university students with no pedagogical training to specialized tutors with extensive tutoring experience, and even to school teachers (Chew & Leong, 1995; Ho, 2010). Because it is difficult to assess the quality of education offered by a tutor before students attend classes, most parents gather information about good tutors by word-of-mouth. Park, Lim, and Choi (2015) observed the extensive information-seeking processes used by Korean mothers who collect opinions, feedback, and personal evaluations from online and offline communities to get the best information on the highest-quality tutors for their children.

Private Tutoring Institutes

Private tutoring institutes (PTIs) are a common form of SE; they are the most school-like form of shadow education because they have a physical space with classrooms (Aurini & Davies, 2004). PTIs are similar to ballet, music, and art academies, except that they focus on school subjects and test preparation. They have formulaic programs and formalized timetables, teaching materials, classes, and evaluation methods (Bray, 2011; Harnisch, 1994; Kim, 2016). Typically, students accessing PTIs attend classes three times a week during the school term and every day during vacations and breaks (Kim, 2016). Class sizes may range from 7 to 15 students or more. They usually group students into classes based on ability. Many PTIs have recently become franchised.

PTIs are described using various terms: cram school, cramming center, tutoring services, or test preparation center in the USA, *juku* in Japan, *hakwon* in South Korea, *buxiban* in Taiwan and China, tuition center in Singapore and Malaysia, coaching center in India, tutorial school in Hong Kong, *bimbel* or *bimbingan Belajar* in Indonesia, crammer in the UK, grind school in Ireland, *Cursinhos* in Brazil, and *Preuniversitarios* in Chile. Students in East Asian countries usually have the highest rates of participation: There are approximately 50,000 PTIs in Japan (Dierkes, 2010), 68,120 in South Korea (Statistics Korea, 2012), and 3500 in Hong Kong (Bray & Kwok, 2003).

PTI has become a big industry in many countries. In Japan, the *juku* industry generates USD$12 billion annually (MEXT, 2008). In South Korea, the size of private education market has expanded from USD$6.5 billion in 2000, $12.5 billion in 2003, to $16.5 billion in 2016. With this expansion, 221 franchised Korean PTI companies have exported their learning content abroad (Park & Paik, 2014). For example, Jeong Sang JLS, founded in 1986, is now worth USD$1.7 billion on the KOSDAQ stock market and has branches in North America, South America, Asia, and Europe. As the PTI industry burgeons, competition is fierce to get the best quality education. Star tutors can earn more than USD$4.5 million (5 billion won) annually. In South Korea, some students engage in HVPT to help them access the best *hakwons* (especially in Gangnam). Harnisch (1994) found that in Japan, some elite *juku* determine entry based on examinations, and some students attend a *juku* to prepare for the examination to enter another *juku*.

North America and Europe have franchised PTIs, such as Princeton Review, Kaplan, Pearson, and Oxford learning centers. These companies, started by non-Asian entrepreneurs, have expanded rapidly throughout the world. They offer courses to help students prepare for various tests, including the SAT, ACT, GMAT, GRE, TOEFL, Law School Admission Test (LSAT), Medical College Admission Test (MCAT), Dental Admission Test (DAT), and college entrance exams. The Princeton Review helps 3.5 million students get admitted to prestigious colleges in the USA every year and employs more than 4000 teachers in 700 centers in 60 countries. Pearson, a UK-based franchise, has expanded its services to 60 countries including the USA, China, and South Korea.

In 2008, about 20% of primary school students and more than 65% of ninth-grade students in Japan attended *juku* (MEXT, 2008). The *juku* market has remained stable over the last ten years, with an overall market size of about USD$8.4 billion (93.6 billion yen) in 2013 (Mawer, 2015). Kitamura (1986) found that the existence of *juku* allows formal schools to continue to function according to the principles of egalitarianism and uniformity, while *juku* helps students prepare for tests in alternative ways. *Juku* can be seen as a necessary part of the Japanese education system: It provides what students need for exams (Harnisch, 1994).

In South Korea, a new college admission system was implemented in the 1960s, and this led to a dramatic increase in demand for *hakwon* education. *Hakwon* participation rates have increased from 14.9% in the 1980s to 67.8% in 2016. In 2012, South Korea had 64,306 *hakwons*, which earned USD$11.4 billion. *Hakwons* can be classified into eight main types based on intended purpose: English language *hakwon*, mathematics *hakwon*, logical writing *hakwon*, comprehensive *hakwon*, special purpose high school *hakwon*, gifted student-centered *hakwon*, Internet-based *hakwon*, and boarding *hakwon* (Kim, 2016). According to the Seoul Metropolitan Office of Education, South Korea has more than 25,000 registered hakwons, with nearly 6000 in the Gangnam area of Seoul alone (*JoongAng Daily*, July 9, 2010).

PTIs can be classified into four main types, as shown in Table 3.2.

One subject PTIs focus on one specific subject such as science, mathematics, or a language. English language PTIs are common in East Asia, providing students with remedial and enhancement lessons and preparing them for school exams and university entrance examinations. Among the eight types of *hakwon* in Korea, English language *hakwon*, mathematics *hakwon*, and logical writing *hakwon* fall under this category.

Table 3.2 Four types of private tutoring institute

Type	*Focus*	*Characteristics*
One subject PTI	One specific subject (math, English, science, social studies, language)	Expertise and specialized instruction on specific subject Remedial and enhancement
Comprehensive PTI	All school subjects (English, math, science)	Systematized learning of various subjects at a reasonable price Remedial, enhancement, school test preparation, homework assistance Forming fundamental learning skills Regular counseling
PTI for talented students	In-depth content in school subjects	Elite education for highly advanced students Increasing school grades Preparation for high-ranking school admission
Test preparation specialized PTI	High-stake test subjects	High school or college admission exam SAT, TOEFL, GRE, GMAT, essay tests Admission consultation (strategies and information)

Comprehensive PTIs provide students with remedial and enhancement lessons in all school subjects to help maintain or improve their GPA. They also provide assistance with school assignments and regular counseling, help students build fundamental learning skills (e.g., note-taking, time management, and learning strategies), and prepare students for high-stake tests. Of the PTIs in South Korea, comprehensive PTIs are the most popular. Although they teach all subjects, they emphasize the major subjects like English, math, and Korean. For elementary school students, comprehensive PTIs help build fundamental learning skills, encourage reading, and develop math and English competencies. For middle school students, they offer rigorous school test preparation. In particular, for advanced students who want to enter a special purpose high school, such as a science academy for the gifted, science high school, or foreign language high school, comprehensive PTIs offer more extreme and accelerated learning, helping students be more competitive. In Japan, this type of institution is called *Sogo juku* (Roesgaard, 2006).

PTIs for talented students provide accelerated learning opportunities for advanced students, which public schools cannot or do not. In Japan, selective *juku* serve advanced students attending private junior and senior 'escalator' high schools or top public schools. They target high-achieving students, and their curricula extend even to university-level mathematics and English (Furukawa, 2015). In South Korea, PTIs for talented students offer special programs for students who want to enter the advanced and competitive special purpose high schools.

Test preparation specialized PTIs provide admission-oriented teaching and preparation for secondary or university entrance exams and high-stake exams. They prepare students for various tests, including the SAT, ACT, GMAT, GRE, TOEFL, essay tests, etc. They usually provide short-term intensive test preparation, with courses lasting 1–2 weeks, 1–6 months, or 1 year. Specifically, they provide strategies, know-how, learning methods, types of questions, and admission counseling and information in order to prepare the exams efficiently (Bray, 2013). In Japan, they are called *Shingaku juku*; international franchising companies such as Kaplan, Oxford, and Princeton Review also provide such services.

Characteristics of Private Tutoring Institutes

The characteristics of PTI include (1) formulaic curriculum and instruction, (2) differentiated classes, (3) ongoing assessment, and (4) counseling service. First, most PTIs have formulaic curriculum and instruction, meaning that they have their own programs, time tables, teaching-learning materials, and assessment techniques. They borrow from school curricula and supplement them with additional materials and different teaching strategies. They also have distinct and recognizable study spaces, in contrast to home tutoring.

Second, PTIs group students by academic levels, abilities, and needs. Some schools also provide different classes based on ability; for example, South Korean schools usually have 2–3 classes for English and math. In contrast, the C and C *hakwon* in Seoul has 31 different classes from elementary to high school, and the Kimsam math *hakwon* has 3 levels of different classes with 3 more subdivided classes at each level according to student ranking on tests.

Third, PTIs use ongoing assessments. Unlike schools, which use formal tests only once or twice a semester or year, PTIs use frequent assessments to evaluate student understanding of course content and

assess their progress. Test results could result in a student being reassigned to a different class level or could be used to develop individualized study guidance to supplement their learning (Mawer, 2015). The first assessment that students take is a diagnostic test. PTIs usually develop elaborate diagnostic tools to determine each student's study progress, academic strengths and weaknesses, and overall attitude about school and learning. This test helps identify weaknesses that will need to be overcome to achieve each student's goals, identify the most suitable program, and offer customized curriculum (Kim, 2016; Mawer, 2015). Operators have developed their own evaluation materials and methods to assess the understanding of learned knowledge and the capabilities for students enrolled in their PTI (Aurini & Davies, 2004). Evaluation methods include pencil and paper tests, presentations, discussions, or portfolio review. Whether evaluations take place once a week/month, biweekly/bimonthly, or after finishing a chapter in a particular course, PTIs all use more frequent testing than public schools.

Fourth, PTIs provide educational counseling. Kim and Kim, (2012) found that this positively contributes to the academic, social, and psychological development of students and enhances their general welfare (Kim & Kim, 2012). Kim (2016) also found that *hakwons* can function as a 'nerve sedative' to relieve the stress of educational competition because their instructors are considered better communicators who are more caring and friendly. Students feel that *hakwon* instructors truly care about them, which strengthens their trust in instructors and encourages them to immerse themselves in their *hakwon* education. We found that *hakwons* use counseling strategies to build intimate relationships between students and instructors, coach students in their learning, and provide guidance about school admissions. Instructors build relationships with students through private communication and official counseling sessions. Such relationships, based on mutual trust, allow instructors to obtain information about almost every aspect of their students: their goals, the schools they want to enter, issues related to learning (attitudes, habits, and problems), familial issues, and peer relationships at the *hakwon* and at school. One student, Hyunchul, said, 'I can ask my tutors about my learning and also other things too. They tell me what school teachers and my parents do not. I feel that they truly care for me.' Choi, a *hakwon* instructor, told us:

> *Hakwon* is not the place only for learning. We really care about learning atmosphere. We regularly have meetings with individual students. When we find an issue with the students, we immediately take actions to resolve them. Our instructors build intimate relationships with students.

Guidance about high school or college admissions, or entrance consulting, is provided on an individual basis (Han & Park, 2013). Unlike schools, which are reactive in that they counsel students after receiving KSAT scores and GPAs, *hakwons* are proactive in that they start entrance counseling a year, or at least six months, in advance. *Hakwon* counselors plan for everything that is needed for high school and university applications. As application season approaches, their guidance becomes more strategic: They thoroughly analyze KSAT scores, GPAs (*naesin*), and the selection standards of schools and universities to which students could apply, and suggest the best high schools and universities for each student. With this guidance, students are able to find the best high schools or universities and tailor their preparation in terms of subject areas and other qualifications. For this reason, Korean students and parents look for *hakwons* with meticulous entrance consulting services: This is one of the most important criteria for choosing a *hakwon* (Park et al., 2015). Some private companies in South Korea, such as Jinhakapply (*jinhak* means to enter schools), provide only services related to applications.

Subscribed Learning Program

A subscribed learning program (SLP) is a highly standardized and systematic tutoring program provided by large, franchised enterprises such as Kumon, Red Pen, Prunet, and Noonnoppi. Students subscribe to these learning materials as they might to a magazine. SLP companies develop their own materials using their own curricular and instructional strategies, with a specific focus on quality worksheets and learning content that is only available by subscription, not from bookstores. The materials are delivered via mail, and students follow them step-by-step at their own pace at home. Most companies send tutors to students' homes once a week. Unlike HVPT, the role of these tutors is to evaluate each student's progress and degree of understanding, guide the next assignments, and help them to deal with other issues related to subject matter and learning strategies. In Korea, these learning materials are called *haksupji* ('learning-paper') (Kim & Kim, 2012); this type of learning

originated in the 1950s as *kumon* in Japan and has since enjoyed a 'spectacular ascent' in many countries (Aurini & Davies, 2004).

Na Yoon, a third-grade student in South Korea, has been taking storytelling/problem solving, math, and Japanese language programs in a SLP for three years. She returns from an English *hakwon* at 4:00 pm and opens her SLP materials without hesitation. She is a huge fan of the SLP programs, especially the combined storytelling/problem-solving program. She reads interesting stories, such as the Adventures of Tom Sawyer, and solves various questions about the story, mainly involving math, science, logical thinking, and reading comprehension. She also enjoys studying the Japanese language: She watches Internet-based programs and plays games, and is then asked to listen to and repeat Japanese words and sentences. She then completes daily worksheets. This has allowed her to get a basic Japanese certificate and to have simple conversations in Japanese. Her SLP tutor visits her at home every Friday to check her work and give her new materials.

SLP has proliferated in some East Asian countries such as Japan and South Korea (Kim, 2016; Ozaki, 2015) and has been increasingly popular in North America (Aurini & Davies, 2004). As noted above, SLP emerged in Japan, initially in the city of Moriguchi, Osaka, in 1955. Japan now has many internationally recognized SLP companies such as Kumon, Z-Kai, and Komodo Challenge. Among them, Kumon is the leading company and is now one of the biggest SLP enterprises in the world. It has two main programs, mathematics and native language (language varies by country), and these range from preschool to college level. It claims to have 4.5 million students studying in 26,000 franchised centers in 50 countries (Russel, 1997). In Japan alone, Kumon has 1.5 million students, 16,300 centers, and 14,500 instructors of Kumon.

In Canada, students are increasingly participating in SLP, in the form of franchised learning centers such as Kumon, Sylvan Learning Center, Academy for Mathematics and Science, and Oxford Learning Center, which have opened hundreds of sites across the country (Aurini & Davies, 2004). SLP services provide various programs for students from preschool to high school. These include a K–12 program (reading, math, writing, homework, study skills) and a college preparation program (AP class, SAT prep, ACT prep). Students who join Kumon complete daily assignments and worksheets in their home five days a week, and visit the learning center to get additional mentoring and coaching two days a

week. This type of combined system of subscribed learning program and learning center visit can build fundamental learning skills and abilities at a reasonable price.

South Korea has one of the high participation rates in SLP. In 2016, 11.6% of students were involved in a SLP, for the second-highest participation rate after *hakwon* education. Specifically, 22.8% of elementary school, 4.7% of middle school, and 0.6% of high school students participate in SLP, illustrating how SLP participation is more focused on elementary school students. Since the 1980s, Korean SLP companies have been developed through intensive material and curriculum development. In 2012, there were 3258 SLP centers with a USD$738 million market share (Park & Paik, 2014). Table 3.3 lists representative SLP franchising brands and companies in South Korea.

Initially, SLP focused on distributing printed worksheets to students, but more recently it has incorporated technology. Now, SLP is delivered

Table 3.3 Subscribed learning franchises in South Korea

Mother company	*Franchise name*	*Subject* / *Targeted students*	*Total sales (2016)*	*Number of instructors*
Daegyo Inc.	Noonnoppi	Math, Korean alphabet, English, Chinese character, social studies Preschool–G6	820 billion won	12,000
Woongjin Think Big Inc.	Woongjin Book Club	Reading program 1–13 years old	624 billion won	8000
Gyowon Inc.	Kumon Hakseup	Math, Korean, English, science, Chinese character, Japanese, etc. 2 years–G12	475 billion won	25,000
	Red Pen	Korean, math, Chinese character, Social studies, science 3 years–G6		
Jaeneung Inc.	Seusuerohakseup	Math, reading, English, science, Chinese character, Japanese, storytelling/problem solving 2 years–G11	195 billion won	3100

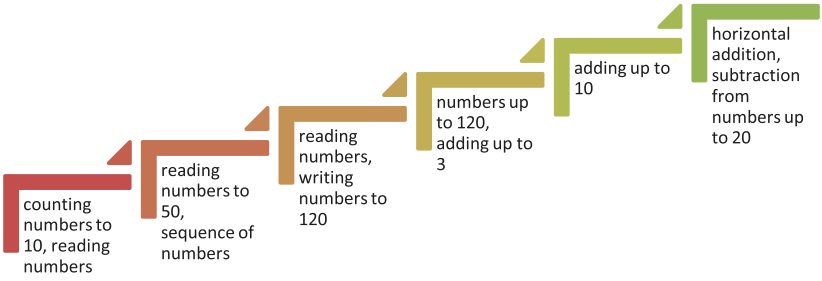
in two main ways: home-visit subscribed learning programs and online/telephone subscribed learning program. Home-visit subscribed learning programs are the most common and traditional form of SLP, whereby students are provided with suitable materials and an instructor visits regularly to check their progress, set up the upcoming week's schedule, and counsel student and parent about academic areas that need to be developed. Online/telephone subscribed learning programs provide students with online and telephone services to manage learning without the need to visit students' homes. They offer online lectures, assessments, learning materials, and other educational content such as extracurricular activities, educational games, and educational videos. The online system accumulates and analyzes students' work, and students may be provided with supplementary online lectures or additional homework. Instructors at some companies make phone calls to check learning progress and set up a new schedule.

Characteristics of Subscribed Learning Programs

The characteristics of SLP include (1) structured curricula and programs based on the small-steps principle, (2) mastering content through repetitive drills and feedback, and (3) managing homework with the goal of forming good learning habits. Table 3.4 provides a sample math curriculum.

Like PTIs, SLPs have systematized curricula, constituting of several levels. However, SLPs have more finely subdivided levels to the point that students are equipped with daily and weekly materials and worksheets. When students enroll in a SLP program, they take a diagnostic test to determine their learning abilities and academic levels. Based

Table 3.4 Math content: Daily worksheets completed by students subscribed to Noonnoppi



on the results, a SLP instructor will make an individualized study plan. Students usually begin at an easy starting point to build study habits, concentration, and a high level of understanding on the essential topics. Because the content is provided in small steps, students feel less burdened by studying. As students progress, SLP instructors plan for students to study material at higher levels. The goal is to find a level of difficulty that challenges students to keep them motivated and learning independently, but is not difficult enough to discourage them.

The second characteristic of SLP is mastering content through repetitive drills and feedback. Students are given repetitive drills at specific academic levels until they fully master the content and fundamental skills. Toru Kumon created Kumon: He gave his son Takeshi short and incremental assignments to complete, allowing him to master each concept completely before moving on to the next level. His method was so effective that Takeshi was solving calculus problems in the 6th grade. Modern SLP programs use Kumon's method, giving students worksheets and materials that repeatedly drill them on specific academic content and skills. The method is especially effective for math and languages.

SLPs also provide students with feedback. Instructors analyze students' work, identify weak points, and provide additional explanation or supplementary worksheets until students demonstrate a sound understanding of the material and can then move on to more advanced topics. With the advent of modern technologies, this feedback can be instant via the Internet, smartphone applications, and telephone calls. Students can solve questions on the Internet or smartphone platforms; based on the results, they are provided with customized materials until they fully grasp the content.

The third characteristic of SLPs is homework management, which is intended to help students develop good learning habits. The programs usually divide learning content into daily workloads, usually about 30 minutes to 1 hour. Students are often motivated to learn by participating in online educational platforms that gives virtual points and rewards to students when they complete online lectures, games, math problems, and reading materials.

Internet-Based Private Tutoring

Internet-based private tutoring (IPT) combines the advantages of private tutoring and highly developed technologies. The Internet has changed how people spend time, communicate, work, and live in

general: Learning is no exception. IPT provides students with new ways of learning that overcome geographical and temporal barriers. It meets the needs of individual students by making numerous lectures, programs, information, and services available online; it may also offer downloadable lessons. The Internet also allows instant online communication between students and instructors. These features have led to progressive growth, globalization, and offshoring: Some students in the USA pay by credit card for tutoring from India using the Internet and Web cameras (Ventura & Jang, 2010). IPT companies often hire top instructors, who sometimes gain icon status as 'God Tutors' in Hong Kong (Cheng, 2007). With its ubiquity and relatively low tuition cost, this type of shadow education is growing exponentially (Cheng, 2007). More traditional offline SE companies have now have expanded their business models to include the Internet, and students are increasingly using Internet-based educational resources to learn content and prepare for tests. For instance, Joo-eun, a 12th-grade student, did not take any SE but studied by herself until the first semester of the 10th grade. However, she felt that the high school math was too hard for her to study on her own when her math school grade dropped from top 10% to 30%. With her sister's advice, she began to take math IPT program of a famous math tutor. She usually takes IPT lectures after school and weekend. While watching the lectures via PMP and laptop, she took notes and repetitively played back the lecture when she could not understand the contents being provided. She selected the necessary programs consisting of concept description and problem solving, followed her own planned daily/weekly/monthly math IPT schedule based on her decision. Even though it is not easy for her to continuously participate in IPT which requires much self-regulation, taking IPT helped her to achieve top 4% in KSAT math.

Global Industry Analysts estimated that the online learning industry is worth about USD$107 billion (McCue, 2014). Online platforms have improved matching between students and tutors. They have also reduced inequalities in information acquisition, as voice and video transmitting technologies allow distant education (Bukowski, 2017). In South Korea, many students enthusiastically engage in IPT. E-learning sales increased by more than 50 billion won in only one year: from 336 billion in 2005 to 389.4 billion in 2006. In 2016, IPT was worth 3428 billion won and was accessed by 81.7% of K–12 students to learn a foreign language (25.3%), master K–12 school textbooks (14.2%), and prepare for

the College Scholastic Ability Test (8%). It emerged in the early 2000s to help high school students prepare for this test; there are now more than 1000 IPT companies in Korea today. Megastudy, the most popular IPT company in Korea, earned 99 billion won in 2011 and continues to grow. It offers test preparation courses for middle to high school students, foreign language course, and law school and medical school test preparation courses. Archived online video lectures cost about 3500 won (USD$3.20) to 5000 won (USD$4.60) per hour. For example, an online lecture series focusing on English reading skills to prepare for the College Scholastic Ability Test is composed of 28 chapters totaling 1400 minutes, at a cost of 87,000 won (USD$40).

Another famous IPT company in South Korea is Daesung Mimac. It became famous for its exclusive offline Daesung *hakwons*: In 2013, one-third of students who got into medical school had attended these *hakwons*. Now, Daesung Mimac has expanded to provide high school students with online programs to prepare for the College Scholastic Ability Test. Each subject and tutor has specialized and subdivided themes: The Korean language program includes comprehensive reading, literature, classical poetry, writing, and grammar, and the math program focuses on explaining concepts, providing in-depth learning, and encouraging problem-solving. Tutors have specialized teaching skills and help equip students gain an accurate and in-depth concept understanding of the content, along with problem-solving capacities and question-solving strategies, with immediate feedback from tutors and their assistants. The programs are high quality and reasonably priced, and allow students to take online mock College Scholastic Ability Tests, compare the results with those of other students nationwide, and analyze their weak points.

India is another country with intense participation in IPT, especially large enterprises such as Educomp, which had 3 million students in 2014 (Bray & Kwo, 2014). TutorVista is another example: It provides online personalized tutoring for test prep, homework assistance, supplementary and enhancement lessons, using an interactive whiteboard for all grade levels. It currently has more than 5 million online sessions available and 2000 teachers residing in India, the USA, the UK, Australia, China, and Southeast Asia. It offers tutoring for USD$2.5 per hour, much cheaper than online tutoring in the USA, which costs about USD$40 per hour (Vora & Dewan, 2009).

In Japan, Internet technology, especially video-on-demand, has had a huge impact on the industry (Watanabe, 2014). IPT has been available

in Japan for about 20 years. In the 1990s, only the big *juku* companies offered this kind of education via expensive satellite communication, but with the advent of inexpensive Internet video-on-demand systems, IPT has been increasingly popular in the country.

In North America, e-learning involves two main practices. First, it provides an online platform, where students and tutors can meet for online one-on-one or group tutoring, or virtual classrooms. Web conferencing tools like Google Hangouts, Syncpad, and Skype are increasingly being used, and students are provided with real-time feedback and individual instruction from online tutors. Services include VIPKid, Tutor.com, Homework Tutoring, Aim-for-A Tutoring, etc. These companies are headquartered in North America, but recruit students and tutors from all over the world. They offer students homework help, study skills, foreign language classes, and preparation for Talented and Gifted (TAG) tests, and other test. The second practice of IPT in North America is to provide students with online archived lectures, similar to the practices of most IPT companies in South Korea. Kaplan, Sylvan, and Princeton Review offer customized prerecorded lectures for students, especially exam preparatory courses.

Table 3.5 lists three main types of IPTs.

Archived online lecture refers to educational videos uploaded on an online platform. These are usually recorded as video files and made viewable on a designated Web site. Students can access the online lectures on the Web sites anytime, anywhere, via their computer, PMP, tablet, or smartphone. After paying for a lecture, students can watch it repeatedly for a designated time period. Some providers make lectures downloadable.

Live online tutoring allows real-time student–teacher interaction without being in the same place. Individual or groups of learners simultaneously log into the system and receive lectures from a single tutor. This type of IPT usually incorporates Learning Management Systems (LMS) or Virtual Learning Environment (VLE) such as Sakai, WebCT, Moodle, and Blackboard.

Blended learning refers to a combination of online and offline learning. It provides students with prerecorded lectures posted on Web sites to supplement offline lectures or one-on-one tutoring. Students can get help from archived online lectures when they cannot understand the content is covered in offline tutoring or lectures, or when they miss a specific lecture.

Table 3.5 Types of Internet-based private tutoring

Type	*Characteristics*
Archived online lecture	Prerecorded lecture uploaded on Internet sites lecture can be watched anytime, anywhere repetitive viewing of the lecture
Live online tutoring	Simultaneous interaction between student and tutor via Internet instant response to student queries
Blended learning	Online lecture + offline lecture/one-on-one tutoring online lecture: remedial and supplementary help

Characteristics of Internet-Based Private Tutoring

IPT provides three main benefits: (1) enabling ubiquitous learning, (2) allowing individual management of archived online lecture, and (3) encouraging self-management.

First, students can access IPT anytime, anywhere, saving them time and money. IPT also allows any student to access to high-quality lessons by famous lecturers, which may reduce the inequality of education. For example, IPT corporations in South Korea provide students nationwide with quality lectures that were originally monopolized by students in Gangnam, Seoul. These online lectures are also considerably less expensive than one-on-one tutoring or *hakwons*. Students can access lectures from tutors across the country and even beyond, allowing them to get quality education from other developed countries.

Second, individual students can proactively manage the archived online lectures with the help of video control functions. They can watch a lecture repeatedly, pause it when necessary, and rewind and fast-forward as needed, allowing students to utilize their time efficiently.

Third, IPT requires students to be more self-managed independent learners. It may help students develop self-regulated learning habits, or it may not be effective for those who lack this ability. The shift from traditional face-to-face classrooms to virtual learning environments has mirrored a pedagogical shift from objectivist to constructivist models of learning, requiring students to take more control and responsibility for their own learning and instructors to devote more time and energy to facilitating a course (Piccoli, Ahmed, & Ives, 2001).

After-School Programs

After-school programs can be defined as a set of student-centered learning and development activities that are school-based but not part of the regular curriculum (Ministry of Education and Science and Technology [South Korea], 2012). ASP can be categorized as a type of SE because in many cases the programs are offered by private tutors or agencies that have contracts with the school. In South Korea, ASP developed as a result of the government's need to meet the diverse needs and demands of students. It is intended to: (1) mitigate the educational gap among students from different socioeconomic statuses and regions, (2) address the increased demand for child care and education due to societal changes in family structure (Halpern, 1999; Weiss et al., 2009), (3) relieve educational costs by absorbing the demand for private education into the public schooling sector (Ham, 2007), (4) help develop well-rounded individuals, and (5) improve student scores on the PISA (Dyson & Jones, 2014; Fischer, Theis, & Züchner, 2014; Holm, 2015; Kanefuji, 2015; Kielblock, 2015).

ASPs have diverse forms in terms of their purposes and activities, because they can incorporate various sociocultural aspects of learning. Many ASPs in South Korea are directed toward enhancing academic achievement, but ASPs in other countries such as New Zealand may focus more on sports-based activities that encourage students to build social networks. ASPs may be called 'all-day schools' or 'after-school activities,' with subtle distinctions in practice and origin. They exist in many regions including Japan (Kanefuji, 2015; Lee, 2012), Hong Kong (Kwon, 2012), the UK (Dyson & Jones, 2014), South Korea (Kim, 2016), Switzerland (Schüpbach, 2014; Schüpbach & von Allmen, 2013), Netherlands (du Bois-Reymond, 2013), and Denmark (Holm, 2015).

In the USA, ASPs have been used for K–12 students since the late nineteenth century (Halpern, 2003). There are national ASPs and national advocates for ASPs, such as the Afterschool Alliance, but most are run at the state level. In California, ASPs at the elementary level are predominantly funded with grants from the After-School Education and Safety (ASES) program, and ASPs at the secondary level have been sponsored by twenty first Century High School After School Safety and Enrichment for Teens program grants, which include academic, enrichment, nutrition, and health components. THINK Together, a large

nonprofit organization, subsidizes about 200 schools in Los Angeles, Riverside, and San Bernardino counties. Beyond the Bell is a form of ASP run by the Los Angeles United School District. Throughout the USA, there are significant differences in how students at different grade levels spend their after-school hours. In particular, far more elementary school students participate in ASPs, compared to middle school, and high school students participate in ASPs, compared to elementary school: Only 12% of middle school students and 7% of high school students in the USA participate in ASPs (Afterschool Alliance, 2008).

In Germany, low PISA scores led to the implementation of ASP (Fischer et al., 2014; Kielblock, 2015; Stecher & Maschke, 2013). Due to the so-called PISA Shock, the German government now provides $4 billion dollars in subsidies annually for ASP (Fischer et al., 2014). As a result, ASPs have exploded in Germany: from 4159 all-day schools in 2002 to 15,349 in 2013. In 2007, 74% of K–5 students participated in ASPs, and most German K–12 students participate in ASPs more than once a week (Stecher & Maschke, 2013).

In South Korea, ASP was initiated with the 1995 educational reform to help public schools take part in the roles of private tutoring and child care (Kim, 2007; Sohn, 2009). In 2006, ASPs integrated the pursuits of skill aptitude education, child care, leveled supplementary education, and the settlement of the educational gap (Shin, 2007). Currently, 99.9% of K–12 schools run ASPs, and 65.9% of elementary school students, 46.9% of middle school students, and 68.7% of high school students participate in ASP (Ministry of Education, 2015).

In Japan, a nonprofit organization called Japan for Sustainability established the after-school program in 2005. These ASPs provide elementary school students with a safe and comfortable space at a low cost. They use the school facilities and include more than 300 programs, such as house-building with an architect, cooking or making sweets with a chef, sports, music, crafts, artistic creation, and learning Japanese culture.

The various practices of ASPs in various countries can be categorized into two major types, as shown in Table 3.6.

Subject knowledge-based ASPs include school subjects: math, English, social studies, science, etc. Students can supplement their learning at school at a low cost. This kind of program serves various roles, including help with homework, remedial help, academic help with

Table 3.6 Types of after-school program

Type	*Purpose*	*Components*
Subject knowledge—based after-school program	Subject study	Homework aids Remedial and supplementation Literacy and mathematics Test preparation
Skill and aptitude after-school program	Development of various skills and capabilities	Sports (soccer, baseball, t-ball, volleyball, basketball) Cultural arts (music, painting, drawing, crafts) Performing arts (dance, ballet, choir, band, drama) Computer literacy (Word, Excel, 3D Printer, coding) Life skills (anti-bullying, delinquency prevention, stress management, financial literacy)

literacy and mathematics, academic enhancement, and test preparation. In some countries, such as Russia, Cambodia, Cyprus, Indonesia, Lebanon, and Nigeria, teachers in mainstream schooling are also teachers in ASPs and receive additional payment for tutoring pupils who are already their students in the mainstream (Bray, 1999). This can be problematic: A study in Cambodia found that because teachers can supplement their income from an ASP, some may intentionally retard the regular school curriculum within the official class hours, forcing students to participate in the ASP (Dawson, 2010).

Skill and aptitude ASPs usually focus on the development of multiple artistic and practical skills. They offer various programs, such as sports (soccer, baseball, t-ball, volleyball, basketball), cultural arts (music, painting, drawing, crafts), performing arts (dance, ballet, choir, band, drama), computer literacy (Word Processor, PPT, Excel, Photoshop, 3D Printer, coding), and life skills (anti-bullying, delinquency prevention, stress management, future business leader program, financial literacy). These programs can help students improve in attitude, self-confidence, and social skills (Evans & Leung, 2012).

Characteristics of After-School Programs

The characteristics of ASPs include (1) diverse purposes and functionalities, (2) relatively low cost, and (3) governmental regulation. While other forms of shadow education mainly focus on academic purposes, ASP functions for diverse purposes, as shown in Table 3.6, from school subjects, sports, and arts (Bryan, 2005; Devaney, Smith, & Wong, 2012; Durlak, Weissberg, & Pachan, 2010; Evans & Leung, 2012; Haycock, 2001). These functionalities vary: As discussed above, in South Korea ASPs mainly focus on improving academic achievement, whereas in New Zealand ASPs include more sports-based activities where students can build social networks.

ASPs also provide child care, especially when parents cannot take care of young children after school. Mahoney, Larson, and Eccles (2005) found that the main reason for student involvement in ASP is that working parents want to be sure their children are supervised and taken care of. Wu and Egeren (2010) also found that parents have their children enroll in ASPs to ensure they are safe. As discussed above, in Japan and South Korea, nonprofit organizations and governments support ASP to fulfill the needs of working parents. ASPs have several advantages with regard to child care. They use school facilities, such as classrooms, gyms, playgrounds, and computer rooms; in some cases, students participate in ASPs in the same classroom as their regular schooling. This means that less time is spent commuting, and that facilities are familiar to students.

Second, the cost of ASP is relatively low compared to PTI or HVPT. This is partially due to the fact that ASPs do not have much in the way of initial business expenses, because they use school classrooms and facilities. Also, the tuition for ASP is often funded or supplemented by governments or nonprofit organizations. Research has found that in terms of assisting students with academic learning, ASPs are as effective as other forms of shadow education (Bryan, 2005; Durlak et al., 2010). Additionally, some scholars have argued that ASPs contribute to reducing educational inequalities by providing extra support to disadvantaged children (Aurini & Davies, 2013).

The third characteristic of ASPs is that they are usually regulated by governments. In general, ASPs initially originate from a government's desire to reduce academic gaps among students, provide child care, and enhance the results of national academic assessments. ASPs are usually closely linked with educational policy. For example, in March 2018, the

Korean government mandated ASPs to ban English classes for 1st and 2nd graders. The goal was to reduce the academic burden on students, but many parents were dissatisfied with the new policy, especially its elimination of low-cost educational opportunities. Not surprisingly, they now seek opportunities in other forms of shadow education.

In sum, some countries such as South Korea and Japan have all of the forms of shadow education, but not all countries do. We expect that more forms of shadow education will continue to emerge, especially blended forms of shadow education. This research is only the beginning of a broader exploration of the nationally specific and culturally distinct phenomenon of shadow education worldwide.

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CHAPTER 4

Use of Shadow Education for Success at School and College Admission

Despite the universal pervasiveness of shadow education, as discussed in Chapter 2, and its implications for curriculum studies, as discussed in Chapter 1, few academic efforts have focused on how shadow education contributes to academic success. Moreover, shadow education has often been framed as an antagonist of public education (Burch, 2009; de Silva et al., 1991; Marimuthu et al., 1991; Park, Lim, & Choi, 2015) and even as a 'societal evil' (Park, Buchmann, Choi, & Merry, 2016; Park et al., 2015). From this perspective, public education is seen as 'normal' and shadow education as 'abnormal.' We suspect that the lack of academic effort exploring how shadow education contributes to academic success is related to these issues of power. Here, we are not promoting shadow education as superior or inferior to public education: We simply want to explore the phenomenon with regard to students' academic success.

Our qualitative analysis of data from our fieldwork and recent research on shadow education revealed that there is a positive relation between student achievement and shadow education (Byun & Park, 2012; Cameron, 2017; Gordon, Bridglall, & Meroe, 2005; Mori, 2015). Byun and Park (2012) found that shadow education was related to the high SAT scores among East Asian American students in the USA. Gordon et al. (2005) also found that students perform better after accessing shadow education. In this respect, Heinrich, Meyer, and Whitten (2010)

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noted that researchers need to get 'inside the black box' to understand the phenomenon better. Therefore, this chapter explores how shadow education helps students, beginning with a case study.

Hanul's Story

Hanul is in the 12th grade and is one of the top students in her class in terms of academic achievement. During the elementary school years, she attended taekwondo hakwons and took piano lessons. She did not much care about her grades during that time, and her grades were mediocre. However, after taking enrolling in hakwon lessons, her grades shot up. Hanul now attends Math and Korean language hakwons after school and on weekends: three Korean lessons and four Math lessons per week. She also has English home-visit tutoring several hours per week. Like many other Korean students, her hakwon learning was initiated by her parents. She said:

> My parents suggested me to take hakwons. You know as elementary school kids we do what our parents told us to do (smile). Also there weren't many friends to play with because most of them took hakwon classes. It was rather natural I think for me to attend hakwon classes. Now, as a high school student who prepare for college admission, I go to hakwons to increase my grades and test scores. I think the hakwons I attend critically affect my grades. My grades change over time depending on what kinds of hakwons I attend. (Individual interview with Hanul, December 20, 2017)

Now, she takes the initiative in attending hakwons, instead of relaxing or being with friends after school. She understands that this is required to ensure her academic success. We asked her why attending hakwons is important. She replied:

> Attending hakwons is kind of taking a shortcut for higher grades and test scores. Hakwon teachers do not care about my hairstyle or dress code while school teachers take it seriously. Hakwon teachers are solely concerned about my learning and increasing grades. They say nothing to me when I wear adult-like clothes with which school teachers may have been mad at me (laugh), but they scold me when I did not finish homework they gave. I think it is the biggest difference between school and hakwon. Hakwon teachers are in a condition where they solely focus on my learning. Did my grades increase because of hakwon learning? Definitely it did but not much of my affection toward learning. (Individual interview with Hanul, December 20, 2017)

Hanul believes that hakwon teachers are different from those of school teachers. Specifically, she evaluates hakwon instructions and learning atmospheres as qualitatively better, and she is more motivated in ability-grouping classes of hakwons. She feels that school classes are simply not enough to obtain good grades on exams. She noted that when she was not attending hakwons, she went through a lot of distress in preparing for school exams:

> The nights before the exams, I tried to memorize everything in my text books. Of course, it was not very effective, ha ha. I lacked learning strategies on my own. I tried hard, I mean it. But my grades remained the same. I was frustrated. When I was taking classes at hakwons, change began. They taught me effective ways to prepare exams. I made them mine. (Individual interview with Hanul, October 17, 2017)

Learning the strategies not only increased her grades, they made her more confident. Hanul said, 'I have no difficulties with my exams now.' She said that hakwons are much superior to schools in terms of preparing for exams, but noted school teachers care more about her life, dreams, and personal issues, whereas hakwon teachers are more interested in her grades. She commented, 'I don't think it is right to judge one over the other. They both have strengths that I get benefit from.'

The following discussion deserves serious attention from teachers and scholars. It focuses on four main themes: (1) improving grades in school subjects, (2) preparing for upper school entrance exams, (3) accelerated learning for advanced students, and (4) personalized learning. We identified these themes during our fieldwork in South Korea; the following discussion is informed by research conducted in various countries.

Improving Grades in School Subjects

Shadow education helps students maintain or increase their grades in school subjects: This is one of the main reasons why students engage in shadow education (de Silva, 1994; Kim, 2016; Nanayakkara & Ranaweera, 1994; Stevenson & Baker, 1992). As discussed in Chapters 1 and 2, research has consistently reported a positive relationship between students' school grades and use of shadow education (Stevenson & Baker, 1992). However, few scholars have engaged in deep analysis of how shadow education helps students learn school subjects and achieve

better grades. This section explores five ways in which shadow education helps students maintain or improve their higher school grades.

First, shadow education exposes students to the content of school subjects in addition to their learning at school. This provides multiple opportunities for being taught, rather than studying alone. Getting additional help benefits good students and those who are falling behind. For example, one-on-one private tutoring, which is a common form of a prevailing form of shadow education in North America and Europe, plays a crucial role in meeting the needs of remedial students (Mori, 2015). Research has shown that among students who cannot master the content taught in school classrooms, shadow education provides a more student-centered atmosphere where students feel more free to ask questions about content they do not understand (Brian, 2004; Kim, M., 2003; Kim, Y. C., 2016; Yang & Kim, 2010). For example, hakwons usually provide preview lessons, in which students learn school subject content before it is taught at school, as well as review lessons, in which students learn the content after it is presented at school (Kim, 2016).

Second, shadow education increases learning time in general (Entrich, 2014; Heyneman, 2013; Patall, Cooper, & Allen, 2010). Many students need more learning time to master school content and memorize large quantities of text for school exams; they feel that repetitive learning is essential for exams and cannot be achieved within the relatively short school hours (Cameron, 2017). Sawada and Kobayashi (1986) analyzed the effect of juku attendance on mathematics performance among upper and lower secondary students. They found that more time spent in jukus provided more opportunities to learn, resulting in higher scores in arithmetic and algebra. Heyneman (2013) analyzed the relationship between mathematical literacy and total time studying in South Korea and the USA and found that the high international test scores among South Korean students were related to time spent in shadow education.

Third, shadow education teaches test-taking strategies for school exams. Students learn various techniques, including understanding text questions, recalling the relevant information quickly, and deciding which knowledge or skills to apply when solving problems. Instructors point out incorrect strategies used by students and correct them; they repeat this until the students learn the strategies to solve certain types of questions (Kim, 2016). Many shadow education instructors also keep records of school exams and are aware of the history, trends, and styles of the

exams given in specific schools by specific school teachers. They help students prepare for these exams by sorting out what is central and what is peripheral for specific school exams (Kim, 2016).

Finally, shadow education improves students' attitudes about learning at school. Many scholars have observed this phenomenon and how it leads to improved learning outcomes (Cayubit et al., 2014; de Silva, 1994; Mori, 2015; Russell, 1997). Students with relatively low achievement and low self-esteem are particularly likely to benefit in this way: Cayubit et al. (2014) found that shadow education affects the general attitudes of participants toward their studies and learning, their perceptions about themselves, and their ability to perform school-related tasks. In the USA, Mori (2015) found that students who engaged in tutoring were more motivated and interested in learning science and spent more time studying alone. In South Korea, Min (2016) found that shadow education helps students develop fundamental learning skills such as time management, note-taking, and mnemonics. Finally, a study by the Japanese Ministry of Education revealed that that the most popular reason for enrolling children in juku is to increase their motivation to study (Russell, 1997). Shadow education encourages basic learning skills, self-directed studying habits, and positive attitudes about learning at school, so students are more likely to become active participants in schooling, often leading to high scores on school exams.

Effective Preparation for Upper School Entrance Exams

Many scholars have found that one main reason that students seek shadow education is to help them prepare for university entrance examinations (Byun & Park, 2012; Falzon & Busuttil, 1988; Gunawardena et al., 1994). Technical functionalists and human capitalists assume there is a direct link between educational credentials and job assignment (El-Khawas, DePietro-Jurand, & Holm-Nielsen, 1998). Based on this belief, many students worldwide want to enter prestigious universities: In South Korea, this is referred to as hakbeolism (Jung, 2016). Some have argued that the growth of shadow education is a result of parents and their children's dissatisfaction with public education (Lee & Jang, 2010) especially with regard to preparing for university entrance examinations (Mori & Baker, 2010).

Several factors affect admission to prestigious schools, including school grades (GPA), entrance exam scores, letters of recommendation, extracurricular activities, and volunteering experience, but standardized entrance exams are arguably the most influential. In the USA, there has been increasing emphasis on official university entrance examination scores (Dowrkin, 2001; Grodsky, Warren, & Felts, 2008), and this competitive pressure has led to the rapid expansion of shadow education (Russell, 2002). In the USA, these tests include the Scholastic Aptitude Test (SAT) and American College Testing (ACT). Elsewhere, they include Gaokao in China, Suneung in South Korea, Daigaku Nyuushi Sentaa Shike in Japan, Baccalauréat in France, Abitur in Germany, and General Certificate of Education Advanced Level in the UK. The pressure is even stronger for international students who must score highly on English proficiency tests, such as TOEFL, IELTS, GRE, or GMAT.

Specialized shadow education institutes help students prepare for university entrance exams. In North America, some students attend so-called cramming centers; research has shown there is a positive relationship between participation in a cramming center and improved SAT test scores, especially among Asian American students (Byun & Park, 2012). Other examples include hakwons or boarding hakwons in South Korea, juku in Japan, and buxiban in Taiwan/China. Shadow education helps students prepare for university entrance examinations in four main ways.

First, shadow education institutes track trends and patterns in university entrance examinations. Students can use these to decide how to solve problems, which can be called a meta-cognitive approach. For example, the recently revised SAT in the USA includes evidence-based reading and writing, a reading test, writing and language tests, math, and an essay. To help students with the reading test part, shadow education institutes may provide students with the most frequently appearing words, passage organization patterns, common errors (exaggeration, diminution, addition), and effective approaches to specific types of questions. Many grade 12 students we interviewed made comments like Hyunsu, who said, 'at hakwon, they teach me specific strategies to solve the questions. Importantly, they help me with analyzing why I got some questions wrong, and how to improve my test-taking skills.' Learning about patterns in tests and effective approaches to deal them is critical in preparing students for entrance exams (Kim, 2016; Kim & Kim, 2015).

Second, shadow education institutes provide opportunities for students to repeatedly practice on previous entrance examinations. Exercises such as drilling allow students to practice their test-taking skills and learn how to manage time for certain questions. Exams require effective time management, because it is difficult for most students to solve all problems. For example, the SAT requires students to solve 153 questions in 3 hours: 65 minutes for 52 critical reading questions, 80 minutes for 57 mathematics questions, and 35 minutes for 44 writing questions, with an additional 50 minutes for an optional essay. Pattern drilling can reduce the time spent on each question, and students also develop their time management skills in terms of how much time to spend on certain questions. Moreover, because SAT questions are selected from a test question bank, students who have been drilled using previous tests have an advantage. Shadow education institutes also lead mock tests to help students get used to the actual test environment.

Third, shadow education institutes provide educational counseling and school entrance information. Generally, school teachers or counselors are expected to provide this information to students and parents. However, the school counseling system may have limitations such as lack of specialized expertise among counselors, frequent changes to school curriculum and university admission policy (Kim & Kim, 2015), and especially insufficient numbers of counselors (Kim, Yoo, & Hong, 2015). Private admission counseling services usually offer more specialized, focused, and especially individualized approaches to university admission in three phases: (1) pre-testing: evaluation of a student's background in academic/personal/extracurricular areas, customized guidance in studying, course planning, extracurricular choices, vacation plans; (2) testing: year-by-year strategy for standardized testing; and (3) post-testing: application strategy, crafting a final college list for early and regular admission based on estimated test scores, and assistance with admission essays, activity sheets, lists of awards and background information, and preparing for interviews.

Finally, Internet-based shadow education institutes have become popular among students preparing for entrance exams (Kim, 2016; Ventura & Jang, 2010). They allow students to participate in supplementary classes with less time and energy. High school students preparing for college admission are busy, and easy access to Internet lectures allows them to participate in classes anywhere and anytime via smartphones or laptops. This eliminates commuting time and provides all students with

access to classes by so-called star lecturers, who were previously only available for students living in wealthy areas. Lecturers deliver the content knowledge in interesting ways. When needed, they or their assistants address questions from students on Web site posts or sent by text.

In the USA, students can access several online resources to help them find the right schools, including College Navigator, College Insight, College Board's Big Future, Cappex, etc. These services provide students with the reliable data about any college in the country and have filters to compare schools considering the location, academic interests, cost and financial aid, admissions, programs offered, graduation rates, athletics, college reviews, and other general statistics. In South Korea, students can access companies such as Jinhak.com (jinhak means 'to enter schools') that provide services for college applicants: introductory information about each school and their admission requirements. They can even estimate the possibility of a student being admitted into a particular school and department: Students can upload their suneung (scores on the Korean College Scholastic Ability Test) on the Web site, and admission specialists can recommend schools and estimate the probability of being accepted.

Accelerated Learning for Advanced Students

In contrast to remedial supplementary lessons, which are designed to help students meet the coursework requirements in schooling, enrichment-oriented shadow education lessons are designed to boost achievement among students who already perform well in school (Baker & LeTendre, 2005). Enrichment activities are more common in East Asian countries such as Japan, South Korea, China, and Taiwan (Kim & Chang, 2010; Kim & Lee, 2010), in contrast to remedial activities, which are popular worldwide (Baker, Akiba, LeTendre, & Wiseman, 2001; Baker & LeTendre, 2005). Shadow education provides learning opportunities for advanced students in ways that public education cannot (Kim, 2016).

Generally, accelerated learning enables advanced students to learn in a relatively short time, allowing them to progress more rapidly than their peers. Advanced students want advanced content; for example, research has shown that some students prefer juku to public school because juku provides materials not taught in schools (Dawson, 2010). Some research indicates that this kind of enrichment can reproduce socioeconomic

inequalities (Dawson, 2010), and the South Korean government attempted (unsuccessfully) to suppress shadow education for advanced students (Kim, 2016). Other scholars have suggested that accelerated learning is a clever market strategy: It eases anxiety in students who attend it and increases anxiety in those who do not, eventually forcing them to become customers themselves (Kim, 2003). The following discussion explores why advanced students prefer shadow education to public education.

In South Korea, special purpose high school hakwons and youngjae (gifted students) hakwons have emerged. They select advanced students from elementary schools to train them to enter special purpose high schools (SPHSs), which are the most prestigious high schools in South Korea, and finally to enter prestigious college. They offer specialized curricula that are popular with students (Kim, 2003), as illustrated by the following interview excerpts:

> At school, we must study what the teacher wants me to do. Many times, I had to study what I already knew. At hakwons, I really learn new things. It is where I truly learn something. (Individual interview with Sang-wook, November 14, 2017)

> I face challenging questions at hakwons, the questions that prepare me to enter the high school that I want to enter. A question took me three days once. And I did it. (Individual interview with Ji-hye, October 3, 2017)

In South Korea, the 2008 High School Diversification 300 Project law changed the traditional high school track into two different tracks (general high schools and SPHSs). This sparked 'education fever' as parents and students wanted to enter the prestigious high schools (e.g., science high school, foreign language high school, independent private high school, international school, and youngjae high school). Students attending these schools have an advantage when it comes to entering prestigious colleges. The entrance exams for SPHSs are highly challenging and require preparation beginning in elementary school, which is only available in the shadow education sector.

Students who want to enter gifted or science high schools must usually master math and science at the high school level before even entering high school. In general, students who attend gifted or science high schools are granted entry to the prestigious Korea Advanced Institute of Science and Technology (KAIST) or special purpose engineering colleges

once they reach the third year of high school (Cho, 2015). Other students study at specialized English hakwons, which train students in the Test of English Foreign Language (TOEFL) and Seoul National University created Test of English Proficiency (TEPS) material. In general, the TOEFL is taken by those who wish to enter universities in the USA, and he TEPS is utilized in employment decisions after students graduate from university.

For our research project on gifted education hakwon, we observed four hakwons in the Seoul area. Our field observations and interviews with four instructors and eight students revealed three common characteristics. First, they have a rigorously admission process. Their curricula are much more advanced than those in schools, so they accept only qualified students. One instructor told us:

> We must be selective and honest in making our decisions. If we accept those who are not qualified by our standards, their existence may function as a barrier for high level of instruction, and we have seen that they usually quit because they could not follow our program. (Individual interview with Cho Sang-wook head instructor at N-GEH on June 24, 2014)

The selection process usually involves three phases: review of school report cards, testing by the hakwon, and interviews with students and parents.

Second, they have highly tailored curricula tailored to specific universities. While other forms of shadow education supplement or accelerate learning at schools (Aurini, 2006; Kim, 2016; Lee, 2007), gifted education hakwons focus helping students enter desired schools and universities. They tailor their curricula, programs, instructions, textbooks, and teaching/learning materials to prepare students for admission exams, interviews, essay writings, and other qualifications that might make student applications strong and distinctive. To do this, they group students by ability and personalize learning using a 'study navigator,' which charts individual study progress and plan, learning portfolio, and individual guidance.

Third, instructors at gifted hakwons emphasize self-directed learning. One instructor, Jin-Yong Ryu, said 'I continuously try to inspire my students to solve questions by themselves. It includes to help them be aware of their learning habits, strengths and weaknesses, problem-solving strategies.' According to Marzano (2000), the highest level of knowing

is self-knowledge. Given the level of competition in South Korean education, self-awareness is vital to achieve one's goals. Hakwons help students understand how they learn by encouraging them to assess the appropriateness of their learning plan, study habits, and strengths and weaknesses in terms of academic subject areas and intellectual abilities. Specific strategies include learning diaries, classes encouraging discussions and presentations, and providing in-depth feedback. Self-directed learning is vital for gifted students, because students studying at gifted hakwons require a much wider breadth of knowledge and higher cognitive levels of thinking than those studying the basic school curriculum.

Personalized Learning

Shadow education provides students with personalized learning (Kim, 2016; Kim & Kim, 2012, 2015; Mawer, 2015; Ozaki, 2015). Ideally, personalized learning enables all students to have equal access to quality education according to their individual needs and interests. In reality, modern schooling is limited in its ability to meet students' individual needs (Kim, 2003; Ozaki, 2015). A 2008 Japanese government survey revealed that two-thirds of parents attributed the growing role of juku to the lack of personalized learning in public schools. Ozaki (2015) found that juku teachers appeal to students more than public school teachers, possibly because of their attention to individual needs. Kim (2016) found similar results in South Korea.

Schools are unable to effectively personalize education for two main reasons. First, they have larger class sizes: On average, classes in OECD countries include 21.1 students in elementary schools and 23.3 students in junior high schools (Education at Glance, OECD, 2017); classes in developing countries are much larger. Considerable research has shown that personalized learning is not effectively practiced in overly large classrooms (Kim, 2016; Yang & Kim, 2010). School teachers find it difficult to provide personalized learning due to the wide range of academic achievement, ability, aptitude, preferred learning styles, and background knowledge among students. Additionally, students may hesitate to ask questions because they fear this may interfere with the teacher's lecture or be seen as a threat to the teacher's authority; they may prefer to take questions and learning difficulties to shadow education instructors (Kim, 2003, 2016; Yang & Kim, 2010). Second, the bureaucracy of school systems prevents effective personalized learning in countries such as Japan

and South Korea, where school curricula are very structured. School teachers in these countries are legally obligated to completely cover all the content of the official curriculum (in all subject areas) within a given period of time: This is their primary duty. This institutional pressure forces them to pay more attention to the delivery of the textbook knowledge to the whole class than to make any effort to provide personalized learning (Kim, 2003).

Among the five types of shadow education, three are most likely to stress personalized learning: (1) home-visit private tutoring, (2) private tutoring institutes, and (3) Internet-based private institutes. As discussed in the previous chapter, home-visit private tutoring is the most personalized. Parents often tell the tutor what to teach based on the student's needs and the purpose for tutoring, such as preparing for entrance exams, increasing school grades, and developing positive self-efficacy and study skills. In South Korea, this kind of tutoring is most commonly used by high school students preparing for the College Scholastic Ability Test (Kim, 2016). Families often spend USD$30,000 or more annually per student on this type of shadow education (Oh My News, 2012).

Private tutoring institutes have much smaller class sizes than schools, which helps them provide personalized learning. Classes average only 8–15 (in some cases 3–5) students—about half the size of public school classes (Kim, 2003). They also often group students by ability. For example, elementary students in the same grade are grouped into advanced, intermediate, and basic classes based on their academic level. Middle and high school students are grouped by ability regardless of their grade: Academic level is the most important criterion. For example, we often observed ninth-graders studying eleventh-grade math at private tutoring institutes. Effective ability grouping is crucial in ensuring quality instruction and student learning, so the institutes administer various kinds of diagnostic and formative assessments to measure student progress, academic level, and learning difficulties on a daily, weekly, monthly, and annual basis. Students can move the next level at any time, once their performance shows that they have mastered the current level. Private tutoring institutes also provide types of learning materials that schools do not. For example, some Korean middle school students in advanced English courses may read the New York Times or watch YouTube videos, as college students do. We also observed that advanced classes emphasize discussion and creative thinking more than basic-level classes, where instructions tend to be more didactic and explanation oriented.

Internet-based private institutes also incorporate personalized learning effectively. Students can choose their favored courses to prepare for school tests and the KSAT simply by clicking a mouse: They can choose from numerous courses and tutors based on their needs and purposes. Some scholars have referred to this feature as 'supermarket education' (Kim & Kim, 2015). Additionally, unlike in schools, students using Internet-based private institutes can start and restart classes anywhere and anytime and skip lessons they do not need. Finally, they can instantly receive answers to questions by simply sending their instructor a message.

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CHAPTER 5

Mathematics and questioning PISA: The Key Reason of Seeking Shadow Education

In Chapter 4, we noted that although many studies have found that shadow education has considerable effects on students, there has been little discussion of *how* it contributes to student learning and academic success. Our own research on shadow education in South Korea over the past decade has revealed that mathematics and English are the subjects that most students and parents want help with. This chapter focuses on mathematics, which is arguably one of the most popular subjects for shadow education students worldwide as it is a core subject in school curricula and is also an important component of college admission tests (Baker, Akiba, LeTendre, & Wiseman 2001; Bray, Zhan, Lykins, Wang, & Kwo, 2014; Kim, 2016). The following discussion will explore the popularity of math shadow education globally, as well as the practices it involves, based on our field work.

The Global Popularity of Shadow Education for Mathematics

Many students find mathematics difficult (Douglas & Attewell, 2017), and some scholars have argued that math serves as a form of gatekeeper by determining social mobility, and is influenced by family socioeconomic status (Douglas & Attewell, 2017). Baker et al. (2001) reported that students worldwide have used shadow education since the mid-1990s to increase their math scores. They found that more than

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one-third of all 7th and 8th graders in 41 countries participate in various forms of math shadow education weekly: tutoring sessions, cram schools, or other forms. Participation rates have traditionally been high in East Asian countries and are increasing in North America and Europe. Many researchers have found that shadow education has positive effects on math competency and test scores (Baker et al., 2001; Choi, 2012; Domignue & Briggs, 2009; Kuan, 2011; Lauer et al., 2006; Liu, 2012; Sawada & Kobayashi, 1986; Zhao, 2015).

Asian countries such as Singapore, Hong Kong, South Korea, China, Japan, Taiwan, and India that regularly rank high in international comparisons have particularly high participation rates in math shadow education. For example, 73.5% of primary students and 65.7% of secondary students in Singapore participate in math shadow education, and math is considered a core subject in shadow education along with English and Chinese (Yang, 2015). In Hong Kong, 68.5% of 9th graders and 35.7% of 12th graders participate in math shadow education (Bray et al., 2014). In China, 28.8% of junior middle school students in Jinan, Shandong Province, received tutoring for math (Zhang, 2011). In Shanghai, parents spend on average 6000 Yuan (USD$960) a year on math and English tutors (Zhang, 2011). More than 90% of students in four Indian states received tutoring in mathematics, including 98.8% of students in the state of Kerala (Sujatha, 2007). In South Korea, math was the most common subject accessed by K–12 students, followed by subjects including Korean language, English, social studies, and science (Korean Statistical Information Service, 2017).

American students are also increasingly using math shadow education. In the past, they tended to engage in math shadow education for remedial help, often in the form of home-visit private tutoring or school-like tutoring institutes. As the importance of standardized math scores to admission to college has been emphasized more recently, many more students are now seeking math shadow education, especially in the form of SAT test preparation services such as Kaplan, Princeton Review, Oxford learning centers, and Pearson (Buchmann, Condron, & Roscigno, 2010; Byun & Park, 2012). Domingue and Briggs (2009) estimated that math shadow education improved SAT scores by about 11–15 points.

Students from East Asian immigrant families living in the U.S. and Canada have also engaged in intense participation in various forms of math shadow education such as private learning centers, private test preparation services, and home visit private tutoring (Dunn, 1995; Hernandez, 2009; Kao, 2004; Kao & Thompson, 2003; Zhou, 2008;

Zhou & Kim, 2006). The most common forms accessed by this population are commercial SAT test preparation courses and private SAT one-on-one tutoring (Byun & Park, 2012). East Asian students in North America are more likely than other populations to utilize math shadow education to improve their SAT scores, and many scholars have argued that this explains their high achievement in math (Byun & Park, 2012; Entrich, 2014; Kim, Y. C., 2016; Ripley, 2013; Schümer, 1999; Watanabe, 2013; Zhou & Kim, 2006).

As we noted earlier, international research has consistently found that students in East Asian countries outperform their Western counterparts in math (Beaton et al., 1996; Lapointe, Mead, & Askew, 1992; Mullis et al., 1997; Robitaille & Garden, 1989; Stevenson et al., 1990; Wong, 1998). East Asian countries including Hong Kong, Makao, Taiwan, Japan, China, and South Korea have consistently ranked near the top of both the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMMS) assessment tests (PISA, 2015; TIMSS & PIRLS International Study Center, 2016). These high achievements have been attributed to deep-rooted cultural values that stress respect for education (Bray, 2006; Leung, 2002; Salili, 2005; Watkins & Biggs, 1996), as well as the fact that many students access math shadow education (Baker et al., 2001; Choi, 2012; Domignue & Briggs, 2009; Kuan, 2011; Lauer et al., 2006; Liu, 2012; Sawada & Kobayashi, 1986; Zhao, 2015). Sawada and Kobayashi (1986) analyzed the effects of *juku* attendance on math performance among upper elementary and lower secondary students in Japan, and found that the time spent in *juku* gave students more opportunity to learn, which resulted in higher scores on problems requiring arithmetic calculation and algebra. Choi (2012) used the Seoul Educational Longitudinal Study to explore the effects of private tutoring on math and English ability among elementary to high school students, and found that the effects were greater among lower-achieving students, suggesting that lower-achieving students may benefit more from shadow education.

Worldwide participation in math shadow education can be classified as having two main purposes: remedial and enrichment (Baker et al., 2001; Lee, 2007). In the Sri Lankan context, de Silva (1994) found that remedial math shadow education helps students by overcoming deficiencies in school math education caused by student/teacher absence, frequent school closure, ineffective teaching and negligence on the part of the teacher, and immature or unqualified teachers. Students in Israel,

Belgium, Denmark, the US, Germany, and Kuwait are also more likely to participate in math shadow education for remedial purposes. Students in these countries who access math shadow education tend to score lowest on math tests, illustrating that they are accessing the shadow education for remedial purposes (Baker et al., 2001).

In contrast, students in South Korea, Romania, and Thailand tend to use math shadow education for enrichment purposes (Baker & LeTendre, 2005). For example, in South Korea and Romania, students who access math shadow education score much higher on math tests than others. South Korea has about 2000 private tutoring institutes for gifted education, which only target high achievers in math (Kim, 2016). These students do not use shadow education to keep up with classes, but to surpass them. Students who want to enroll in schools for the gifted, or science high schools, often master high school math before entering high school, so that they will be successful in the admission process. Elementary school students who study high school level math can be described as engaging in 'extreme accelerated math learning' (Kim, 2016). The following discussion explores why so many students participate in shadow education to learn mathematics.

Why Do Students Need Extra Help for Mathematics Learning?

Why do students access shadow education for math? Some may simply love math and want to become mathematicians. Others realize that math is critical to their academic success (Douglas & Attewell, 2017; Leung, 2002). Mathmatics is an important school subject. In South Korea, students spend much more time studying math in school compared with other subjects: 12–13% of all school time (Korean Ministry of Education, 2015). Chinese students also spend about 13–15% of their school time on math, which is second only to study of the Chinese language (Park, 2004). Japanese students in elementary schools spend 17.9% of school time on math (Park, 2014). In Canada, math ranks second in weekly lesson time, at 228 of 1520 minutes of school time per week (Paik, 2013).

In fact, Math is a decisive factor in getting admission to high schools or universities. National academic assessments for university admission in many countries include a mandatory math section; these tests include the SAT or ACT in the US, *Suneung* in South Korea, *Gaokao* in China, *Baccalaureate* in France, and *Abitur* in Germany. Chinese high school

students who want to attend college are required to get a high score on the math component in *Gaokao*, which occupies 150 points of the total possible score of 750, even if they have chosen to study social sciences or natural sciences. Of the possible score of 1600 on the SAT in the US, math questions are responsible for 800 points, while reading, writing, and language are responsible for the remaining 800 points. In South Korea, math scores in *Suneung* are an important part of the overall university admission process, and failure directly prevents admission to prestigious universities (*Edu Donga*, January 17, 2017).

The cumulative nature of math learning means that it is difficult for students to catch up when they fall behind in math. They need to master basic math concepts to move on to the next level. Generally, a math curriculum can be considered a spiral: students see the same topics throughout their school career, with each encounter increasing in complexity and reinforcing previous learning. This kind of spiral curriculum is an important element of the math curriculum in South Korea. Students learn various concepts step by step: integers in K–7, rational numbers in K–8, irrational number in K–9, and complex numbers in K–10. Without understanding the concepts of integer, rational number, and irrational number, students will find it difficult to grasp the concept of complex number and may lose interest in learning math. A recent survey found in South Korea, that 36.5% of elementary school students, 46.2% of middle school students, and 59.7% of high school students have given up studying math in South Korea (No Worries, 2015).

Our previous research revealed that students may access math shadow education due to deficiencies in school math classes (Kim, 2008, 2016; Kim & Kim, 2012, 2015), which may also be the case in other countries. South Korean students told us they were dissatisfied with their math classes at school due to uniform math curriculum, teachers' lack of ability to teach, and other complaints about their school (Kim, 2008; Kim & Kim, 2016). School math classes use identical textbooks and one teaching pace for all students in a class, even though their academic levels vary. Some students fall behind while more advanced students are bored (KOFAC, 2011). In contrast, math shadow education provides subdivided classes and levels of curriculum to match each student's learning pace and preferences. Many students in South Korea (Je, 2002; Kim, 2008), Canada (Davies, 2004), China (Zhang, 2013), and many developing countries (Biswal, 1999) also think that shadow education teachers teach math better than school teachers, in terms of professional expertise, passion toward the class, and providing customized lessons.

Types of Math Shadow Education

Students choose different forms of math shadow education based on their learning styles, academic needs, geographical locations, available time, and familial budget. Our previous research revealed that in South Korea, the forms include private tutoring institutes, home-visit private tutoring, private tutoring institutes for gifted-students, and Internet-based private tutoring, but forms may differ in other countries as we have discussed in Chapter 3. Table 5.1 lists the general characteristics of the types of math shadow education.

Table 5.1 Types and characteristics of math shadow education

Type	*Targeted students*	*Purpose*	*Characteristics*
Private tutoring institute	Elementary to high school	Remedial Enrichment	• Develop understanding of mathematical concepts through the combination of accelerated and review learning • Enhance test-taking skills • Develop math learning habits with systematic management
Home-visit private tutoring	Elementary to high school	Remedial Enrichment	• Personalized learning • Improvement of mathematical thinking with the help of constant mathematical interaction • Finding the effective math test preparatory strategies by absorbing the tutor's personal know-how
Private tutoring institute for gifted education	Middle and high school	Enrichment	• Acquisition of inclusive mathematical structure via in-depth learning by theme • Formation of mathematical communication capability with non-graded discussion
Internet-based private tutoring	High school	Remedial Enrichment	• Proactive learning through the active manipulation of online learning platform • Flexibility in terms of learning time and space • Individual choices of level, content, and instructor • Requires self-motivation and self-regulation

Math Private Tutoring Institute

Math private tutoring institutes (PTIs) are the most popular form of math shadow education. According to the Ministry of Education in Japan (1994), 89.2% of middle school students take math lessons in *juku* (Cummings & Altbach, 1997). In South Korea, about 30% of elementary students, 25% of middle school students, and 16.6% of high school students attend math PTIs (KOFAC, 2011). Because so many students want math shadow education, most PTIs offer math programs.

There are two major types of math PTI: comprehensive PTIs and math-specialized PTIs. Both provide students with formulaic math teaching program and instruction, organized timetables, various teaching materials, and homework management based on school-like classroom structures. However, they differ in some ways, as shown in Table 5.2.

Comprehensive PTIs offer math education along with other subjects, but usually allot more time to math because it is so important to academic success. Their tuition is usually lower than math-specialized PTIs, often about half the cost. They may group students based on their school, because different schools use different math textbooks and materials. Additionally, different teachers have different patterns in terms of exam questions, for example using questions from school textbooks or using questions from materials published by private companies. Instructors at comprehensive PTIs are aware of these trends and ensure students practice on appropriate questions. A math instructor of CPTI told us:

Table 5.2 Characteristics of math PTIs

Type	*Similarities*	*Differences*
Comprehensive private tutoring institute	• Formulaic curriculum and instruction, class organization • Remedial and enrichment • Homework management • Admission preparation to high school or college	• Learning math along with other subjects, native language, English, foreign language, science, social studies, etc. • Effective math learning with reasonable price
Math-specialized private tutoring institute	• Privately owned or franchised	• Teaching math only • Specialized math curriculum and instruction • More focus on high-stakes tests (e.g., SAT, GRE, GMAT)

> … the math questions are from the Mathematics Workbook [a workbook used to supplement school math textbooks in schools]. I focus more on the workbook for the students. I have them practice questions that are similar to those in the workbook. Using this strategy, many of my students' grades increased. Thus, I developed a good reputation in the area, having many more students come to my hakwon. (Individual interview Ki Hyuk, a hakwon instructor, December 20, 2018)

In math-specialized PTIs, students learn only math, with more systematic curricula and instruction. They have various levels of classes, and develop their own teaching and learning materials and specialized programs. The characteristics of math-specialized PTIs include: (1) mastering content through the combination of accelerated and review learning, (2) equipping students with test-taking skills using multiple strategies, and (3) tight management of student learning.

First, math-specialized PTIs ensure students master content through the combination of accelerated and review learning. Students are usually provided with a curriculum consisting of accelerated learning and review learning. In South Korea, math PTIs run on a four-part system: 1st quarter in January to February (winter break), 2nd quarter in March to June, 3rd quarter in July to August (summer break), and 4th quarter in September to December. In the 1st and 3rd quarter, during school break times, students focus on previewing the content they will learn in the upcoming school semester: in this accelerated learning, they learn the essential concepts and principles in their school textbook. In the 2nd and 4th quarter, while school is running, students focus on reviewing what they learned in the 1st and 3rd quarters, with in-depth learning. This combined system of accelerated learning and review learning helps students obtain a clearer and more in-depth understanding on specific mathematical concepts (Table 5.3).

This combined system of accelerated and review-learning, allow students to develop a clearer and more in-depth understanding of the specific mathematical concepts and test question solving skills. Through preview-learning during 1st and 3rd quarters, students can proactively participate in school math classes and easily understand the school textbook. One student told us:

> Because I previewed the school contents prior to the school class, I can concentrate more on math class in school. I can almost catch all of what the school math teacher teaches. And, when I prepare for a school exam, I have less burden from math because I study the same content again and again in both school and the hakwon. (March 16, 2017, Ha Neul, 3rd grade of middle school)

Table 5.3 Yearly structure of the curriculum of a typical math-specialized PTI

	1st quarter	*2nd quarter*	*3rd quarter*	*4th quarter*
Months	January, February	March, April, May, July	July, August	September, October, November, December
School curriculum	Winter break	1st semester	Summer break	2nd semester
School test	–	April, July	–	October, December
Math learning in math PTI	Accelerated learning of 1st semester	Review learning, In-depth learning	Accelerated learning of 2nd semester	Review learning, In-depth learning

The second characteristic of math-specialized PTIs is rigorous training in test-taking strategies. Students are exposed to a variety of math questions about subareas of math, central concepts, levels, and complexities. Many math-specialized PTIs have a 'math question bank' consisting of questions specific to grade, math area, question patterns, and solving strategies as the next quote describes:

> There are few questions in the school textbook. In contrast, there are many questions in PTI materials. As well, I can practice several math questions organized by specific type, pattern, and level which were analyzed according to the recent trend of the tests. This helped me get a better math score on school tests. (Individual interview with Soo Young, 10th grade, February 6, 2018)

Instructors explain fundamental mathematical concepts and principles and demonstrate how to solve the representative types of math problems. Then, students practice solving several typical types of math problems by themselves. Students are provided with more questions to solve at home. When they return to the math-specialized PTI, they check their answers and ask the instructor about weak or difficult points; the instructor provides students with detailed explanations.

Math-specialized PTIs have systematic homework management systems to ensure students regularly practice solving math problems. One math-specialized PTI in South Korea has a homework management

system involving independent homework-specialized room. The homework manager in the homework-specialized classroom checks daily homework before classes begin. Together, homework manager and the math instructor evaluate each student's progress. When students need additional help, the homework manager notifies it to the math teacher. An instructor at T math PTI told us:

> At the end of my classes, I give them homework, more math questions they have to solve. They have to do some of them in the homework room, and they do rest of them at home. When I send my students to the homework room at the hakwon, I let the instructor know the assignments that my students have to do, and what needs to be checked. The homework room instructor guides and help students according to my requests. (Individual interview Hwang, an instructor, December 17, 2017)

This kind of system supplements classes and serves not only as a way to check progress, but also to provide feedback.

Most math-specialized PTIs teach question-solving strategies that they have developed. Students who are low achievers in math not only lack understanding of basic mathematical concepts; many also lack strategic thinking skills in terms of how to approach solving mathematical questions. One math-specialized PTI in South Korea teaches students a systemic five-step question-solving procedural strategy: (1) identify what needs to be found, (2) identify the conditions provided, (3) find answers, (4) checking what should be considered, and (5) find alternative approaches. Another uses a strategy called PICASO (Point, Information, Clue, mathematical Approach, Solve, solve with Other methods): P for point is to identify what needs to be found; I for information is finding all information to be used; C for clue is to find where to start; A for mathematical approach is to recall mathematical concepts and/or formula to be used; S for solving is to solve questions; and O for solve with other methods is to solve given questions via other approaches.

The third characteristic of math-specialized PTIs is tight management of student learning. Learning math, and specifically developing test-taking skills, requires a lot of time, so math-specialized PTI ensure students attend all shadow education classes and complete all assignments. Because missing classes means missing content, most math-specialized PTIs mandate students to attend their classes. When students

miss a class, the math PTI may send an SMS to their parents. Some math-specialized PTIs reward students who have excellent attendance records as demonstrated below:

> I try hard not to skip a single class in math PTI. If I did not miss classes for 6 months, I could get a gift card. And I have to attend additional classes if I miss a class. It is more tiresome. When I just continuously attend the classes and concentrate on studying, my math score improves a lot. I appreciate the rule. (From an individual interview with Se Hoon, January 8, 2018)

Math Home-Visit Private Tutoring

Math home-visit private tutoring (Math HVPT) is the most personalized form of math shadow education, with an intimate relationship between a tutor and a student. Math HVPT can be found in all around the world, especially in North America, Europe, and Asia (Davies, Aurini & Quirke, 2002; Kirby, 2016; Mahmud & Kenayathulla, 2017; Mori & Baker, 2010). In South Korea, about 25% elementary school students, 20% of middle school students, and 15$ of high school students participate in math HVPT (KOFAC, 2011).

Math HVPT can be in the form of one-on-one tutoring, group tutoring (one teacher to 2–5 students), and enterprise-type math HVPT. The first two types are usually provided by individuals, while enterprise-type math HVPT is run by large agencies that provide an online platform for teachers and students. Some large agencies recruit tutors privately and manage their class quality as well as their monthly salary. In South Korea, they usually have more math tutors than other instructors. For example, Gwawoe Bada has about 28,000 math tutors, compared with 26,000 English tutors, 11,000 Korean language tutors, 7600 science tutors, and 6000 social studies tutors (Gwawoe Bada, 2018); these numbers reflect the high demand for math tutoring.

Math HVPT is characterized by personalized learning, and transferring the tutor's know-how to students. Chapter 3 explored how many students and parents prefer HVPT because it allows personalized learning (Fukaya, 1977; Kim, 2016; Kim & Kim, 2012, 2015; Mawer, 2015; Ozaki, 2015). Math HVPT is no exception: students have different levels of mathematical background, strengths and weaknesses, ability, personal goals, and preferred learning style, and math HVPT offers students

personalized learning with diverse curriculum, pace, and instructional approach. Students are given customized programs, content, timetables, learning materials, etc., based on their own learning styles and goals. For example, if a student is good at geometry and weak at probability and statistics, math HVPT focuses on dealing with probability and statistics more intensively. Students are also taught at a customized learning pace, with no predesignated time to master specific content, unlike in school, when all students must follow the teacher's pace. As an illustration, if a fifth-grade elementary student masters the elementary school math curriculum, he can get accelerated learning and study middle school curriculum. Young, a math tutor, said:

> Some of my 6th grade student's math level is a few years ahead of their peers. I am teaching them high school level math because they, and their parents, want them to enter special purpose high schools. Usually those kids finish middle school math before they enter middle schools. (Individual interview with Young, February 28, 2018)

Another important characteristic of math HVPT is personalized learning with different instructional approaches. Taking the student's preferred learning style, academic needs, and personal challenges into consideration, students are taught using tailored instructional approaches. For example, Sung Joon, a seventh grader, scored 64 in his first math school exam. Shocked by his low score, he started attending a math HVPT. His instructor identified and then supplemented his weak math areas in the elementary curriculum, specifically geometry, probability, and statistics, while catching up on the middle school curriculum at the same time. When Sung Joon shows weakness in specific areas of his middle school curriculum, he is given additional problems and explanation in those areas. After taking math HVPT lessons for one year, he scored 90 points on his eighth-grade math exam at school.

Individualized instruction that instantly addresses students' questions is a major feature that makes math HVPT effective (Brian, 2004; Kim, M., 2003; Kim, Y. C., 2016; Yang & Kim, 2010). Students can ask questions and get feedback from their tutor, who may encourage the student to think about the problem more deeply, think about different approaches, or find errors they made. Individual conversations between students and tutors help tutors identify any issues students may have,

and also help students, who may be reluctant to raise their questions in school classrooms. This is well illustrated in the following excerpt:

> The biggest merit that math HVPT has is allowing students to freely ask their tutor questions. There were many times in school math classes that I could not understand the logic of the problem solving even though I read the answer sheets. I was reluctant to ask my school teacher questions because it is shameful to do that in front of many peers. And as I had so many questions while solving the problems, there was not enough time to deal with this in school. However, after getting math tutoring, I can ask questions to my tutor anytime I need, even when I study math myself. This makes me continuously study math and improve my math score. (December 17, 2017, Seung Joo, 9th grade of middle school)

In math HVPT, tutors transfer their know-how to students, both in terms of math content and preparing for exams. Many students regard their tutor as a mentor (Ho, 2010) and want to use their practical knowledge in preparing for the tests. Strategies may include repetitive learning, reviewing previously solved problems, limiting time, and drilling in patterns One student in our study, Gyung Mi, in 10th grade, had been using her tutor's preparatory strategies since she was in grade 8. Repetitive learning meant that when made an error on a certain type of question, students would practice similar types of questions until she should solve them accurately. Combining this with a time limit increased her speed and improved her concentration when working on math. Initially she was resistant to these methods because they were unfamiliar, but she was motivated to adopt them after getting good scores on math tests.

Private Tutoring Institutes for Gifted Education

Private tutoring institutes for gifted education (PTIGE) provide a high level of math education for advanced students in math: from the top 30% to the top 0.5% of all students. In South Korea, they emerged in response to high demand for accelerated learning in math, especially students who wanted to prepare for the International Olympiad or prepare for special high schools for science or gifted schools. South Korea has approximately 2000 PTIGEs nationwide, of which 1000 are located in Seoul: 12.99% of elementary school students, 5.41% of middle school

students, and 2.71% of high school students in South Korea patriciate in PTIGE (KOFAC, 2011). PTIGEs subdivide students into ability groups and provide accelerated learning. One PTIGE in Seoul has five subdivided levels: from Level A (for the top 20–30% of students, 1 year advancement) to Level E (top 0.5% of students, +2 year advancement).

Math PTIGEs differ from other forms of math shadow education by helping students grasp complete mathematical structures via in-depth learning, and providing discussion-oriented classes of highly advanced students. First, math PTIGE students learn whole structures via in-depth learning, regardless of school grade. Table 5.4 lists an example of how students at one math PTIGE are taught the categories of equations, including linear equation, simultaneous equation, quadratic equation, and equation of higher degree. Math PTIGEs are not dictated by national curricula for specific grades.

Ji Na explained how such approach is effective in helping students to grasp the whole mathematical concept:

> As I learn various related concepts in same category, I can understand the content knowledge in my school math textbook more easily than before. I realized that even though the specific form and expressions being used are different according to the mathematical unit, the inherent principle is identical. This made me feel more fascinated with math and increased my understanding. (March 9, 2018, Ji Na, 2nd grade of middle school)

Another important aspect of math PTIGEs is discussion-oriented classes. In contrast to the common preconception that math shadow education should emphasize repetitive test-taking skills, math PTIGEs

Table 5.4 Elements of equation learning at one math PTIGE

	Number system	*Words and equations*	*Equation*	*Function*
7th grade	Integer	Words and equation	Linear equation	Function
8th grade	Rational number	Monomial	Simultaneous equation	Linear function
9th grade	Irrational number	Factorization	Quadratic equation	Quadratic function
10th grade	Complex number	Factorization	Equation of higher degree	Higher-order function

implement non-graded, discussion-oriented classes with little intervention from instructors. For example, one student may act as emcee and judge, leading the evaluation on that day's discussion. Other students may form teams of two and solve a designated problem by themselves in front of the other students under a time limit. After the time limit expires, the judge grades their question-solving procedures. As part of the grading, students make a case for the accuracy of the logic they used to solve the equation. Those who could not solve the problem may ask students who were successful how they reached their conclusion. The following excerpt captures the grading dynamic:

> *Judge*: I think there is something missing in your procedure. How can you change the equation like this?
> *Sungho*: You can figure it out when you reduce a fraction and arrange it.
> *Judge*: You wrote down $\sqrt{5} = 2.235$. How did you know that? The strange thing is that even though Minho wrote down $\sqrt{5} = 2.16$, both answers are the same.
> *Sungho*: I just used the number written on the book. We should discuss it with Mihho.

At this point the judge, Sungho, and other nearby students approached Minho and started discussing why the answer was same even though the value of $\sqrt{5}$ was different. After finishing solving two questions, a winner is decided for that day. Accumulated wins are used to select scholarship awardees. This kind of discussion is usually reserved for high-level of students. The intense and active participation in demonstrating their question-solving procedures and strategies helps students develop their mathematical communication capability, along with increasing their mathematical question-solving ability.

Math Internet-Based Private Tutoring

Many students access Internet-based private tutoring (IPT) to learn math. Math is one of the most popular subjects in the USD$100 billion online learning industry (GIA, 2017). In South Korea, 18.4% of elementary school students, 16% of middle school students, and 19% of high school students participate in math IPT (KOFAC, 2011). Both the public sector (e.g., Education Broadcasting System) and the private sector (e.g., Megastudy, Edunet, YBMsisa, Edubox, Daesung Mimac) have

Table 5.5 Proportions in math Internet-based private tutoring

	Basic (%)	*Question solving (%)*	*Exam preparation (%)*
Proportion of concept explanation	70	30	10
Proportion of question-solving	30	70	90

responded to the demand for math IPT (Ventura & Jang, 2010). More than 1000 IPT corporations have been established in Korea, each with a math program. Many studies have shown that math IPT has positive effects on student math learning (Kozar, 2013; Šťastný, 2017).

There are three major types of math IPT: archived online lectures, live online tutoring, and blended learning. For archived online lectures, students watch prerecorded math lectures uploaded on Internet website. For lived online tutoring, students engage in real-time interactions with tutors with the help of Internet. In blended learning, students participate in both online and offline math lectures.

As shown in Table 5.5, math IPT involves disproportionate proportions in terms of explaining concepts and solving math questions.

As they watch basic lectures, students get basic explanations about the fundamental mathematical concepts along with representative patterns of questions. As they watch question focused lectures, they are much more likely to practice math questions with a variety of patterns and levels. Tutors may also present effective approaches to enhance mathematical thinking ability among students. Some college entrance exams, such as the SAT in the US and *Suneung* in South Korea, require students to be equipped with mathematical thinking ability, not just merely memorize math question-solving procedures. Math IPV provides students with real test settings where they are required to solve problems within a designated test time. A series of lectures consisting of several phases of test preparation helps students develop their math question-solving abilities. The following interview from a high school student demonstrates the effectiveness of math IPT in developing her math learning:

> Han's lectures are truly fascinating. He explains basic mathematical concepts like a fairy tale. In question solving lectures, he points out the most important elements that the *Suneung* math test requires. And he suggests

> how to approach each question and what approaches and attitude I should have in test site. I really like his teaching. Because we are the test takers, all we have to do is follow his instruction and practice hard. (February 13, 2018, So Jung, 12th grade)

As discussed in Chapter 3, all forms of IPT, including math IPT, require active participation and self-directed attitudes among students to be effective. Most students repeatedly watch specific parts of the courses that they do not understand, until they finally understand it.

Overall, this chapter has explored the worldwide popularity of math shadow education, what drives students toward it, and how different forms of math shadow education help students with learning. Math is arguably the largest component of shadow education worldwide. Given that so many students are left behind in math at school, math shadow education is likely to continue to expand. These findings regarding how students learn math in the shadow education sector should be useful for school teachers, and the educators of teachers, who may engage in new ways to teach math at school.

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CHAPTER 6

Shadow Education for Gifted and Highly Motivated Learners

In Chapter 5, we explored mathematics, which is arguably the most sought-after subject in shadow education. The following discussion explores the needs of students who are most likely to engage in shadow education: Specifically, students who need enrichment or acceleration are most likely to engage in shadow education (Cho, 2015; Ireson, 2004; Kim, 2016; Loyalka & Zakharov, 2014). The needs of students with a high level of motivation and desire for academic success are often ignored by schools, and these students may participate less enthusiastically in school classroom learning (Cho, 2015; Kim, 2016). Shadow education can help them, but to date little research has focused on this issue. Therefore, the following discussion relies heavily on our previous research in the South Korean context. Our hope is to inspire more research efforts in various countries because comparative research on how gifted students are educated in public schools, and the private sector will broaden our understanding about education for gifted students and the shadow education phenomenon more broadly.

Current State of Gifted Education in South Korea

The Korean education system can best be characterized as a continuous struggle between educational equality for all and educational justice for achieving individual goals. Historically, Korean education has been

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standardized with a national curriculum to ensure equality for political and economic reasons (see Jung, 2016). Unity in language, the educational system, and even in ways of thinking has been highly valued. Political universalism, aimed at binding all Koreans into one collective, was considered the only way to break through the postwar national crisis. Solidarity was promoted as indispensable, regardless of the government in power, and given the country's strong centralization, people who thought differently or wanted a different kind of education were excluded (Kim, 2008).

In 2000, Korean education has experienced an important turn from education for equality. In that year, the Law of the Promotion of Gifted Education was inaugurated, and since then, specialty schools have been multiplying and steadily attracting an increasing number of students, as shown in Table 6.1.

The growth of these specialty schools has changed the ecology of Korean education, leading to what has been called an 'excessive hierarchy' of high schools (Hong & Eun, 2017). The proliferation of shadow education for gifted students in Korea is structurally linked to the fact that entering specialty schools almost guarantees admission to prestigious universities. Understanding their practices is thus crucial to determining how to balance educational options and outcomes for all students.

Overall, gifted education in Korea involves four components: gifted student classes, gifted education centers, gifted schools, and gifted education hakwons. The first three are official government-sanctioned educational institutions (Ministry of Education, 2014); only gifted education hakwons are private institutions. In this section, we briefly explain how the general features of gifted education in South Korea.

Table 6.1 Number of specialty schools and student enrollment over time

	Science high schools		*Foreign language high schools*		*Independent private high schools*	
	Schools	*Students*	*Schools*	*Students*	*Schools*	*Students*
1990	6	744	–	–	–	–
1995	15	3620	14	15,309	–	–
2000	16	3094	18	19,571	–	–
2005	18	3340	25	19,164	6	5153
2010	21	4097	37	27,865	49	45,237
2015	27	5868	31	19,964	49	47,608

Gifted Student Classes (Youngjae Classes)

Gifted student classes involve a special curriculum for gifted students that accompanies their public school classes. Since the 2002 Act on the Promotion of Specific Education for Brilliant Children, students in the gifted program spend 60 hours per year, or 1–2 hours per week, in gifted student classes (Ministry of Education, 2014). In 2015, there were 2168 gifted student classes nationwide with 61,528 students enrolled (Statistics Korea, 2015). Each class is responsible for recruiting students, choosing textbooks, and adapting its curriculum to meet standards and expectations. In principle, students in any grade can be placed in a gifted class, but most are in grades 5–11. Subjects include math, science, critical writing, invention, liberal arts, art, information, economics, and English. The programs receive less than 5% of the total school budget (Statistics Korea, 2015). Overall, their unstructured system and insufficient funding tend to push gifted students to seek classes outside of schools (Han & Park, 2013).

Gifted Education Centers

Gifted education centers (Youngjae centers) are funded by the state and run by the Regional Office of Education, universities, and public service corporations. In 2015, there were a total of 343 gifted education centers nationwide with 42,502 students (Statistics Korea, 2016). They operate after school on weekdays, on weekends, and during breaks. They are independent in terms of their admission procedures, and their management and curriculum vary depending on the operating institution. Students spend about 200 hours per year in a wide variety of classes including math, science, information, literature, and art (Park, 2008). Teachers must be highly qualified, with a Master's degree with a specialization in gifted education. As a result, the programs are of very high quality. Additionally, because the principal agents implementing the programs are responsible for their management, students can choose what they want to learn. These centers, which actively recruit gifted and talented students between December and February each year, attract many students and parents.

Schools for the Gifted

Schools for the gifted provide the most advanced education available in the public education system. There are two types: gifted schools and special purpose high schools (SPHSs). Schools for the gifted were

established under the Act on the Promotion of Specific Education for Brilliant Children. In 2015, there were only 27 of these schools nationwide (Statistics Korea, 2016). Only students in the academic top 5% at any given school in Korea are eligible for admission: In 2015, the average application to acceptance ratio was 17.3:1 (Statistics Korea, 2016). Competition is fierce because these schools offer top-level education with an accompanying near-guarantee of top university admission. Most teachers hold Ph.D. degrees and teach advanced classes in math, physics, chemistry, biology, history, and linguistics. Additionally, while students in general schools attend a certain number of days per week, students in schools for the gifted take as many classes as they want within a course credit system (Kim, 2001). SPHSs were created under the Elementary and Secondary Education Act and target different student populations than schools for the gifted: Schools for the gifted only accept students who they have evaluated as gifted, but SPHSs are open to all students who can meet the admission requirements. The curriculum in SPHSs focuses on advanced coursework in specialized areas such as math, science, foreign language, arts, or physical education. The existence and expansion of these schools have dramatically increased the needs of shadow education (Kim, 2016). In 2015, there were 148 SPHSs nationwide with 102,482 students (Statistics of Korea, 2016).

Gifted Education Hakwon

Gifted education hakwon (GEH) is a form of private tutoring institute in Korea. The emergence of schools for the gifted and SPHSs has led to increased demand for a support structure to supplement them, which is filled by GEHs. These GEHs determine their own curriculum, textbooks, organizational structure, and fees. Fees depend on the subject, class size, and quality of instruction, but a typical fee is approximately USD$200–300 per class or USD$500 or more per month (Statistics Korea, 2015). These GEHs may be independent or part of a franchise. Most are small-scale, with an owner operating one or two hakwons. A few are known for their well-organized curriculum and teaching excellence, including the franchises of Wiseman, C-Math, and Shichida Education. GEHs usually focus on either math, science, or English, with math being the most popular as we discussed in the last chapter.

Students have an individualized schedule that helps them prepare for competitions and develop critical skills. They are also provided with

counseling as needed. These institutions do not separate students by grade: Students are assigned to classes based solely on academic performance, so middle school and high school students may attend the same class. Some GEHs focus on science, and teachers at these hakwons usually hold at least a Master's degree in science. Others focus on English, targeting a wide range of students from early elementary school to high school. Unlike math or science hakwons, GEHs admit young children to prepare them for admission to schools outside Korea. They may also offer courses on culture to prepare students for smooth transition to schools in the country of their choice. Older students take courses to prepare for English proficiency testing such as TOEIC, TOEFL, TEPS, and OPIC. Overall, students choose courses based on their individual needs.

The Characteristics of Gifted Education Hakwon

The following discussion focuses on three characteristics that differentiate these hakwons from gifted education offered in public schools and other types of shadow education: selective acceptance of advanced students, customized curriculum, and personalized learning.

Selective Acceptance of Advanced Students

Hakwons are highly selective in accepting students who can follow their advanced and accelerated curriculum. The selection process usually involves three phases: reviewing cumulative school records, testing, and interviews with students and parents. For example, the Einstein youngjae hakwon reviews report cards to assess not only grades but also teacher opinions about student attitude, aptitude, and personality. Kim Jun, the president of E-GEH, told us:

> We always ask students to bring student cumulative records (SCR). It tells us more about the students than report cards do. Because school teachers write about a student's personality, attitudes such as tenacity, academic rigor, etc., we can have more holistic picture of the students. (Individual interview, December 9, 2017)

Testing usually consists of two sets of questions: The first is to assess the student's academic level, and the second is to assess the student's level of understanding and creative problem-solving skills. The head instructor

thoroughly examines the test results to assess not only whether students got the answers right, but also how they solved them. For example, if a student does well on the first set of questions but not the second, this may indicate excessive prior learning based on memorization and repetition.

Interviews are conducted with potential students and their parents to collect information about the students' lifestyles, educational experiences, study habits, etc. At the end of the interview, parents are informed whether the student is accepted or not and provided with an analysis of the test results. The head instructor of Newton youngjae hakwon (N-GEH) said:

> We must be selective in making our decisions and honest to share it with students and parents. If we accept those who are not qualified by our standards, their presence may function as a barrier for high level of instruction, and we have seen that they usually quit because they could not follow our program. Thus, informing the parents candidly about their children is necessary. (Individual interview, June 24, 2014)

Hakwons do not grant admission if a student shows no sign of a gift or notable academic talent, even if parents try to demand admission; admission of these students would lower the overall quality of the hakwon. The whole evaluation process usually takes at least 3–4 hours. Once a student is accepted, the hakwon uses the acquired information to assign the students with the most suitable teachers, curriculum, and learning materials.

Customized Curriculum

Gifted education hakwons customize their curriculum in ways that public schools do not (Aurini & Davies, 2004; Kim, 2016). Some researchers have argued that this makes them preferable to students, especially advanced ones (Go & Han, 2015; Han & Park, 2013). We found three main characteristics that distinguish them from public schools: goal-oriented curriculum, advanced and accelerated learning, and personalized guidance.

Tailored Curriculum to Specific Schools and Universities

GEHs tailor curriculum, programs, instructions, textbooks, and teaching/learning materials to prepare students for admission exams, interviews, and essay writing and to improve their qualifications for desired

schools and universities. They focus on helping students enter prestigious schools and universities whereas other forms of shadow education supplement or accelerate learning at public schools (Aurini, 2006; Kim, 2016; Lee, 2007).

For example, Einstein youngjae hakwon has a program specifically tailored for students who want to be admitted by the prestigious Korea Advanced Institute of Science and Technology (KAIST). KAIST's admission criteria differ from other universities: It interviews applicants to assess their critical thinking abilities and problem-solving skills (KAIST, 2017). Applicants are asked to present on one area of science and mathematics: They are expected to thoroughly and persuasively express their ideas on their topic. Table 6.2 presents the year-long mathematics program at Einstein youngjae hakwon for KAIST applicants.

Table 6.2 Mathematics program for KAIST at Einstein Youngjae Hakwon

Period	*Focus of learning*	*Contents of learning*
December–February	Progression and calculus Basics of oral examination in mathematics	Reviewing theories in progression and calculus in/outside of school curriculum Learning expected questions in progression and calculus Learning important topics and how to present
March–June	Geometry and algebra Developing proficiency in presentation	Reviewing theories in geometry and algebra in/outside of school curriculum Critical thinking skills and problem-solving skills Understanding the preparation process of presentation
July–August	Analysis of prior exam questions Knowledge application	Building competency by getting familiar with the questions Identifying targeted areas based on individual students' strengths and weaknesses
September–October	Mastering in-depth content Resolving challenges of students	Mock exams and close individual feedback Psychological consultation for emotional stability and building competency
Close to entrance exam	Focused practice	Mock tests and presentations Last-minute checking

Advanced and Accelerated Learning: Math, Science, and English
Previous research has found that this type of hakwon provides advanced and accelerated learning that gifted students cannot find in public schools (Davis, Rimm, & Siegle, 2011; Han, 2010; Han & Park, 2013; Kim, 2014, 2016). While most shadow education programs offer advanced and accelerated learning (Loyalka & Zakharov, 2014), GEHs provide the most advanced and accelerated learning. On average, their students are 1–3 years ahead of their peers at public schools, and it is not unusual for elementary students to learn middle school or even high school content. Table 6.3 presents the content one sixth-grader was studying.

However, learning more and faster is not the only priority. GEHs also emphasize in-depth learning. They tend to emphasize math, science, and English because these are most important subjects to most prestigious schools and universities. Some gifted high schools such as Korea Science Academy and Gyeonggi Science High School only accept students who are gifted in science; others such as Daejeon Youngjae High School and Daegu Youngjae School accept students who are gifted in mathematics, and some others require both. English is also important because many lessons at gifted schools are taught in English. Table 6.4 lists mathematics and science classes available for middle school students at Kim's Youngjae Hakwon. These differ depending on the desired school: The course for youngjae school is the most advanced, and the course for an independent private high school is the least advanced.

Table 6.3 Min-soo's mathematics learning program in sixth grade

Level	*Numeric*	*Arithmetic*	*Equation*	*Function*
Grade 7	Integer (learned)	Basic arithmetic (learned)	Linear equation (learned)	Basic function (learned)
Grade 8	Rational number (learned)	Monomial expression (learning)	Simultaneous equation (learned)	Linear function (learning)
Grade 9	Irrational number (learned)	Factorization	Quadratic equation (learning)	Quadratic function
Grade 10	Complex number (learning)	High factorization	Higher degree equation	Higher degree function

Table 6.4 Mathematics and science program for middle school students at Kim's Youngjae Hakwon

Desired schools	*Basics (7th grader)*	*Advanced (8th grader)*	*Entrance exam (9th grader)*
Youngjae school	Basic concepts in mathematics Integrated mathematical thinking Preparation for Olympiad	Math and science at 10th grade level Advanced Olympiad preparation	English and science essay writing Math and science at 11th grade level Olympiad level
Science high school	Basic mathematics Basic science Science essay writing	Advanced mathematics Advanced science High school English	Learning content at 10th grade level Mock testing for entrance examinations
Independent private high school	Reviewing central subjects Advanced middle school mathematics Olympiad mathematics	Advanced middle school English Advanced middle school mathematics (2) Basic science	Content at 10th grade level Mathematical essay writing Preparation for interviews in English

Personalized Learning

Maximizing personalized learning based on each student's academic level, aspirations, and desired school is another important characteristic of GEHs. As discussed in Chapter 4, many students we interviewed described their hakwons as providing well-organized learning systems and highly personalized help and guidance as the following excerpts reveal:

> Entering the GEH, I have set my own goal in consultation with the instructors. The GEH assigned me with the instructors who are specialized in meeting my goal because instructors of the GEH have different specializations. Some are specialized in preparing students for Youngjae high school. Some are specialized in Independent Private High School. (Individual interview with Soo-young, May 10, 2014)

> I like learning at GEH because they teach me what I need and what I want. At school, I usually pretend I am learning because if I say 'it is too easy' my friends and teachers would not like it. (Individual interview with Ji-na, November 3, 2014)

Most shadow education institutes provide personalized learning (Kim & Kim, 2012, 2015; see Mawer, 2015 for a discussion of juku in Japan), but GEHs provide personalized learning that is much more focused because their students have specific goals related to learning and desired school. They use various strategies, including study navigation, portfolio, and ability grouping; the Darwin youngjae hakwon uses all three. A study navigation is a kind of a roadmap of a student's learning. It is a master plan for the student to follow from entering the hakwon until entrance into the desired school. It covers three years or longer, but can change over time as the student's learning progresses, goals change, or the desired school changes its selection criteria. A portfolio is a collection of a student's learning outcomes, achievements, and educational experiences. It is prepared for the desired school, and instructors help students determine what needs to be included. For example, students who want to attend a science high school may include materials showing their preparation and achievements related to Science Olympiads. Ability grouping refers to using the limited hakwon resources to actualize personalized learning. Instruction at these hakwons is not one-on-one; to overcome this limitation, students with similar academic abilities and goals are grouped into small classes, usually five students or fewer. The class composition can vary, and middle school and high school students often study together.

Hakwons and their instructors promote self-learning abilities for maximizing personalized learning. Ryu Jin-young, a high school grade instructor at E-GEH, said 'I continuously try to inspire my students to solve problems by themselves. It includes helping them be aware of their learning habits, strengths and weaknesses, problem-solving strategies.' Arguably, the highest level of knowledge is self-knowledge (Marzano, 2000). The hakwons we observed provide guiding strategies to help students improve in terms of self-learning. Strategies may include learning diaries, discussion- and presentation-oriented classes, and in-depth feedback. These help students understand the features of their own learning such as the appropriateness of their learning plan, study habits, strengths and weaknesses in terms of academic subject areas, and intellectual abilities.

Learning diaries helps students reflect on their daily learning: Students record what and how they studied, and what challenges they faced. It helps them become more self-aware, and by recording specific information, such as which questions or challenges are particularly difficult, they

can inform tutors for subsequent instruction. For example, Sang-wook, a 10th grade student told us, 'because I have written in it, I feel that I am responsible for it. I regularly look at it to check my progress. When I find difficult questions or challenges, I mark them.'

Discussion- and presentation-based classes are perhaps the more effective form of learning for gifted students (Davis, Rimm, & Siegle, 2011). Many students prefer this type of learning to instruction-based classes: They like expressing their thoughts and opinions and comparing them with those of others. These classes also foster self-directed learning: Students explain how they solved a given problem, and other students and instructors comment on the process they used. In-depth feedback is provided by instructors during self-study periods. At Pythagoras young-jae hakwon, the best instructors are assigned for self-study periods because students bring them the most challenging problems. Instructors and students prepare for these sessions, which involve intense and interactive exchanges and help students become more self-aware. One instructor said:

> We know that we cannot teach them everything. We only see them two or three times a week. Our instructions cannot cover everything they need to learn. Eventually, they need to find a way to teach themselves whatever they study. (Interview with Sung-ho, June 28, 2014)

Implications

Gifted education hakwons have implications for individual students, families, and public schooling, which may explain why there are so many of these institutions in South Korea. The following discussion explores their pros and cons.

Contributing to Learning Among Highly Motivated and Advanced Students

Our main finding was that these hakwons contribute to the academic development of highly motivated and advanced students. This is consistent with previous research on shadow education indicating that it is more effective for advanced learners than for low achievers (Choe, 2016; Han & Park, 2013; Kim, 2016). Table 6.5 lists student responses to a question about whether their learning at the hakwon is helpful.

Table 6.5 Reflective evaluation by students regarding learning at a gifted education hakwon

Category	*Reflective evaluation*
Academic attainment	• At school, I must study what the teacher wants me to. Many times, I had to study what I already knew. At hakwons, I really learn new things. It is where I truly learn something. (Ko Sang-wook) • For me, school is a place to relax; hakwon is a place to study. (Kim Soo-young) • I face challenging questions at hakwons. A question took me three days once. And I did it. (Na Ji-hye)
Admission	• What I need to do is to follow the guidance of hakwons. They take care of everything. I do not need to be even noticed at school. I need to do well at hakwons. (Noh Jung-jin) • They've got a lot of information, including information about Olympiads. They seem to have everything, such as what I need to enter the school I want to. What strategies are helpful. They have the secrets. (Jung Sang-hyun)
Learning satisfaction	• School teachers do not welcome students' questions. Sometimes they do not allow us to raise questions during lessons. In here, they teach me until I understand and master it. (Yun Ji-na) • These hakwons are so expensive. But I do not have choice because in here I can learn. (Ko Sang-wook)
Psychological stability	• They complement me a lot, especially in the interview preparation sessions. They help me to find my strengths and how to make them distinctive. (Park Tae-jun) • I am entirely comfortable to ask what I need in the classes at hakwons. …they keep asking me if I like it and am happy with it. (Na Ji-hye)

As reflected in the table above, gifted students feel that hakwons are crucial to their academic development: They feel this is where their real learning happens and would eventually help them enter their desired school. Hakwons provide students with elements that are not provided by public schools (Kim & Kim, 2015). For example, most gifted students consider the learning process at public schools to be too slow. GEHs also play a crucial role by providing years of rigorous preparation with specific strategies such as practice with Olympiads and improving TOEFL scores. Public schools do not provide this kind of extra help for advanced students, which is why advanced students and their parents often choose these hakwons to maintain or accelerate their education (Gagne, 2011; Neihart, Reis, Robinson, & Moon, 2002). GEHs also provide highly personalized learning, which is not provided at public

schools: This helps improve self-esteem, academic competence, and learning satisfaction. Overall, we found that these hakwons have positive effects on students' psychological stability, making them feel safe and providing a stronger sense of belonging than at public schools. These positive effects of SE on students' emotional stability are, however, controversial. In keeping with our findings, some scholars have reported that SE has positive effects on students' social and psychological development and improves their general welfare (Kim & Kim, 2012; Ozaki, 2015). Some have found that SE can function as a 'nerve sedative' to relieve the stress from educational competition because SE instructors are considered 'better communicators' and more 'caring and friendly' (Kim, 2003, 2016). Other scholars have reported that SE has negative influences on students, such as increased academic pressure (Ahn & Baek, 2013; Gillen-O'Neel, Huynh, & Fuligni, 2013), or effects on students' psychological well-being (Bray, 2013) and socio-emotional development (Oh, 2012). Our finding that students at the GEHs have a heightened sense of emotional belonging, because they felt that the instructors truly cared about them strengthened students' trust in the hakwons and encouraged them to immerse themselves in the program.

Overlooked Gifted Students in Public Schooling

Highly motivated students with academic excellence are arguably overlooked within regular classes of public schools. Most of the student participants in our study reported that their school lessons are not suitable for them and that they are often 'silenced' and even marginalized within public education (see Table 6.5). Similar to findings from prior surveys comparing public schools and shadow education in Korea (Choi, 2009; Je, 2002; Kim, 2003; Yang & Kim, 2010), our student participants strongly expressed their preference for GEHs over school lessons. In this respect, Yang and Kim (2010) argue that there is a phenomenon of 'inverted roles' between public and shadow education in Korea. The contested status of public schools based on student and parent preferences for shadow education has implications for educational contexts in other countries and has already drawn the attention of several scholars (for an Indian case, see Paramita, 2015; for Canada, see Aurini and Davies, 2004).

Although gifted education is promoted at the institutional level in Korea (as we showed in Chapter 2), the findings of our research reveal

that the academic needs of gifted and highly motivated students are not being appropriately met in public education. Thus, students seek educational opportunities in the SE sector. This is becoming one of the most difficult challenges for public education systems and school teachers in Korea. Students' increasing and consistent participation in GEH education has shifted the culture of Korean education, leaving a genuine dilemma for the Korean public education system: Ultimately, it is a struggle between educational equality and academic excellence in Korea. We recommend the development of new educational approaches to gifted education in the public education system and rigorous scholarly investigation.

The Roles of 'Gangnam Moms'

The proliferation of GEHs also reveals the competitive spirit of some parents for the academic success of their children, which is found among Gangnam mothers. 'Gangnam mom'—akin to the American term 'tiger mom' (Paul, 2011)—refers to middle- and upper-class mothers who live in the Gangnam area in Seoul, the most affluent area in Korea, and who tightly manage their children's education and desperately seek for the right formula for their children's academic success (Park, Lim, & Choi, 2015). The term has been generalized to refer to all middle- and upper-class mothers with excessive educational fever for the education of their children around the country. The roles of such mothers, specifically finding information and strategies for their children to enter good GEHs and prestigious schools, are arguably crucial for students' academic success.

In Information Power of Gangnam Mothers, Kim (2016) urges mothers to be 'information experts' and to tailor educational care and support for their children's educational success using all available information and connections. GEHs reinforce education fever among parents as GEHs function a conduit for some students to enter prestigious schools and eventually to be admitted by nationally and internationally renowned universities (Mundy, 2014; Noh, 2012). In this respect, finding a good GEH and financial support for it has become an aspiration of the middle- and upper-class mothers around the country. Thus, for some students, academic success requires a combination of factors including

students' intellectual ability, mothers' information expertise, familial wealth, and good GEHs.

We did observe some parents placing extreme pressure on their children, such as becoming upset when their children made even a single mistake on a test. One student, Soo-young, said 'they are never satisfied. I got almost all the questions right. They never compliment me. Always tell me to do better.' This education fever undoubtedly affects the children. In Korea, having a child attend a GEH is a source of great praise and envy. It is seen as evidence that the child is truly talented and gifted. One student, Sang-hyun, said 'Mom seems to be so proud of the fact that I go to the GEH. Whomever she meets and wherever she goes, she always talks about it.' We learned, however, that parents often keep admission information secret or share it only with their closest friends because they do not want the hakwon their child attends to be overwhelmingly popular. Overall, education-obsessed parents tend to put more faith in hakwons for gifted children than the public schooling they are meant to supplement (Choe, 2016).

Enhancing Educational Inequality

Researchers have found that GEHs in South Korea increase educational and socioeconomic inequality, which has implications for education and social justice (Byun, 2010). Despite their success and popularity, GEHs lead to financial problems for families, because they are much more expensive than other forms of SE in South Korea (Byun, 2010; Kim, 2016; Lee, 2007). Tuition is usually more than USD$700/month, which is at least five times higher than other forms of SE. One student participant, Ji-hye, said that her parents pay about $1000/month: $300 for high level math and $700 for preparation for the Chemistry Olympiad. At the time of our interview, she said that they had spent more than $50,000 on her SE. This financial burden becomes more problematic when families also pay for 'make-up hakwons.' Make-up hakwons are SE institutes that either help students enter GEHs or supplement their learning there (Jun, 2015). One middle school student, Jung-jin, spent about $3000 per semester for counseling and in-depth consultation. This kind of financial burden means that top quality gifted education and preparation may be available only to the economically

elite. In this sense, GEHs have been blamed for exacerbating educational inequality in South Korea (Dang & Rogers, 2008).

It should also be noted that most gifted students in Korea choose to attend medical, pharmacy, law, or engineering schools instead of studying liberal arts, math, or science (Park, 2017). The trend toward education that will lead to a clearly defined job upon completion seems to reflect a view of education as a means of social mobility and not necessarily of personal enrichment. It also suggests that the stated objective of schools for the gifted and SPHSs to nourish intellectual proficiency in basic fields of knowledge may be in name only. A telling example is medical school freshmen, approximately 70% of whom are graduates of schools for the gifted that receive high levels of public funding for the development of basic academic areas such as mathematics and science. This number is significantly higher than that of graduates studying math or fundamental science in university, which is estimated at about 10–15% (Korean Education Ministry, 2016). In this respect, GEHs may be attributed to enhancing educational inequality in South Korea.

GEHs are increasingly popular and competition for admission is intense in South Korea. They undoubtedly benefit gifted students in many ways, but they also have ramifications for larger society in terms of educational justice and equality. Not all gifted students can attend due to the price of tuition. To address this issue, public schools, we suggest, should try to provide another option to meet the unique needs of gifted students. Overall, our findings suggest that GEHs should neither be idealized nor demonized. They provide a kind of education that is not easily achieved in public schools in South Korea. However, it is also important to ensure that gifted children are not excluded from this privatized education due to lack of access.

Based on our findings, we suggest three avenues for further study. First, longitudinal research is needed to assess the experiences of students in GEHs and assess which components could be integrated into public schools to address gifted students' needs. Second, a thorough examination should be conducted to objectively assess the diverse programs offered at GEHs: Do they really improve the abilities of students, and if so, how? Third, the fact that most gifted students pursue careers such as medicine and law seems to contradict the stated purpose of gifted schooling in Korea, which is to enhance basic studies. A systematic assessment of this contradiction is needed.

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CHAPTER 7

From Shadow Education to "Shadow Curriculum": Its Definitions and Features

In this chapter, we conceptualize 'shadow curriculum,' one component of the worldwide phenomenon of shadow education. The concept of curriculum is complicated and can be defined in various ways depending on context (Jung & Pinar, 2015; Pinar, 2015). Generally, it refers to a course of study, a syllabus, objectives and outcomes, guidelines, and educational ideals. In this respect, the concept of curriculum is as expansive as the educational experience itself (Jung & Pinar, 2015). Diverse conceptualizations of curriculum such as the 'hidden curriculum' (Jackson, 1968), and the 'null curriculum' (Eisner, 1979) have expanded our understanding about schooling and official curriculum.

Current conceptions of curriculum are not, however, applicable to shadow education, given the aspects of shadow education discussed in Chapter 1, which qualify it for its own research focus within the field of curriculum studies. In the following discussion, we build on existing scholarship and our own field experience in South Korea, to develop a new conception of shadow curriculum. The discussion will also clarify the blurry aspects of shadow curriculum and demonstrate its relevance to the field of curriculum studies. Our hope is that this discussion will open new intellectual space for analysis of the complex phenomenon of shadow education.

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Defining Shadow Curriculum

In this section, we define shadow curriculum by drawing on existing terminologies, definitions, and characteristics of shadow education. Shadow education has been described using various terms; in English, it is usually called private supplementary tutoring (Bray & Kwo, 2014; Kim, 2016). It is referred to as private tuition and coaching in Bangladesh, India, and Pakistan; *juku* in Japan; *hakwons* and *sagyoyuk* in South Korea; *Buxiban* in Taiwan; and *Nachhilfe* in Germany. The entrepreneurs who run formal establishments for private tutoring may variously refer to them as centers, academies, or institutes. The phenomenon of shadow education was first introduced to the academic world in the early 1990s. de Silva et al. (1991) referred to it as 'private supplementary tutoring' and the 'shadow' metaphor was first used in academic discourse about the phenomenon in Malaysia (Marimuthu et al., 1991), Singapore (George, 1992, cited in Malik, 2017), and Japan (Stevenson & Baker, 1992). In his 2007 [1999] book, *The Shadow Education System: Private Tutoring and Its Implications for Planners*, Bray referred to private supplementary tutoring using the ideas of 'shadow' and 'shadow education':

> First, private supplementary tutoring only exists because mainstream education exists; second, as the size and shape of the mainstream system change, so do the size and shape of supplementary tutoring; third, in almost all societies much more public attention focuses on the mainstream than on it shadow; and fourth, the features of the shadow system are much less distinct than those of the mainstream system. (p. 17)

He expanded on this idea and popularized it via his subsequent works with colleagues (Bray & Kobakhidze, 2015; Bray & Kwok, 2003). Many scholars focusing on the phenomenon commonly accept the 'shadow' characterization.

But what constitutes 'shadow education'? Early on, Stevenson and Baker defined it as 'a set of educational activities that occur outside formal schooling and are designed to enhance the student's formal school career' (1992, p. 1639). Later, Baker et al. defined it as 'outside-school learning activities paralleling features of formal schooling used by students to increase their own educational opportunities' (2001, p. 2). Buchmann, Condron, and Roscingo defined it as 'educational activities, such as tutoring and extra classes, occurring outside of formal schooling designed to improve a student's chance of successfully moving through

high school graduation and into a college of their choice' (2010, p. 436). Malik (2017) reviewed various definitions of shadow education and argues that the various definitions cause confusion and ambiguity, specifically around the issues of supplementation and privateness. Malik identified two lines of thought in defining shadow education: Baker followers and Bray followers. According to Malik, definitions following Baker refer to 'activities which mean not only tutoring, but also other activities for this purpose such as solved and unsolved exercises, prerecorded lectures (via CDs or websites), guide books and notes (paperback and online) and other helping materials' (2017, p. 20). Definitions following Bray include 'those activities which are organized by public schools or government [such as after-school-programs] to help improve the academically weak students in their studies even when teachers are paid for those extra classes … by public schools or government' (Malik, 2017, p. 20). According to Malik, the former restricts shadow education to only 'paid and private activities,' while the latter 'eliminate the elements of privateness.' Malik went on to define the phenomenon of shadow education as 'activities that are meant to help the students to improve their school learning in examinable subjects' (2017, p. 20). In our opinion, Malik's definition incorporates most existing definitions and provides clarity.

Existing definitions have contributed to inquiries about this important educational phenomenon and made possible the proliferation of research about it in academic fields such as comparative education, educational policy, the sociology of education, and human resource development. However, these definitions are limiting in terms of creating intellectual space for curriculum scholars to inquire into student learning and instruction under shadow education. For example, few studies have evaluated the programs, curricula, teaching–learning materials, and instructional strategies used in shadow education. One exception is Kim's (2016) book, which focused on shadow education practices in South Korea in great detail in terms of curriculum and instruction. To open academic space for curriculum research on shadow education, we need an appropriate curriculum concept for further inquiry into this phenomenon from a curriculum studies perspective.

Therefore, informed by the existing definitions of shadow education, we define shadow curriculum as *supplementary curriculum out of schooling provided by educational business industries that is intended to improve academic success among individual students in formal education.*

This definition incorporates three main components. First, the focus of a shadow curriculum is on the individual (Kim & Kim, 2012, 2015; Mawer, 2015; Ozaki, 2015). Compared to public schooling, a shadow curriculum focuses on the academic level of individual students by providing students with personalized learning environments through ability grouping (Dawson, 2010; Kim, 2003; Park et al., 2016), providing personalized learning materials and programs (Kim, 2016; Kim & Kim, 2012, 2015), and adjusting instructional strategies to students' learning styles and needs (Kim, 2016; Ozaki, 2015; Zhang, 2013). Kim's qualitative study on *hakwons* in Korea revealed that their most distinctive features were differentiated classes and individualized teaching:

> … in differentiated classes, students are divided into levels, similar to schools to some extent, but it is different because there are more levels at hakwons compared to schools. The division is based on placement tests and individual counseling. Hakwons try to put the closest students in terms of their achievement in the same classes. Hakwons also use differentiated curricula and materials, which allows for really differentiated education. (2016, p. 140)

This distinctive feature is not limited to Korean *hakwons*: other scholars in different contexts have observed similar phenomena (see Dawson, 2010; Ozaki, 2015).

The second component of a shadow curriculum is enhancing academic success: Its main objective is to help students achieve higher scores at school and finally enter the college of their choice (Lee, 2007; Yamamoto & Brinton, 2010). The third component of a shadow curriculum is that the lessons are determined by each student's academic level: They either help low-achieving students catch up or help high-achievers advance faster (Carr & Wang, 2015; Cho, 2015; Entrich, 2014). If a student cannot follow the school lessons, a shadow curriculum helps by using remedial strategies, and if a student is far beyond the level of other students at school, a shadow curriculum provides more advanced materials (Cho, 2015; Kim, 2016; Kim & Kim, 2015).

Our use of the term 'shadow curriculum' differs from how other scholars have used it. For example, the term has been used in a similar sense to 'hidden curriculum' in the environmental education context (Jucker, 2002) and to the 'null curriculum' in other contexts. The term 'hidden curriculum' refers to what schools teach without explicitly

teaching it—the disparity between what is intentionally taught and what students learn (Jackson, 1968), while the 'null curriculum' refers to what is left out of the official curriculum—what is not taught (Eisner, 1979). Brown (2005) also used the term 'shadow curriculum' within a media literacy context to refer to the discrepancy, or contradiction, between university policies and practices. Hagay and Baram-Tsabari (2011) used the term in their study of how formal biology curriculum is limiting in terms of incorporating students' interests. These uses all refer to different phenomena than what is captured in our definition of the term.

In the discourse about shadow education, the term has appeared relatively recently. Malik used it as one of the subcategories of shadow education that include shadow teaching, shadow curriculum, and pre-recorded academic aids (2017). Specifically, Malik defined shadow curriculum to include 'all help books, eBooks, guides, helping materials, notes, solved and unsolved materials. Both paperback and electronic versions are part of it, but they must be textual' (ibid., p. 22). However, Malik's definition is limited because it conceives curriculum in a narrow sense as a static entity. In this way, it reflects the traditional conception of curriculum.

In contrast, our definition of shadow curriculum is framed within the discourse of curriculum studies, which is an 'interdisciplinary academic field devoted to understanding curriculum' (Pinar, 2011, p. ix). Here, the emphasis is on *understanding*. One of the main foci of understanding curriculum, which includes the design and production of formal curricula, is to understand how, what, and where students learn, unlearn, or not-learn, as hidden curriculum and null curriculum denote. This new definition opens an academic space for understanding the phenomenon of shadow education.

Characteristics of a Shadow Curriculum

Based on our definition of shadow curriculum and the forms of shadow education and their features, we present six characteristics of shadow curriculum. For clarity, we compare these to schooling and school curricula, but some characteristics of shadow curriculum may not differ greatly from school curricula.

Based on Student Academic Needs

The first characteristic of shadow curriculum is that it meets academic (and educational) needs of its consumers: students and parents (Bray, 2007 [1999]; Bray & Kwo, 2014; Kim, 2016; Ozaki, 2015; Park et al., 2016). Because shadow education enterprises must respond to consumer needs, they make 'a special effort to find out what students want and then to respond to it' (Bray, 2007 [1999], p. 40). Shadow education practices can be 'tailored to the need of individuals and groups' (Bray & Kwo, 2014, p. 2), addressing content and skills that are sometimes not covered in public schooling. In the context of South Korea, Kim found that because 'public schooling does not meet their academic needs, they rely on hakwon education to achieve their goal' (2016, p. 33). Kim's observations about public schooling may be overly generalized because he has not observed all schools and classroom practices in Korea, but his point is that *hakwons* in Korea actively and aggressively address consumer need.

Oriented Toward Student Academic Success

The second characteristic of shadow curriculum is its strong emphasis on students' academic success. Academic success is the main reason why pupils take shadow education classes (Bray, 2007 [1999]; Kim, 2016; Stevenson & Baker, 1992). Bray found that shadow education is used 'especially to improve and maintain their children's competitive advantage' (2011, p. 14). School curricula are also intended to promote academic success, but tend to foster more well-rounded development of students with the inclusion of content and instruction for balanced intellectual, affective, and psychomotor development. In contrast, a shadow curriculum is oriented toward academic success because most university entrance examinations and applications require students to have a high GPA and to demonstrate advanced intellectual ability and high achievement (Kim, 2016; Ozaki, 2015; Stevenson & Baker, 1992).

Bray (2007 [1999]) found that pupils with either weak or strong academic performance seek tutoring. Research conducted in Hong Kong and Taiwan (Tseng, 1998) and in Korea (Kim, 2016) has revealed that students in high-ranking schools are more likely to use shadow education than those in lower-ranking schools. In Japan, Ozaki (2015) found that intense *juku* attendance was perceived as being linked with university admission and future success within society. The logic behind this belief is that higher achievement in schools will lead students to prestigious

universities and that graduates from such universities are more likely to succeed. This may or may not be the case, but the ultimate goal of academic success is why students and parents seek shadow education and shadow curriculum.

Focused on School Grades and Exam Preparation

The third characteristic of shadow curriculum is that it focuses on teaching students exam preparation (Aurini & Davies, 2004; Harnisch, 1994; Kim, 2016; Kim & Kim, 2012, 2015; Stevenson & Baker, 1992; Yamamoto & Brinton, 2010). Stevenson and Baker (1992) found that shadow education stresses the use of formal examinations, particularly centrally administered examinations. In Canada, Aurini and Davies found that 'shadow education tends to be goal-specific and task-oriented, usually aimed to pass an impending test or improve a grade in a key course' (2004, p. 6). Harnisch found that *jukus* 'track children by ability and focus solely on test preparation in a way that public schools cannot and may not want to do' (1994, p. 330). Kim (2016) observed similar features in South Korea and provided examples of how *hakwons* help students prepare for school examinations and the College Scholastic Ability Test.

A shadow curriculum is oriented toward academic success, and customer satisfaction is determined by outcomes such as school grades and passing university entrance examinations. Thus, shadow curriculum tends to emphasize test-taking skills to help students obtain better grades on school tests and nationally standardized tests. Providers of shadow curricula may place excessive emphasis on providing exam-relevant academic knowledge and test-taking training, which has been criticized for leading students to believe that the purpose of education is to obtain high grades and learn test-taking skills rather than encouraging students to appreciate the intrinsic value of learning (Bray & Kwo, 2014; Kim & Kim, 2012, 2015).

Accelerating Different Learning Opportunities Based on Family Investment

Shadow curriculum is highly subject to parental investment in terms of what, where, and how students learn. For example, family investment affects access to shadow curriculum in terms of class sizes, quality of instructors, and materials used. Family investment also affects decisions that affect public education, as families with more financial resources can live near schools with better quality education, educational

environments, and high-achieving student populations. For example, many Korean families move to the Gangnam area for their children's education (Kim, 2016; Park et al., 2015). However, parental investment functions more powerfully (and relatively instantly) in terms of accessing shadow education and curriculum. This feature should not be confused with the idea that shadow education reproduces social and educational inequality, although the two are closely related. Entrich (2017) stressed this point because there are two possible outcomes of investment in shadow education: In the words of Aurini, Davies, and Dierkes, shadow education 'can equalize educational opportunity by providing extra support to disadvantaged children, or it can deepen educational inequality by providing a market-based resource for advantaged children' (2013, p. xxi). Bray (2009) similarly acknowledged that shadow education can exacerbate social inequalities. In general, students from wealthy families are more likely to access shadow education than their less resource-rich counterparts (Bray & Kwok, 2003; Byun & Kim, 2008; Dang, 2007; Kim, 2016; Stevenson & Baker, 1992). Dang and Rogers (2008) and others have pointed out that social (and educational) inequalities are exacerbated by shadow education as privileged families are able to invest more.

Family investment also affects the types and intensity of shadow education students receive. Generally, one-on-one tutoring, which is commonly conceived as the most personalized, is usually the most expensive (Bray & Kwo, 2014; Kim, 2016). In shadow education, the smaller and more specialized classes are, the more expensive tuition is. Internet-based private tutoring is the most reasonably priced, but if a student needs more courses or individual services, even its tuition increases. Thus, the type and quality of shadow education are highly subject to family socioeconomic status; in this sense, shadow education can be considered a form of 'positional goods' (Halliday, 2016). Private education allows the children of wealthy parents to jump the queue for prestigious universities and well-paid occupations; Halliday cited Koski and Reich (2006), who wrote that 'the stronger the case that education is a positional good, the more necessary it becomes to be an egalitarian' (2016, p. 605).

Oriented Toward Personalized Learning

Personalized learning is another characteristic of shadow curriculum (Kim, 2016; Kim & Kim, 2012, 2015; Mawer, 2015). The idea of personalized learning is not new: public schooling and school curricula

throughout the twentieth century have used personalized approaches called tracking or streaming. However, personalized learning is more effectively actualized and actively pursued in shadow curriculum, and this is related to the first two characteristics of shadow curriculum: student academic need and student academic success.

Generally, because shadow curriculum is consumer-oriented and need-based, personalized learning is better actualized in shadow curriculum. One-on-one tutoring is the best example of personalized learning (Bray, 2009) because it focuses on the needs, learning styles, and academic levels and goals of individual students (Kim, 2016). Kim (2016) provided examples of how *hakwons* personalize learning. One example is ability grouping, which usually involves grouping 8–15 students with similar individual abilities and academic levels, providing them with tailored curriculum and counselling including portfolios, learning diaries, university exam preparation schedules, and accumulative evaluations (for details see Kim, 2016). In Japan, Mawer (2015) found that *hingaku*, *hoshū juku*, and *juku* that specialize in *kobetsu shidō*, a type of *juku* that is focused on individual instruction, provide highly individualized instruction for both academic study and more general guidance. This kind of personalization is less evident in nations where shadow education is only available in the form of mass classes.

In Internet-based shadow education, students can effectively personalize their own learning by making choices about subject areas, levels of courses, materials to be used, and various instructors with different teaching styles (Kim, 2016; Park et al., 2016; Ventura & Jang, 2010). Unlike in public schools, where students are assigned teachers and learning materials, students can manage their own learning by choosing instructors they like, course content, learning speed, as well as where and when to study. They can also skip content they find easy and repeat content they find challenging. From a student's perspective, personalized learning is better actualized in Internet-based private institutes. However, this maximizing of student choice has another side: It requires student responsibility and commitment toward learning. The effectiveness of this form of shadow education varies; overall, Kim (2016) found that students used Internet-based education (*ingang*) effectively and were satisfied by the possibilities it provides.

In some countries, including South Korea, public school teachers are required to deliver established curriculum content to all students within a given period of time (Kim, 2003; Yang & Kim, 2010). Although many

public school teachers work hard to meet the needs of individual students, shadow curriculum and its potential for more personalized learning provide an alternative for some.

Exacerbating the Competitive Aspect of Education

The final characteristic of shadow curriculum is that it heightens the competitive aspect of education (Halliday, 2016; Kim, 2003; Kim & Kim, 2012, 2015; Lee, 2007; Mawer, 2015). Many scholars have found that it has contributed to 'an overall intensification of exam competition' (Mawer, 2015. p. 133), leading to what Halliday (2016) referred to as a type of educational 'arms race' that has turned education into a survival game. As noted earlier, Bray (2007 [1999]) found that already high-achieving students are much more likely to engage in shadow education, as have scholars in Germany (Toyama-Bialke, 1997, cited in Bray, 2007 [1999]), South Korea (Kim, 2016), and Hong Kong (Tseng, 1998). Intensified competition can encourage students to view other students as rivals to defeat, rather than encouraging the intrinsic value of learning. When students see learning merely as a way to get better scores or beat other students, they risk being stuck to test scores and school grades (Kim, 2016; Park et al., 2015; Zhang, 2013). According to Halliday, the 'markets in education raise a moral concern because of the way in which they cause, or at least exacerbate, an educational arms race that expands educational screening at the expense of educational development' (2016, p. 151). In this chapter, we have provided a comprehensive definition of shadow education curriculum and explored its characteristics. The next chapter explores how the expansion of shadow education is changing student learning today.

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CHAPTER 8

Demise of School Curriculum: Post-schooling and the Rise of Trans-boundary Learning

We are living in an era of 'posts'—postmodern, post-colonial, post-human, and post-paradigm. These 'posts' require a critical analytic view of modernism and our understanding about what is real about education. According to post-modernism, modern structures are rejected as antiquated (Doll & Trueit, 2012). From this perspective, postmodern schooling is a form of rejection of modern schooling and may lead to the death of traditional schooling. The status of school curriculum may be illustrated by Willy, the old salesman in *Death of a Salesman*, who is unstable, insecure, and self-deluded person. He is uncapable of making living during the Great Depression. With his insecure identity, he is captivated by his past which is not real anymore. Without recognizing reality, Willy's behavior seems to be a way to illustrate the jeopardized status of school curriculum which seems to fail to recognize the reality it faces. Metaphorically speaking, the death of Willy symbolizes the death of school curriculum. Decades ago, Joseph Schwab (1969) diagnosed the field of curriculum studies as moribund. Today, we can diagnose the school curriculum as moribund, with students sleeping in classrooms and desperately seeking education outside of schooling. This chapter explores the changes in student learning and the authority of schooling with the weakening status of school curriculum and the strengthening status of shadow education.

The expansion of shadow education is changing student learning today such that learning is increasingly becoming 'transboundary'

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(Held, McGrew, Goldblatt, & Perraton, 1999), blurring the boundaries between public school and shadow education (Jung, 2018; Kim, Gough, & Jung, 2018). From a transformationalist perspective, the global phenomenon of shadow education is transforming state powers and the context in which states operate with respect to education. Held et al. argued that 'politics is no longer, and can no longer simply be, based on nation-states' (1999, p. 15). Student learning is also no longer simply based on schooling. As discussed in the previous chapters, shadow education is increasing worldwide: We are living in a post-schooling learning culture. The status of schooling is eroding: It is competing with shadow education, and in some places, shadow education is winning. This chapter explores how shadow education can be considered post-schooling.

Definition and Traits of Post-schooling

With regard to the weakening status of school curriculum, Benn Williams, the author of *School Knowledge in Digital Age*, argued that post-schooling 'reanimates the countercultural "deschooling" agenda … reaffirming its attack on institutionalized schooling, its assault on assembly-line learning, and its commitment to self-determined learning through informal networks and community bonds' (Williams, 2013, p. 42). With the blurred boundary between formal and informal, and public and private education, learning becomes 'increasingly flexible, and even porous' (Williams, 2013, p. 43). Williams was referring to post-schooling in the context of the digital age. Here, we use the term more broadly to include various online and offline forms of educational opportunities out of schooling. This new learning culture decenters the authority of education: The status of schooling as the center of education weakens and the boundary between schooling and shadow education is increasingly becoming blurry.

In this respect, the mimicry identity of shadow education needs to be reconsidered. Shadow education began by mimicking public education, but it has now become another reality, achieving its own identity. It is no longer subordinate to public education anymore: It has become another original (Baudrillard, 1994). The following discussion explores how the concept and the roles of schooling are changing with the expansion of shadow education. First, we can identify eight main characteristics of post-schooling.

First, the role and authority of public schools with regard to student learning is weakening. Many students worldwide no longer simply rely

on schooling and school teachers, so school is no longer the center for their learning. In some ways, many schools and teacher have lost control of student learning.

Second, many students believe they can achieve their educational goals better through shadow education. They are dissatisfied with schooling, especially high-achieving students who cannot get the education they need at public schools.

Third, the concept of learning places is expanding: learning no longer takes place only in schools. It can occur many other places such as the Internet, private tutoring institutes, and homes with subscribed learning program and home-visit tutors. Even cafes, buses, and other places have become learning places.

Fourth, students and teachers now conceive of academic success as something that can be achieved outside of schools. They use shadow education practices, learning coaches, educational and admission counseling, and access individualized guidance from sources other than school and school teachers.

Fifth, students and parents are increasingly able to get more information and make decisions about learning, teaching, and counseling. Shadow education has made students and parents important decision-making agents.

Sixth, the concept of teacher is expanding. Traditionally, 'teacher' referred to school teacher, but now shadow educators have become important elements of student learning, often because they are more skilled than school teachers.

Seventh, it has become clear that student achievement and learning outcomes can no longer be fully grasped by investigating their learning at schools and what school teachers do. They spend considerable time in shadow education spaces, so scholars need to focus on student learning, outcomes, and achievements in both spaces. International comparison achievement tests, such as PISA and TIMMS, should also be analyzed in accordance with how students learn in shadow education spaces, not solely attributing the results to public education.

Eighth, school curricula are limited due to their universal curricula, structured classrooms with age-based grouping, and are generally unable to meet the diverse needs of individual students. Overall, the post-schooling phenomenon reveals the limitations of traditional schooling.

Trans-boundary Culture of Learning in a Post-schooling Era

The following discussion explores some of the characteristics of post-schooling learning culture. First, we present an example of one student's post-schooling education.

Min Hyuk is an 11th grader who lives in Seoul. He wants to enter KAIST to become a science researcher. He leaves home at 7 a.m. On the bus to school, he watches a social studies lecture from his Internet-based private tutoring company. During the daytime, he learns from his school teachers. Every day after school, he goes to a Science hakwon and an English hakwon. After he gets home, he watches one more lecture from his Internet-based private tutoring company. Twice a week, his math tutor visits him for a two-hour math tutoring session. Min Hyun prioritizes learning from tutoring and hakwons, because they provide new content: School classes are for reviewing and ensuring a good GPA for college admission. Min Hyuk decides what, where, and how to study. He chooses the lessons of subjects he needs to study more and selects exam preparation courses and instructors that fit his style of learning.

The learning materials he uses vary from school textbooks to PTI workbooks, handouts, and learning materials he finds on the Internet. Even in school classrooms, he uses his own materials to supplement the teacher's materials. For example, in English class, his teacher uses a textbook and a workbook; Min Hyuk also uses a condensed grammar handbook that he bought and his own English word dictionary. He often shops for learning materials at bookstores: New learning materials are published every month and every semester, so he wants to identify the strengths and weakness. These provide him with choices given his academic needs and learning style.

Min Hyuk's learning life can be characterized by trans-boundary learning as his learning happens across the boundary of school walls and the boundary of online and offline. He also acts as the major decision maker with regard to learning in terms of where, how, and with what materials he studies. In the following section, we explain the characteristics of trans-boundary learning culture.

Decentered Authority of Education

The post-schooling learning culture can best be characterized as decentering the authority of schooling, teachers, and public curriculum materials. Students and parents no longer have blind faith in public education

and school teachers and are relying on their authority less and less. Some public school teachers incorporate shadow curriculum into their teaching materials developed by private companies and even encourage students to find shadow education opportunities. Many students feel that shadow education provides more and better educational opportunities than schools (Kim & Kim, 2012, 2015; Paramita, 2015; Yang & Kim, 2010). Many value shadow education more than public schooling (Je, 2002; Kim, 2016; Paramita, 2015), believing that shadow education teachers understand and guide them better; this has been reported in many countries including South Korea, Japan, and India (Kim & Kim, 2012, 2015; Paramita, 2015).

The eroding authority of schools and teachers has been witnessed in many countries through what Bray (2011) called the 'backwash' of shadow education. For example, when students learn content that has not yet been taught at school via a shadow curriculum ('preview learning'), they are likely to lose interest in school lessons and become easily bored (Ripley, 2013). Because the degree of preview learning varies—some students may be one or more years ahead of their peers—school teachers are likely to have students at many different academic levels in their classroom, making it difficult for them to decide what level of instruction to provide. This situation makes school teachers less capable of providing appropriate instruction to all students, resulting in students and parents relying more on shadow education than on schools. Yang and Kim (2010) witnessed this phenomenon of 'inverted roles' between public education and shadow education in South Korea as they found that many students consider public schooling secondary to their shadow education. This inversion of roles has also been observed in India; Paramita found that some students 'follow the private tutors not the teachers' (2015, p. 819).

Interestingly, there is a 'fandom' phenomenon in some Asian countries and regions such as Hong Kong, South Korea, and Japan (Cheng, 2007; Kim, 2016; Ozaki, 2015). Highly popular and favored tutors are called 'God Tutors' in Hong Kong (Cheng, 2007). In South Korea, they are called 'Star Instructors.' One of these is a $4 million-dollar instructor who wrote a book called *Smartest Kids in the World* (Ripley, 2013). Such figures become idols of students, and many students follow such star tutors and instructors, being mesmerized by their teaching and charisma. South Korean students often travel to another city, usually Seoul, during vacations and weekends to take classes from the figures. Access to these figures has become much easier with the advent of Internet-based private institutes.

Furthermore, some teachers encourage students to find shadow education opportunities. For instance, some students we interviewed began learning in shadow education because their school teachers suggested it to them. Misun told us:

> I have been doing ok with my learning at school. I worked hard and I thought I could do it by myself. But, when I reached 11th grade, the amount of material I had to learn became so demanding to me. When I faced challenges in my math learning that I was really struggling with to resolve, my grade dropped. I was called upon by my home-room teacher at my school. I told her my difficulties. The teacher suggested I find a tutor or a hakwon who could help me. She even suggested a couple of hakwons which are famous for Math education. This is how I started attending hakwon. It has been really helpful for me. I think I will continue to take classes there until I take the KSAT. (Individual interview with Misun, January 18, 2018)

Overall, the authority of education no longer remains within the boundary of school and public education curriculum. Shadow curriculum is increasingly being incorporated into the public education sector, and the two interact via the decisions of students and parents and the acceptance of shadow education by public school teachers.

Conversion of Decision-Making Agents

Another characteristic of post-schooling learning culture is that many students and parents are taking over the primary role in making decisions about learning. Decision-making agents in educational matters include governments, policy-makers, teachers, students, and parents. Traditionally, governments, schools, and teachers took the primary roles, but this is changing with the proliferation of shadow education. Teachers and governments may believe they are still responsible for making decisions about student learning, but in reality, the responsibility now lies with students and parents.

We are not blaming teachers for this, but suggesting that students, and to a lesser degree their parents, are ultimately responsible for their learning outcomes. Putting this responsibility solely on teachers is a political and intellectual trap (Poetter & Googins, 2017), often strengthened by the forceful standardization of education (see Jung, 2016; Pinar, 2015). Many students increasingly believe that because they are responsible for

their learning, they should make decisions about their learning in and out of schools, searching for the best curriculum and teachers, and evaluating learning materials and other educational opportunities to achieve their goals. In this sense, students' curriculum is not designed or entirely regulated by school or teachers but constructed by students and their parents. For instance, students are less willing to wait for school teachers to direct their learning and provide them with materials. Passive learning in schools through standardized curriculum and structured lectures is being augmented (or replaced) by shadow education.

Because of the profit-making nature of shadow curricula, the consumers—students and parents—can aggressively ask for and eventually obtain what students need. If shadow curriculum providers cannot or do not address expressed needs, consumers will leave and find another provider. In this way, curriculum in terms of content, teaching style, learning materials, and learning sequence is constructed by individual students. This feature makes sense within the understanding that the ultimate responsibility for learning should be shouldered by the student and parents. With the advent of shadow education, curricula have become malleable, purposeful, flexible, and individualized in terms of content and levels of materials, ways of learning, and learning progress.

Some parents take a strong role in managing their children's learning, as reported in Japan, England, the USA, and South Korea (Sriprakash, Proctor, & Hu, 2015; Vincent & Ball, 2007; Vincent, Rollock, Ball, & Gillborn, 2012, 2013). Shadow curricula have exposed parents to numerous possibilities outside of public schooling, and some parents are desperate to find the very best curricula and teachers for their children, as illustrated by the term such as 'helicopter mom' in the USA (Hunt, 2008), 'tiger mom' in Chinese communities in the USA (Chua, 2011), and 'Gangnam mom' in South Korea (Park, Lim, & Choi, 2015). These parents might have played an equally active role in public schooling, but shadow education provides more opportunities for them to make decisions. As Park et al. (2015) reported, many Korean parents actively search for information about schools, admission criteria of universities, PTIs, and tutors. According to Bernstein's (1975, 1996 [2000]) theories of invisible and visible pedagogies, parents have an invisible role that tacitly influences student learning and education; in contrast, visible pedagogies include strong framing and explicit controls over the relay of educational practices. Bernstein made an important contribution to the sociology of education by elucidating the familial influence, especially

with regard to socioeconomic status. This is beyond the scope of our discussion here, but it is clear that parental influence is no longer implicit or invisible: It is visible and explicit in their decisions about their child's career path, school, curriculum, materials, teachers, and tutors.

Many students we met told us that their parents, mostly mothers, provide them with information about admission criteria of the school they want to enter, PTIs, tutors, and learning materials. For example, Youngsuk, a 10th grader, told us:

> My mom recommends which hakwons I can attend, and the tutors I can learn from. It would be more accurate to say that she mostly makes decisions for me. Of course, I do not simply follow all her suggestions. But, I am busy studying at school, hakwons, and tutoring. I do not have much time to search for such information. Mom, since she stays home, does it for me. She has friends she meets almost every day and they share their information about how they help their children with learning. She does it for me. (Individual interview with YoungSuk, December 3, 2017)

In South Korea, some parents—mostly mothers—consider managing their children's learning to be a full-time job. It requires considerable time, as well as work finding information and appropriate supports. Mothers may drive their students to school, *hakwon*, and home, so that their children save time and energy that they could spend on learning. Parenting and parenting styles have important effects on children's academic success, and many curriculum studies scholars have discussed how ethnicity, race, culture, and familial socioeconomic status affect student learning (Spera, Wentzel, & Matto, 2009; Vincent et al., 2013).

Inflow of Shadow Curriculum into Public Education Space

Above, we discussed the eroding authority of school and teachers from the perspective of students and parents. This section discusses it from the perspective of public educators. Schools have incorporated various elements of shadow education, including after-school programs that serve as a form of shadow education. These are the result of public education policies with various purposes in countries including Hong Kong (Kwon, 2012), the UK (Dyson & Jones, 2014), South Korea (Kim, 2016), New Zealand (Youthtown, 2015), Switzerland (Schüpbach, 2014; Schüpbach & von Allmen, 2013), the Netherlands (du Bois-Reymond, 2013), and

Denmark (Holm, 2015). Most of these after-school programs are offered by private tutoring instructors or private tutoring agencies that have contracts with schools.

Additionally, instead of insisting on maintaining their authority and the authority of public education materials, some school teachers try to find ways to improve their teaching by incorporating elements of shadow curriculum. Many teachers use teaching and learning materials produced by private education companies, instead of just using the traditional textbooks and whiteboards. For example, with technological innovations, some school teachers in South Korea use an Internet-based lesson platform that provides all lessons in all subjects, extracurricular materials, and evaluation sources. One such service is I-Scream, which is the most popular in South Korea. It is a private company, but it is exclusively provided to public school teachers, and 99% of elementary school teachers in South Korea now use this service daily (Pyo, 2017). It also provides various in-service teacher training courses such as methods of teaching, language, and student counseling courses.

Many teachers also use shadow education materials such as educational videos, workbooks, question books, and mock test materials. Yu Jeong, a 10th grader told us:

> My school teachers finish the textbook as quickly as possible. Then, they teach us with question books and learning materials produced by really famous hakwon companies. They ask us to buy them. I think teachers use them more and more because the materials have a lot more questions and mock tests than textbooks do. They often give out handouts which are condensed versions of hakwon materials. I know that because I have the materials. (Individual interview with Yujeong, March 10, 2018)

Overall, shadow education practices and materials have moved into the public education space, crossing the boundary of school walls. However, unlike the extensive research that has been conducted on public education materials, few scholars have focused on the strengths and weaknesses of shadow curriculum materials, so more research is needed.

Consilience of Learning Materials

Consilience of public and private curriculum materials is another characteristic of the post-schooling learning culture. In the educational context, consilience can be defined as a phenomenon of constructing

knowledge that converges evidence, paradigms, and multiple disciplines (Wilson, 1999). In the post-schooling learning culture, students who access both public curriculum and shadow curriculum are seeking consilience: They are using various learning materials from various sources and providers. The example of Min Hyuk above helps illustrate this: When he finds content difficult to grasp, he accesses many kinds of learning sources: school textbooks and workbooks, *hakwon* materials, and online content like Wikipedia, online encyclopedias, YouTube channels, and Google. Many other students also choose to use various learning materials on their own because they feel that textbooks and materials provided by school teachers are insufficient. Yu Jeong told us:

> Yes, the textbook is important because there should be a standard. However, I cannot imagine myself studying only with the textbook. No. Textbooks have little exemplary questions, and in KSAT there are a lot of questions, content, terminologies, and sets of texts that do not appear in textbooks. Importantly, school teachers do not rely on textbooks. They also encourage us to use other sources. (Individual interview with Yu Jeong, February 7, 2018)

Yu Jeong has more than six learning materials in book format for math learning, and more than 10 for English. For English, she has a textbook, three listening workbooks, four reading workbooks, three question-focused workbooks, two grammar books, two word-idiom focused books, and two English KSAT mock test books.

School textbooks mostly provide contents with explanations; many students feel that they lack examples of questions, and importantly, they lack a systemic mechanism to check if students really understand the content. Therefore, many students use workbooks of private companies with collections of questions to resolve the limitations of textbook. These workbooks are developed by private publishers and provide many questions with in-depth, and/or summarized, explanations of targeted content. Barron's, Kaplan, Kallis, and McGraw-Hill Education provide SAT preparation materials. In some countries, there are numerous privately produced materials for each subject, sub-categories of subjects, school mid-term and final-term tests, and of course preparation for the College Scholastic Ability Test in South Korea. Table 8.1 lists some of learning materials that Min Hyuk bought at bookstores.

Min Hyuk's various learning materials illustrate the consilience of learning materials by individual students. In addition to commercially

Table 8.1 Min Hyuk's learning materials

Name	*Subject*	*Characteristics*
Concept math	Math	Organized by math concept and textbook chapters Focused on question-solving strategies Some content above high school curriculum
Genius	English	1001 core sentences with patterns Descriptive questions focused, not multiple choices Key words and idioms sections
Xi premium	All subjects	Only questions Organized by frequently appearing patterns in the college Scholastic Ability Test
Summa Cum Laude	All subjects	Focused on detailed explanations on concepts and core contents Alternative strategies for understanding

produced printed learning materials, students may also use non-commercial materials provided by school teachers and shadow educators. For example, many PTI instructors provide learning materials for students in the form of handouts or booklets to maximize the efficiency of their lessons and student learning. Yu Jeong told us:

> I like the instructor's handout because it saves me a lot of time, and more importantly it is much less boring than textbooks. I also prefer learning with such materials because I learn how to make my own notetaking, thinking about how to organize the contents I learn. (Individual interview with Yu Jeong, February 8, 2018)

Relatively recently, more learning materials have become available online, including online platforms of question banks, with numerous questions to help students prepare for school exams and the College Scholastic Ability Test. Students solve questions online; the system immediately checks and evaluates answers and guides students to the next step. If a student gets a question wrong, the system provides more questions, either at a similar or less difficult level. If the answer is correct, the system leads the student to the next level. This online system helps students save time and increases the efficiency of their learning. It tracks student learning and analyses their strengths and weaknesses.

This discussion of the consilience of learning materials has been based mainly on our own fieldwork in South Korea. Similar phenomena may be observed in other countries, especially those with a strong prevalence of shadow education, but few studies have focused on how students use the various materials and characteristics of commercialized or non-commercialized learning materials, and more research is needed.

Complex Learning Space

Learning spaces for today's learners are becoming increasingly complex. In the context of architecture, Norberg-Schulz (1988) defined complexity as a phenomenon in which heterogeneous elements are combined to produce new values and meanings: Complex buildings have multiple purposes or are built according to a collection of different concepts. Similarly, we can characterize today's learning spaces as complex learning spaces as students learn in multiple spaces.

In the past, students learned only from school teachers, and the school curriculum was the only guideline for determining what and how students learned. Now, the emergence and expansion of shadow education have changed learning spaces, crossing the boundary of school walls and being shaped and influenced by shadow education spaces. Chapter 3 explored how students now learn in multiple spaces and make their own decisions about which space is the 'center' of their learning. For some, it may still be school, but for some others, it may be home with a one-on-one tutor or a private tutoring institute. Some may have multiple centers, learning new content from their tutors or PTI instructors and then using school as a place to review this content. For example, one student told us:

> I learn at hakwons first. It prepares me well for my learning at school. I like this pattern because I can be prepared and do better at school. I do not think that I can do well with learning at school only. I prefer to learn things in advance. (Individual interview with Hye Young, March 3, 2018)

Internet-based private tutoring is a good example of this phenomenon: Students can take lessons wherever they want: at home, school classrooms, *hakwons*, buses, subways, or cafes. Another student told us:

> I like taking ingang [lectures of IPT] classes. I can take them on the bus going to school or hakwons. If I find myself not focused or want to go to washroom, I pause it. When I am in a good mood for learning, I take 3 or

> 4 lectures at a time. When I do not get it, I retake the classes. (Individual interview with Sung Jin, October 4, 2017)

Overall, trans-boundary learning in terms of space and time blurs the boundary between learning spaces and living spaces. A comprehensive examination of current learning culture requires analyzing how students learn in multiple spaces, how they use the spaces, and which spaces are centered or decentered.

Various Models of Academic Success

The post-schooling learning culture includes various models of academic success. Simply put, academic success can no longer be attributed solely to the role of public education—it now extends to shadow curricula. Although educators in public education are hesitant to acknowledge it, empirical research has shown that academic success is seriously influenced by participation in shadow education (OECD, 2012). Many students achieve their academic goals by learning in the shadow education sector. In South Korea and Japan, many high school graduates may spend another year or two studying in the shadow education sector before retaking college entrance examinations. Research in both countries has revealed that many of these student*s* successfully enter the university they want with the help of shadow education (Ozaki, 2015). Students may access shadow education to learn their strengths and weaknesses, get caught up in school, increase their grades, get individualized coaching and accelerated and advanced learning, and even students in remote areas can now access lectures by Star Instructors online. Students of today, especially in South Korea, do not believe that working hard at school is the only way to ensure academic success. This belief is reflected in what Yu Jeong told us about model students who are diligent in their learning and do well at schools:

> I think that students who do not use shadow education and do well in their learning are mobumsaeng [model students]. I also think that those who go to hakwons and take tutoring sessions are also mobumsaeng. It is not the matter of where they study but it is about how well they do. (Individual interview with Yu Jeong, March 10, 2018)

With the existence of various shadow education opportunities, there are a lot of different cases of academic success. Some students may still rely on schooling and school teachers; some students rely heavily on home-visit private tutors; some students achieve their academic goals by using mostly Internet-based private tutoring; some may combine various forms of educational opportunities. For example, Min Su, a high school graduate, prepares KSAT by himself with only taking lessons from IPTs, of course with various learning materials that he bought at bookstores. He told us:

> I prefer studying alone. I never really liked school teachers or hakwon teachers. Because I am highly self-organized, I can manage my learning, and I think that I am doing pretty well. Because I do not need to attend any off-line classes, it saves me a lot of time so that I can use the saved time for exercise or more studying. I like it this way because I can freely control what to study and how to study. I can especially control my learning pace. If I am in a class, I am forced to follow as the class moves even though I do not get what is going. (Individual interview with Min Su, January 10, 2018)

Other examples show different means of academic success:

> I like to be taught by home-visit private tutors. I have three: a math tutor, an English tutor, and a Korean tutor. For other subjects, I learn at school and hakwons. I prefer my tutors because they spend the whole lesson time on me. They know me and my learning really well. So I almost entirely trust their judgment and the decisions they make for me. Yes, the lessons are expensive. I feel that I am really fortunate in that way because my parents can support my learning that way. (Individual interview with Mi Ryung, February 23, 2018)
>
> My school is located in a rural area as you know. There are not many hakwons or tutors. At the end of my middle school, I had to make an important decision regarding which high school I wanted to enter. My grades were high enough to enter good high schools in a big city. But, my family is not rich. So I gave up going to a big city school. Instead, I entered a high school in my hometown. It is small but the teachers are all passionate. Importantly, the regional office provides our school with a lot of financial supports. They built a dormitory in which I stay now. They provide money so that our school can buy various, I mean tons of, commercial learning materials. In the teachers' office at my school, there are bookshelves with all available learning sources. Whenever I need more

> question books or learning materials, I go to teachers' office. I just pick what I need from there. They are free. When I study in the evening in my room at the dormitory, there are resident teachers always who I can ask questions regarding my learning. For KSAT preparation, my school bought a service package of Jinhaksa, an online service for KSAT consultation. Using Jinhaksa, I know which universities or majors I may be able to enter. My teachers consult with me with the data we get from Jinhaksa. (Individual interview with Su Hyun, December 17, 2017)

In the South Korean context, these models of student success are radically different from the traditional model of sitting in a school classroom and diligently following school teachers. Shadow education has allowed the development of many models for academic success. Therefore, research needs to move beyond the school context and focus on all the different ways of learning. In this respect, we theorize shadow education as nomadic curriculum inquiry in the final chapter.

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CHAPTER 9

Shadow Education as Text of "Curriculum of Difference": Nomadic Inquiry

This chapter explores how shadow curriculum can be conceived as a form of nomadic inquiry that is characterized not by fidelity to a master narrative, but by transformations of concepts, ideas, and representations that welcome difference: a curriculum of difference (Deleuze, 1994). Historically, curriculum studies scholars have been most concerned with public education and what happens at schools. This is still an important component of curriculum studies, but we suggest that shadow curriculum should be considered as important as school curriculum.

Shadow curriculum can be incorporated into new ways of curriculum theorizing. Here, we build on Pinar's idea of 'disciplinarity' (2007), questioning the rigor of the current disciplinarity of shadow curriculum as an academic field. We suggest that the current disciplinarity of shadow curriculum is stale, because it does not reveal the complex processes involved. As we have shown in this book, shadow curriculum influences students' emotional and social development (Gök, 2010; Kassotakis & Verdis, 2013) but also plays important roles in student learning, such as improving academic achievement, ensuring college admission (OECD, 2012), and many others (Buchmann, Condron, & Roscigno, 2010; Wasik & Slavin, 1993). Therefore, this chapter explores what kinds of curricular approaches and questions should be applied to further study shadow curriculum.

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Shadow Curriculum and Student Achievement

First, it is important to understand the relationship between shadow curriculum and student achievement from the perspective of curriculum studies, e.g., in terms of curricular programs, instructions, teaching and learning materials, and evaluation. Studies have demonstrated that students and parents seek shadow education to increase academic achievement, and that shadow education has positive effects on student achievement in many countries including South Korea (Lee, 2007; Park, 2008), Japan (Mori & Baker, 2010), Bangladesh (Nath, 2008), Sri Lanka (Pallegedara, 2011), Canada (Davies & Guppy, 2010), and Hong Kong (Bray & Lykins, 2012). Even OECD acknowledges the benefits of shadow education, stating that 'private education plays an important role in mobilizing resources from a wider range of funding sources and is sometimes also considered a way of making education more cost-effective' (OECD, 2012, p. 70; also see Ireson, 2004; Kim, 2016; Park, Buchmann, Choi, & Merry, 2016). Still, there is a research gap with regard to how shadow curricula help students maintain or improve their academic achievements.

Addressing this research gap requires moving beyond simple statistics and delving deeper into the specificities of shadow curriculum practices. Chapter 5 explored how gifted and highly motivated learners in Korea learn in shadow education spaces, and Chapter 6 focused on mathematics shadow curricula in Korea. Little research has specifically focused on how shadow curricula help students learn and achieve in other countries. To clarify these unknown mechanisms, curriculum scholars should address the following questions:

- What aspects of shadow curriculum (programs, instructions, evaluations, coaching, etc.) influence student achievement?
- How do shadow education practitioners evaluate student achievement and guide (or manage) progress?
- How does shadow curriculum affect student achievement compared to school curriculum?
- What instructional strategies and materials are used in shadow curriculum?
- How does shadow curriculum affect students' intellectual, cognitive, and psychological development?

- How does shadow curriculum affect students' cultural and affective development?
- How does participation in shadow curriculum directly or indirectly influence student participation in school practices?

By exploring these questions, curriculum scholars can understand what kinds of materials, programs, strategies, and evaluations used in shadow education are most effective in terms of student achievement, and how these differ from those used in schools.

Lived Experience of Shadow Curriculum

A comprehensive inquiry of how students experience shadow curriculum should incorporate the idea of 'lived experience' (Goodson, 1984; Grumet, 1988; Pinar, 2015). Students do not only learn within the school walls; they also learn in many other online and online spaces. Shadow curricula are important spaces that strongly influence student learning and intellectual, emotional, and social development, especially from K–12 (Gök, 2010; Kassotakis & Verdis, 2013). A full analysis of shadow curriculum cannot simply involve investigating academic records—it needs to investigate how students obtain knowledge, values, attitudes about learning, and self-management and social skills (Gök, 2010; Hartmann, 2013) within shadow curriculum. Shadow education also exposes students to different people with different success stories, and other new information that may help them on their life path. Previous research on shadow curriculum has predominantly been quantitative and has not explored its complex and holistic effects on students. The following questions need to be explored:

- How does shadow curriculum contribute to overall educational development?
- How does shadow curriculum as a constituent of the ecology of education affect students' lived experience of learning?
- How does shadow curriculum influence individual students' social and emotional development?

- How does shadow curriculum affect students' construction or reconstruction of the meanings of academic learning, school life, and biographical life?
- How is the influence of shadow curriculum on student learning and development different from or similar to that of public schooling?
- What are the negative consequences of shadow curriculum on student learning and development, especially when it focuses too much on improving school grades and ensuring college admission?
- What do students learn or achieve in shadow curriculum other than academic achievement?

It is encouraging that research in this area, although incipient, is emerging. Some studies have reported the negative influences of shadow curriculum on students such as increased pressure on young people (Ahn & Baek, 2013; Gillen-O'Neel, Huynh, & Fuligni, 2013), with warnings about students' psychological well-being (Bray, 2003) and socio-emotional development (Oh My News, 2012). In contrast, other studies have revealed positive influences, as discussed earlier in this book. Thus, the existing research reveals a mixed picture. Because the effects of shadow curriculum are not limited to academic performance, it is important to explore how shadow curricula can help students achieve both academic and life goals.

Understanding how students construct and reconstruct their lived experience of shadow curriculum requires moving past what is testable, quantifiable, or easily observable. We need to understand how students 'experience' shadow curriculum, especially in their hidden 'inner lives' (Pinar & Grumet, 2015 [1976]) that affect their knowing and being in the world. A phenomenological approach can help researchers understand the essence and particularities of students' experiences through their eyes (Patton, 1990). Pinar (1994) coined the term '*currere*' to refer to the lived experience of curriculum. By exploring currere, we can 'sketch the relations among school knowledge, life history, and intellectual development in ways that might function self-transformatively' (Pinar, Reynolds, Slattery, & Taubman, 1995, p. 515). Application of this idea to student experience and development under shadow curriculum can reveal the significance and meanings of shadow curriculum in individual biographies and intellectual lives.

New Culture of Learning in Two Different Educational Spaces

In Chapter 8, we explored how student learning is changing in the educational environment including public schooling and shadow education. Changes include blurred boundaries between schooling and shadow education, active searching for the best curriculum and teachers, learning designed by the goals of individual students, and less reliance on the power, or myth, of schools and school teachers. Students no longer wait to be taught: They actively search for resources and information outside of public education spaces (Kim, 2016). These changes mean that we cannot understand student learning and education without rigorous study about how students learn in the shadow education sector. We need to consider the following questions:

- What roles do students play in terms of their academic success?
- What benefits or ramifications emerge when students are exposed to two different educational environments?
- How does student learning culture in shadow education differ from that in schools?
- How does the coexistence of schooling and shadow education change student learning culture?
- How do students use the two educational spaces for their academic success?
- Is public education losing its authority as a learning space?
- How can the changing learning culture be defined, and which of its characteristics can be identified?
- Is learning something that is provided by schooling or something that students actively create?
- How can students whose goal is not academic success find meaningful opportunities or experiences outside schools?
- What roles do ethnic cultures play in student learning cultures in shadow education spaces?

Clearly, today's students do not rely solely on public education for their academic success. In South Korea, Yang and Kim observed a 'phenomenon of inverted roles between public education and shadow education' (2010, p. 117), and some of the students they interviewed considered

public schooling to be secondary to their shadow curriculum. Korea is not alone: In India, Paramita found that some students 'follow the private tutors not the teachers' (2015, p. 819). With the emergence of shadow education, the Internet, one-on-one tutoring, private tutoring institutes, etc., students now learn in radically different ways compared to a few decades ago when schools were generally the only spaces for educational opportunities. Scholars working in the fields of curriculum studies, and educational research more broadly, need to consider this changing learning culture.

Power Dynamics Between Shadow Curriculum and School Curriculum

Curriculum researchers need to explore how shadow curriculum affects public education. Chapters 1 and 2 explored how shadow education has affected public education, specifically from the policy point of view. For example, in South Korea, Hong Kong, and Australia, educational policies now include measures to control and regulate shadow education (see Bray, 2011). We suggest moving beyond the level of policy point to explore how shadow curricula influence public school curricula, instruction of school teachers, and teacher professionalism, identity formation, and development.

In South Korea, public school teachers have expressed concern about the difficulties they experience in delivering effective instruction because of the diversity of student learning levels and abilities (Kim, 2016; Rizvi, 2016). This is not a new challenge, but as students continue to learn more and faster in shadow curriculum, diversity in classrooms has increased, making teachers' jobs more difficult. For example, teaching English in Korean elementary school has traditionally been an attractive position; it has provided Korean teachers with more opportunities to learn English as they co-teach with native English instructors. Now, many Korean teachers avoid these jobs because many students speak better English than they do, especially in Seoul, where shadow education is particularly competitive. Some teachers have become frustrated about this situation, but it is not clear how schools and school teachers should respond. The following questions should be considered:

- How does shadow curriculum influence school curriculum and instruction?
- How do curricular changes (e.g., addition or elimination of content, changes in evaluation, and admission requirements) in public schooling affect the needs of shadow education?
- How do the practices of shadow education influence student participation in public schooling, both positively and negatively?
- How does the existence of shadow curriculum and student learning influence identity formation and development among school teachers?
- How do school teachers compare themselves to educators in the private education sector?
- What elements of shadow curriculum are welcomed or rejected by school teachers and why?
- How do school teachers teach students who have already learned the material in shadow education, and whose academic needs are met or ignored?

In addition to policies regulating shadow education, governments have reacted to shadow education in several ways. For example, 'after-school programs' have emerged in South Korea (Bae, Oh, Kim, Lee, & Oh, 2010; Carr & Wang, 2015; Ham, 2007; Lee, 2007), and public funds are now provided for low achievers in Japan so they can access private tutoring (Ozaki, 2015). These approaches are intended to reduce educational inequality, but have not yet been extensively studied.

Lives of Shadow Educators

Teachers (their lives, professional development, identity formation, etc.) have been a central research topic in the field of curriculum studies (Britzmann, 1989; Bullough, 1989; Grumet, 1988; Kim, Jung, & Lee, 2003; Miller, 1990; Schubert & Ayers, 1992). However, little attention has been paid to educators who work in shadow education. The number of shadow educators is too big to be ignored. In 2014, there were about 277,000 hakwon instructors in Korea, compared with about 418,000 school teachers (Korean Educational Statistics Service, 2017). This number increases when we include shadow educators working outside of hakwons.

Historically, the lives of school teachers and the nature of their profession have been of interest in the field of curriculum studies, which is situated at the intersection between the areas of 'understanding curriculum as autobiographical/biographical text' (Pinar et al., 1995, p. 515), and 'understanding curriculum as institutional text' (ibid., p. 661). Scholars have explored the lives of teachers after school (Lortie, 1975), the experiences of first-year teachers (Britzmann, 1989; Bullough, 1989; Bullough & Knowles, 1989; Kim, Jung, & Lee, 2006), the lives of female teachers (Grumet, 1988), and other elements of teachers' lives (Goodson, 1984; Miller, 1990; Schubert & Ayers, 1992). Schubert and Ayers argued that:

> The secret of teaching is to be found in the local detail and the everyday life of teachers; teachers can be the richest and most useful source of knowledge about teaching; those who hope to understand teaching must turn at some point to teachers themselves. (1992, p. v)

Schubert and Ayers also asked: 'Why are teachers so often invisible and silent even in their own world? What gives meaning and direction to the lives of teachers?' (1992, p. ix). Scholars have conducted considerable research on teachers to understand teachers, their profession, and education in general. This has not been the case for shadow education educators. Therefore, it is important to explore questions such as:

- Who enters the shadow education profession and why?
- What characterizes the lives of shadow education educators?
- How is the professionalism of shadow educators similar and different from that of public educators?
- How do shadow educators develop their professionalism and how does it differ from that of school teachers?
- Is governmental authority to license teachers changing, considering the significant roles of shadow educators?
- What are theoretical perspectives are appropriate in understanding shadow educators?
- What gives meaning and vitality to the lives of shadow education educators?
- What kinds of struggles, dilemmas, or pleasures do shadow educators experience?

- How do the identities of shadow educations develop, and how do they identify themselves?
- How does knowledge about the roles of shadow educators expand our understanding about educational theories, curriculum studies, and teacher education?

Two studies have been published about the lives of shadow educators. First, in *Case Study About Hakwon Teachers' Educational Culture*, Lee (2010) interviewed hakwon educators who helped Korean high school students and high school graduates prepare for the College Scholastic Ability Test. Hakwon instructors expressed negative attitudes about public educational policies that favored public education and ignored the shadow education sector. Lee also identified some characteristics of the profession, such as performance-based pay system that can encourage quality instruction, the efforts of hakwon educators to build supportive relationships with students, and frequent communication with parents. In particular, Lee found that the performance-based pay system was associated with job insecurity and led to a high turnover rate of hakwon teachers. This is the biggest difference between hakwon instructors and school teachers in Korea: A school teacher may remain in a job for life, while hakwon instructors who fail to prove their ability to teach tend to fall behind and may lose their jobs.

Second, in *Constructing Professional Identities in Shadow Education: Perspectives of Private Supplementary Educators in Hong Kong*, Trent (2016) conducted interviews with six private tutors in Hong Kong. The results revealed a problematic discourse that establishes a rigid division between private tutors and mainstream school teachers. Interviewees felt that the discourse constrains them to construct their preferred professional identities. Trend concluded that educational authorities should respond to private tutoring in ways that overcome the antagonism between the two sectors.

Thus, studies about shadow educators have begun to emerge, but much more research is needed. Shadow education has a huge effect of students, and shadow educators should not be considered intruders or 'invasive species' (Bray & Kobakhidze, 2015), or supplemental instructors, as commonly understood in Korea. Rather, they are educational agents that different from public school teachers and should be a subject of curriculum studies.

Privatization of Education and Shadow Curriculum

In most contexts, shadow education is privately funded, meaning that families pay the fees. Halliday (2016) conceived of private education as 'positional goods,' and shadow education can be viewed as the space where students and families consume educational goods. This raises concerns about a serious issue: that shadow education strengthens the privatization of education. From the perspectives of educational justice and education as a public good, the privatization of education is problematic.

Shadow education as the privatization of education involves a dilemma: On one hand, governments generally do not consider privatization of education desirable, especially from a social justice perspective; on the other hand, privatization of education is also related to people's right to learn. Privatization in education has been observed worldwide and is sometimes embraced by governments (see Rizvi, 2016) under the 'neoliberal rationality' (Brown, 2015) and the idea of increasing 'human capital that can be exchanged in the labor market or used to acquire social status' (Rizvi, 2016, p. 8; Burch, 2009). Privatization in education is becoming a global trend (Rizvi, 2016). Shadow education has been a powerful agent in this transition: Bray noted that 'the development of private tuition has to be interpreted within an overall trend, that of a gradual privatization and marketization of education' (1999, p. 10). One of the major research objectives of scholars studying shadow education involves identifying the implications of the privatization and marketization of education. Many have argued that shadow education is accelerating the privatization of education in countries such as South Korea (Kim, 2016), Hong Kong (Chan & Bray, 2014), Taiwan (Zhan, 2014), Japan (Ozaki, 2015), and the USA (Mori, 2013).

Rizvi identified four major forms of privatization of education provides four major forms: 'Privatization as cost-sharing (public provision and private financing modality); Privatization by application of business-like management styles to public institutions (corporatization); Privatization through voucher system (market provision and state financing); Privatization as emergence of non-state education sector (market provision and financing)' (2016, p. 5). The third and fourth forms are particularly relevant to shadow education, especially the fourth form (to which most types of shadow education belong), which has 'backwash effects' (Bray, 2014). Some governments embrace the third form, including the USA (Mori, 2013), Japan (Tokyo Metropolitan Government,

2008), and South Korea (Lee, 2005). Despite the efforts of governments to regulate shadow education in an effort to reduce the financial burden of families and help low-achieving students using public funds, Mori noted that 'the promotion of publicly funded tutoring for poor families as a policy measure may encourage the development of privately funded tutoring sector and may influence people's norms about the use of tutoring' (Mori, 2013, p. 204).

As governments such as Singapore, Japan, the USA, and South Korea embrace shadow education practices, it is important to explore the relationships between privatization, shadow education, and public education. This will require exploring the following questions:

- How is shadow education related to the privatization of education in different nations?
- What aspects or types of shadow education accelerate the privatization of education in different countries?
- What implications and consequences does the privatization of education have for individuals, public education, and societies?
- How do parents who solely rely on public education conceive the privatization of education accelerated by shadow education?
- How does the privatization of education challenge public education and schools?
- What are the mechanisms by which the privatization of education is related to familial socioeconomic status?
- Do certain people get a better quality of shadow education and why?
- In what ways is the privatization of education related to educational justice, neoliberalism, and meritocracy?
- How do governments respond to the privatization of education?
- What are the purpose of governmental regulations and controls of education?
- What consequences has governmental regulation had for the shadow education sector?

Shadow education is obviously related to the privatization of education, and shadow education may accelerate the global trend. Those who express worries about the phenomenon may refer to the 1948 Universal Declaration of Human Rights, which states that 'everyone has the right

to education. Education shall be free … Elementary education shall be compulsory.' However, is the regulation of shadow education justifiable? More specifically, is regulation of what, how, and where students learn justifiable? Instead of framing education as public versus private, it may be more helpful to take a less binary approach. Perhaps we should question the assumption that shadow education needs to be regulated or controlled. For whom do we have to control it? What justifies such enforcement? If students want to learn different things in different ways than they are taught at schools, should not they be allowed, if not encouraged, to do so, especially when they are willing to pay for it?

Many Korean students and parents seek shadow education because they are not satisfied with public schooling. They have a strong desire to get higher grades than others so they can enter better schools and universities, and there is no legal or ethical reasoning to stop them from doing so. In fact, the legal eradication policies implemented in South Korea in the 1980s were gradually canceled, and on April 7, 2000, the Constitutional Court judged that abolition laws against private tutoring were unconstitutional. This leads to several important research questions:

- What legal or ethical assumptions led to governmental regulation of shadow education in different countries?
- How were these assumptions justified by the government policies and/or by media?
- How do students and parents feel about the enforcement of regulation, and how do they ethically justify their pursuit of shadow education?

The next section expands on these complex issues.

Social Inequality and Shadow Curriculum

Many empirical studies have focused on how shadow education is used to supplement schooling (Apple, 1990; Goodlad, 1984). The results are mixed: Aurini, Davies, and Dierkes (2013) found that shadow education can increase social inequality, but can also equalize educational opportunities. Many scholars have argued that shadow education contributes to reproducing existing social inequalities. Because it requires financial investment from families, it has often been accused of reproducing

educational inequality and social stratification by providing better educational opportunities for students from rich families (Dawson, 2010; Hof, 2014; Lee, 2013; Lee, Lee, & Jang, 2010; Majumdar, 2014; Nath, 2008; Yamamoto & Brinton, 2010). This perception has led many scholars to problematize shadow education and to stress the need for more research on its hidden roles in capitalist countries (Falzon & Busuttil, 1988). Within this framework, and from the perspective of critical curriculum studies, we suggest that shadow curriculum should be conceptualized as a hidden but very powerful agency that effectively leverages a family's economic and cultural capital.

Some scholars have already argued that shadow education functions as a medium through which the social and cultural capital of families effectively delivered to students (Coleman, 1988; Lareau, 2002; Park, Lim, & Choi, 2015; Sun & Braeye, 2012). This argument is supported by data showing higher demand for shadow education among families with higher socioeconomic status (Kim & Lee, 2010; Paviot, Heinsohn, & Korkman, 2008; Stevenson & Baker, 1992; Tsang, Ding, & Shen, 2010). Some scholars also argue that the positive relationship between the intensity of shadow education and the academic achievements of students illustrates that shadow education is the main cause of educational inequality (Lee et al., 2010). In this regard, Halliday (2016) characterized private education markets as 'positional goods' in that they create incentives for parents to find ways for their children to distinguish themselves. In contrast, recent research conducted in Japan has revealed that shadow education can function to equalize educational opportunity, by providing extra support to disadvantaged students (Entrich, 2017).

Despite these mixed empirical findings regarding the roles of shadow education, scholars have not yet thoroughly explored the specificities of its reproductive role. In other words, research has not moved beyond the fact that student achievement and the distribution of educational resources are heavily influenced by family background (Coleman, 1988). Halliday correctly noted that "the complexity surrounding the allocation mechanisms for positional goods in education" … is "yet to work fully" (2016, p. 164). Research consistently focuses on the same issue: whether shadow education is associated with educational inequality. Very few scholars have explored the functionality of shadow education in terms of curricular and educational specificities that might explain why and how

some educational opportunities and resources are accessed by only a limited number of people, what the resources are, and with what kinds of resources and strategies shadow education helps certain students more and effectively. Therefore, more focus is needed on another issue: *how* shadow education exacerbates educational inequality. Research questions should include:

- How do certain students achieve access to more effective or helpful shadow education institutes or educators?
- How does the socioeconomic status and social capital of middle- and upper-class families lead their students to better shadow education resources?
- How is student learning and progress planned, tracked, or managed so that they can enter prestigious middle schools, high schools, or universities?
- How do shadow educators foster desire and passion for studying among individual students and is this observed more among students from wealthy families?

These questions are very important because shadow education is by nature a form of 'educational business' (Ball, Thrupp, & Forsey, 2010), and the companies and educators will continue try to acquire more profit by embracing the students of more wealthy families. Research efforts address these questions will help reveal how shadow education affects student learning and whether and how it strengthens and/or reduces existing educational inequalities (Zhou & Wang, 2015).

Shadow Education as Ethnic Capital

Another important research topic is the roles of shadow education and its educational significance and meanings in multicultural and multiethnic contexts. Many researchers have explored why students from certain ethnic and cultural backgrounds, especially children of East Asian immigrants and students in Asian American communities, outperform other ethnic groups in the USA, Canada, and Australia in terms of academic achievement (Byun, 2010; Cummings, 1997; Lee & Zhou, 2015; Schneider & Lee, 1990; Sun & Braeye, 2012; Zhou, 2008; Zhou & Kim, 2006). The findings have revealed that shadow education is a crucial educational space, especially for East Asian students, not only in

terms of outperforming other ethnic groups in grades and admissions to better universities or colleges, but also in maintaining their ethnicity.[1]

Various scholars have attributed the success of these students to the 'ethnic system,' the ethnic social environment (Zhou, 2008), or 'ethnic capital' (Lee & Zhou, 2015) in conjunction with the use of shadow education (Byun, 2010; Cummings, 1997; Schneider & Lee, 1990; Sun & Braeye, 2012). Thus, understanding why and how Chinese and Korean students outperform, other ethnic students in the USA and elsewhere requires research to reveal how shadow education works in such communities, based on the following questions:

- What is the role of shadow education in the success of students in Ethnic communities in the USA and elsewhere?
- What knowledge, ethnic values, and cultural norms are students taught in shadow education in East Asian communities?
- What ethnic elements make shadow education more prevalent in East Asian communities than in other ethnic communities in the USA and elsewhere?
- How has shadow education used by certain ethnic groups been understood and represented in the mainstream society?
- How can we conceptualize shadow education in East Asian communities as an influential agency and use it to develop similar models for other minority students in the USA and elsewhere?
- What kinds of shadow education are favored by certain ethnic groups and for what purposes?
- Is the high achievement among student of certain ethnicities attributable to ethnic capital, public schooling, and/or shadow education?

Many ethnic communities in North America actively employ shadow education; researchers have explored its intensity and characteristics in Chinese and Korean communities in Los Angeles (Zhou, 2008;

[1]For example, in *A Chinese Model of Education in New Zealand*, Ai-Hsin Ho and Yu Wang (2016) focused on Chinese community schools including the Auckland Chinese Community Center Inc., Browns Bay Chinese Community School, New Market Afterschool Chinese program, and Wakaaranga Afterschool Chinese program, which provide various courses ranging from Chinese-language academic programs and China-focused extracurricular programs to mathematics and English reading and writing.

Zhou & Kim, 2006), and in Chinese communities in Quebec and Flanders, Canada (Sun & Braeye, 2012). In trying to explain why shadow education has been so strong in ethnic communities, especially East Asian communities, researchers have often attributed student success to the Confucian values of respect for learning, diligence, and effort (Sun & Braeye, 2012). Others have argued that the educational environment supported by ethnic communities works not only to increase students' academic success, but also 'to nurture ethnic identities and pride that may otherwise be rejected by the children because of the pressure to assimilate' (Zhou, 2008, p. 242). However, this explanation may be insufficient. For example, Fung (2012) found differences in the characteristics and functionalities of shadow education between various Chinese communities, so he concluded that attributions of student success to Confucian culture and/or certain cultural codes are limiting: he further argued that their success may fall into 'cultural normalization.' Thus, it is crucial to consider context when exploring the roles of shadow education among certain ethnic groups. Additionally, considering that the world is increasingly multiethnic and multicultural, framing shadow education as a form of ethnic text may help in understanding the success or failure of students from certain ethnic communities and the roles communities play for children.

Development and State of Shadow Curriculum in Different Countries

Many studies, especially international comparison studies (Bray, 1999; Bray & Kobakhidze, 2015; Bray & Kwo, 2014; Mori & Baker, 2010), have focused on certain factors such as rates of participation in shadow education, its effectiveness, and governmental regulatory approaches. Few have focused on national distinctiveness in terms of history, culture, and forms of shadow education. More research is needed to explore geographic and cultural context: How have shadow curricula developed historically in different nations, what are their current states, and how do they compare to public education systems? Shadow education is often framed as different and is rejected as only a 'shadow' of public education. To clarify the historical elements of shadow curriculum, more research is needed to explore the following questions:

- How has shadow curriculum emerged and developed in different countries, from supplementary to, competing with, or even overtaking public education?
- In what ways has shadow education been conceived and represented by educators, administrators, curriculum researchers, and even social media in different countries?
- How is shadow curriculum different from school curricula in specific countries and subject areas?
- How has the relationship between public schooling and shadow education developed in different countries?
- How has shadow education been treated by governments and the public in different countries and how has shadow education resisted or changed as a result?
- What forms of shadow education are more prevalent in different countries and why is this the case?
- How does shadow education (participation rate and types) relate to the result of international comparison tests?

Curriculum studies scholars have stressed the significance of historical research. Some have explored the etymology and reconstruction of the term 'curriculum' (Pinar et al., 1995), its birth as an institutional structure (Doll, 2012), and its recent development and diversification (Goodson, 1984; Pinar et al., 1995). Although shadow curriculum has become a worldwide phenomenon (Aspinall & Roesgaard, 2008; Dawson, 2010), very little research has investigated how it emerged and subsequently developed. Fung noted that 'there is no documented history of cram schools in Hong Kong' (2012, p. 185). For shadow curriculum to develop into a sustained field of academic study, its history must be investigated. We need to understand how shadow education has developed, and how our current attitudes toward it may change. The only research that has seriously undertaken this project is Kim's 2016 book, *History of Shadow Education in Korea*, which traced the history of shadow education in South Korea over the last 100 years.

Curriculum scholars should explore how shadow education has obtained such a marginalized status (Said, 1993) and why it is so negatively represented by teachers, administrators, educational researchers, the public, and even mass media (Choi & Cho, 2016; de Silva et al., 1991; Marimuthu et al., 1991) which is discussed in Chapter 7.

While it seems natural for shadow curriculum to be viewed negatively given that public schooling has long taken the priority, it is precisely because of the unequal position of the two that we need to obtain a better understanding of how shadow curriculum has been marginalized. Counter-narratives have shown that shadow curricula can be helpful and have positive effects on student learning and broader society (Entrich, 2017; Kim, 2016): For example, it plays a crucial role in keeping alive certain ethnicities and cultures (Sun & Braeye, 2012; Zhou, 2008; Zhou & Kim, 2006). The politically constructed definitions and representations of shadow curriculum may be considered denigrations, and shadow curriculum advocates now reject them.

Why have curriculum scholars not questioned the political construction of shadow curriculum by the mainstream? It is important to explore why shadow curriculum has been characterized so negatively in various nations, using phrases such as the 'evils of private tuition' (Foondun, 2002, p. 509), or framing shadow education as exacerbating 'educational fever' (Seth, 2002) or an 'invasive species' (Bray & Kobakhidze, 2015, p. 476). By exploring the genealogy and archeology of knowledge and power (Foucault, 1997) related to shadow curriculum, historical research will reveal the power/knowledge game around shadow curriculum and may also uncover elements of shadow education that challenge the functionality of the power. By understanding the historicity of shadow curriculum, we may change the dynamic of the power around it.

Decolonizing Western Discourse on Shadow Curriculum

What does shadow education have to do with decolonizing educational studies? Shadow education can be framed as a unique educational phenomenon emerging from East Asian countries, while negative understandings and representations of shadow education may have emerged from Western perspectives. Research into this dichotomy can be additive, providing the perspectives of subaltern people to the global discourses, and can also transform the internal formation of shadow education in the psyches of non-Westerners (Chen, 2010). The significance of producing 'local knowledge' (Chen, 2010; Gough, 2003) and its dialectic relationship with global discourse is well known in the field of curriculum studies (Lather, 2006; Pinar, 2014; Pinar et al., 1995), and an institutional

foundation for it has been established: The World Educational Research Association established in 2009 and the International Association for the Advancement of Curriculum Studies in 2001. Still, similar research involving shadow education in this project has not emerged (Kanu, 2006). We suggest that shadow education can serve as an area of decolonization education research in the field of curriculum studies. This could include building on the following research questions:

- How can scholars in East Asian countries, as insiders, reconceptualize shadow education by studying hidden aspects of shadow education, such as cultural elements that are difficult for outsiders like Western scholars to access and understand?
- What ideas, concepts, and cultural elements from East Asia can be used to theorize shadow education as a form of decolonization curriculum text?
- How is shadow education represented by Western ideology, and how is the Western ideology of shadow education embedded within non-Western nations?
- What new implications can shadow education provide for educational and curriculum research in the West?
- What languages (terminologies and concepts) can we use to understand and describe the exponentially growing influence of shadow education?
- How can shadow education and related concepts be reconstructed to incorporate its positive elements?

The image of shadow education, both in the West and in the East, appears to have been largely constructed from a Western perspective (Ozaki, 2015). The well-known term 'education fever' has been used to describe Korean and Chinese education (Lee, 2005; Seth, 2002), and shadow education has been cited as the cause of this 'fever' in various East Asian countries such as South Korea, China, Hong Kong, Japan, and Taiwan (Dawson, 2010; Hof, 2014; Majumdar, 2014; Nath, 2008). The term emerged from a critical perspective: 'education fever' is a pejorative term (fevers are to be avoided). Yet, fever can also refer to enthusiasm and desire: in this context, for education. The dominant negative discourse about shadow education in East Asian countries might prevent us from seeing the other side of the coin: the positive elements of

shadow education. It is vital to recognize the importance of geographical space, or 'place' (Kincheloe, 1991): the specificity of dynamic local histories, cultures, and other regional distinctiveness, as enacted and embodied in the public.

Focusing on context does not necessarily mean enhancing provincialism, but rather promoting 'localness' (Gough, 2003). From this perspective, shadow education in East Asian countries is not a fixed institution, but rather contributes to emerging and diversifying cultural capital. One example is the recent cultural phenomenon of 'Gangnam mothers' in South Korea (Park et al., 2015). These dedicated mothers work individually or collectively to find the best education-related information to get their child the best teachers, schools, private tutors, and other educational supports. Research on shadow education can be framed as a project of decolonizing educational research: Shadow education can serve as a space where multiple agents create a new culture of education through active engagement with others. How this emerging culture will affect or interact with shadow education and its educational implications and consequences are largely unknown. We believe that understanding shadow education as a decolonization of educational studies needs to move beyond existing representations of shadow education as simply 'educational fever.' This process may yield counter-practices that disrupt the existing rules of the dominant discourse about shadow education and educational research in general (Smith, 2013).

We close this chapter by inviting curriculum scholars around the world to explore the phenomenon of shadow curriculum. We care about how, what, and how students learn, and we know that our choices as educators and educational researchers affect their learning. Our professional obligation is to understand educational phenomena, and we cannot ignore shadow curriculum. We look forward to more research about the features of shadow curricula in different countries.

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