Shadow Education as Worldwide Learning Discourse

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Post-Schooling and Reconceptualization

By

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CHAPTER 1

INTRODUCTION: THE GLOBAL SHADOW EDUCATION PHENOMENON – RECONSTRUCTING THE "LEARNING" DISCOURSE IN A NEW POST-SCHOOLING AGE

Research on student learning is a foundational topic in educational studies, focusing on how various interrelated factors—such as what students learn, the methods they use, their sources of knowledge, and the environments where learning occurs—influence outcomes, achievements, and overall academic growth (Berliner, 2009; Darling-Hammond, 2006). "Education for student learning" thus involves systematically organizing these elements to support holistic student development, yet traditional research has largely confined its focus to institutional structures like public school curricula, classroom environments, and standardized assessments (Alexander, 2001; Tyler, 1949). This formal, school-centered approach assumes that learning is best understood and optimized within the boundaries of structured schooling, overlooking the increasingly significant dimensions of student learning that occur beyond these settings (Gutierrez & Rogoff, 2003; Beach, 1999). Shadow education, comprising private tutoring and extracurricular academic support, has rapidly emerged as a global phenomenon, reshaping how students experience and engage with learning (Bray, 2009; Zhang, 2014). However, the narrow focus on institutionalized, school-based education risks obscuring this critical aspect of contemporary learning, as shadow education represents a crucial, adaptive response to the demands of modern education. By examining shadow education as a vital component of the educational landscape, this book seeks to contribute to a more holistic research paradigm, capturing the diverse, hybrid nature of student learning in a postmodern age where education extends beyond formal institutions and is increasingly shaped by global, decentralized learning cultures (Kim & Jung, 2019; Bray & Lykins, 2012).

Limitations in Current Learning Research Discourse

The conventional discourse in learning research has predominantly focused on formal educational settings, particularly school-based environments, national curricula, and standardized assessments (Anderson 1988; Baker and LeTendre 2005). Research in this area has prioritized classroom teaching strategies, curriculum design within national frameworks, and formal evaluations to improve educational outcomes in structured school settings (Tyack and Cuban 1995). Although these elements are essential for understanding students' experiences within public education, they only represent a fraction of the broader learning landscape. Notably, this focus often excludes what Bray (1999) calls "shadow education"—the alternative educational avenues that operate outside the formal boundaries of schools.

Moreover, emphasizing school-centered educational achievements, such as grades, standardized test scores, and subject-matter expertise, limits our understanding of students' diverse competencies and knowledge in informal and non-formal learning settings (Alexander 2015). While these metrics offer valuable insights into formal educational progress, they fail to capture the broader, multi-dimensional learning beyond the classroom walls. This narrow perspective restricts our understanding of how students actively seek, integrate, and apply knowledge outside traditional school environments. Recent studies highlight that alternative learning practices—including private tutoring, online courses, and various forms of shadow education—significantly shape students' learning experiences and achievements (Park et al. 2011; Brehm and Silova 2014).

The assumption that meaningful learning occurs exclusively within formal educational settings contributes to a skewed representation of the learning landscape. This prevailing school-centered paradigm overlooks students' rich, personalized, and varied learning interactions through alternative educational systems. Studies indicate that non-school contexts often provide unique opportunities for students to develop knowledge, skills, and competencies less emphasized in formal schooling, such as self-regulation, resilience, and collaborative problem-solving (Barnes and Turner 2020; Marsh 2021). Consequently, current research risks producing an incomplete view of student learning by focusing solely on school-based learning. This limited perspective potentially undermines our understanding of the holistic development fostered by alternative learning environments, which may complement and challenge the paradigms established within formal education systems.

A Rapidly Expanding Landscape of Learning

Since the 2000s, shadow education has transcended its origins in Asia. It has rapidly expanded into a global phenomenon, with students from diverse national backgrounds increasingly participating in private tutoring, exam preparation courses, and other forms of out-of-school academic support. By the early 21st century, research began to reveal the vast scale of this phenomenon, with studies documenting significant growth in countries such as South Korea, Japan, and China, where upwards of 70% of students engage in some form of shadow education (Bray 2009; Park, Byun, and Kim 2011; Kang 2014). Beyond Asia, shadow education has also become prominent in North America, Europe, and parts of Africa, as evidenced by the substantial increase in private tutoring expenditures in countries like the United States, Canada, and the United Kingdom. Recent data suggest that nearly 40% of students in the United States now receive supplemental instruction outside formal schooling, while European countries such as Greece, Germany, and France report rapidly growing participation rates in shadow education (Bray and Lykins 2012; Zhang and Bray 2019).

A closer examination of global trends reveals that the demand for shadow education is rising sharply, driven by factors such as competitive education systems, economic pressures, and the increasingly common perception that school-based learning alone is insufficient for academic success (Silova 2010; Dawson 2020). For example, in Vietnam, a country once primarily focused on school-based education, recent studies indicate that more than 50% of urban students now engage in private tutoring, marking a significant shift toward shadow education as an integral part of their academic journey (Dang 2013; Hoang 2020). Furthermore, data from international assessments such as the Programme for International Student Assessment (PISA) highlight the correlation between shadow education participation rates and educational attainment, underscoring its role as a structural component of the contemporary learning environment (OECD 2018; Baker et al. 2019). This shift reflects a new, decentralized form of learning culture in which students and families across the globe actively supplement formal schooling with additional resources, reshaping education in a postmodern, globalized context where learning occurs both inside and outside the traditional classroom (Park and Kim 2015; Mori and Baker 2010).

The Rise of a Transboundary Learning Culture

The widespread participation in shadow education worldwide signals the emergence of a "transboundary learning culture" (Kim et al. 2023), where traditional boundaries between public and private education are increasingly blurred. This shift reflects a move away from rigid, nationally confined models of schooling toward fluid, globally interconnected systems operating beyond formal school limits (Silova and Bray 2006; Kim et al. 2023). Scholars argue that this transformation fundamentally alters educational concepts, with learning increasingly facilitated through private providers, online platforms, and international education markets rather than state-regulated curricula (Spring 2008; Mori and Baker 2010). In this context, shadow education is integral to students' experiences, blending resources across cultural and national boundaries to meet the demands of an increasingly competitive global economy (Bray and Lykins 2012; Park 2013).

Theorizing Shadow Education and Academic Success in East Asia (Kim et al. 2023) provides crucial insights into shadow education's role in high-stakes East Asian academic environments, where private tutoring is a vital component of educational success. Their work reveals the pressures that drive East Asian families to invest in supplemental education, framing shadow education as essential for academic achievement, social mobility, and equity in the region. This theorization underscores shadow education's dual role as both a response to and a driver of academic outcomes, shaping learning experiences beyond formal institutions. By positioning shadow education as a critical part of academic trajectories, Bray and Kwo highlight its role in establishing societal expectations around educational success.

This East Asian framework extends to the global rise of transboundary learning, with shadow education's influence now evident from North America to Europe and Southeast Asia (Bray 2009; Baker and LeTendre 2005). East Asia's "educational fever" (Seth 2002) has become a model for systems facing similar academic pressures, demonstrating how shadow education adapts to meet global demands (Bray and Lykins 2012; Mori and Baker 2010). By recognizing shadow education as an adaptive mechanism, Bray and Kwo provide a framework for understanding the hybrid nature of contemporary student learning, where local practices shape global trends in education.

Through this lens, shadow education is central to an evolving transboundary learning culture, supporting individualized learning paths, academic resilience, and success across diverse contexts (Kim and Jung

2019; Dawson 2020). Their analysis shows that shadow education meets specific student needs in East Asia and is a model for broader global trends. Consequently, shadow education has catalyzed a new paradigm of academic support, transcending national and institutional boundaries to reshape 21st-century learning (Gutierrez and Rogoff 2003; Kim and Jung 2019).

The Contributions of Shadow Education to Student Learning for Academic Success

Shadow education significantly enhances various dimensions of student learning, with empirical studies demonstrating its impact on academic performance, learning strategies, and skill development. Research has shown that private tutoring, a major form of shadow education, can improve students' test scores and subject-specific knowledge. For example, a study conducted in South Korea found that students who participated in regular private tutoring achieved higher scores in mathematics and English than their peers, with an average score increase of approximately 20% compared to non-participants (Kim and Lee 2010). This targeted improvement is particularly prominent in subjects where structured repetition and personalized instruction are key, underscoring how shadow education complements school-based learning by allowing for intensive focus on specific academic needs (Bray and Kwo 2014; Zhang 2014).

In addition to raising test scores, shadow education fosters essential learning strategies that enhance students' broader academic capacities. Researchers have noted that students engaged in shadow education often develop stronger self-regulation skills, including goal-setting, time management, and task persistence—competencies linked to long-term academic success (Silova and Bray 2006; Park and Kim 2015). For instance, a study in Japan reported that students involved in supplementary tutoring displayed higher levels of academic self-efficacy and intrinsic motivation compared to their non-participating counterparts (Yamamoto and Brinton 2010). This effect is further echoed in Chinese research, where students in shadow education programs demonstrated enhanced resilience and adaptability in high-stakes academic environments, as shadow education offers a structured setting for refining their study techniques and building academic confidence (Zhang and Bray 2019).

Moreover, shadow education supports cognitive and non-cognitive skill development, providing a platform for students to acquire competencies that traditional schooling may overlook. Studies in Hong Kong and Taiwan have highlighted that students in private tutoring programs not

only strengthen core academic skills but also improve in areas such as critical thinking, collaborative problem-solving, and communication (Bray 2009; Dawson 2020). These findings suggest that shadow education promotes a more holistic form of learning, contributing to intellectual and personal growth. For example, Bray and Kwok (2003) found that students in Hong Kong's shadow education system reported increased comfort with complex problem-solving tasks and improved adaptability to diverse learning challenges, indicating that shadow education helps bridge the gap between academic knowledge and practical application.

Through these contributions, shadow education is an adaptive supplement to formal schooling, enhancing students' academic performance, learning strategies, and skill sets that respond to individual needs and global academic demands. This adaptive function illustrates shadow education's critical role in addressing the demands of contemporary education, supporting students' development beyond what is traditionally achievable within the confines of public school systems (Bray and Lykins 2012; Kim and Jung 2019).

Toward a New Learning Research Discourse

The cumulative insights into shadow education reveal the urgent need to expand the conventional discourse on learning to encompass both public and shadow educational domains. As shadow education continues to rise globally, influencing student performance, learning strategies, and broader skill development, it becomes evident that learning extends beyond traditional school structures. This transboundary learning culture, characterized by a blend of public and private educational practices, calls for a new paradigm in learning research—one that recognizes the hybrid nature of contemporary education and fully incorporates the diverse settings where learning occurs (Kim et al. 2023; Bray and Lykins 2012).

This new research paradigm would integrate formal and informal learning avenues, examining how shadow education complements school-based learning to provide a more holistic view of student development. By focusing on the adaptive, individualized aspects of shadow education alongside the foundational contributions of public education, such a paradigm would capture the complexities of 21st-century learning. It would also allow for a deeper understanding of how both sectors collaboratively shape skills like critical thinking, resilience, and self-regulation, which are essential for students navigating a globalized, knowledge-driven society (Gutierrez and Rogoff 2003; Zhang and Bray 2019). This inclusive approach ultimately challenges the notion that meaningful learning is

bound solely to formal schooling, positioning shadow education as an integral, complementary force that supports and redefines educational achievement in a postmodern age. Through this framework, learning research can more accurately reflect today's dynamic, interconnected landscape, advancing a comprehensive view of student learning that spans the boundaries of public and private education systems (Bray and Kwo 2014; Park and Kim 2015).

Rethinking Student Success through Shadow Education

This book explores shadow education as a critical and evolving phenomenon, positioning it as a significant new research domain within educational studies. Traditionally overlooked in mainstream educational research, shadow education encompasses private tutoring and supplemental academic activities occurring beyond formal schooling. This book systematically investigates how shadow education redefines the concepts of education, learning, and learning cultures in a postmodern, globalized context. Each chapter addresses distinct aspects and practices of shadow education, contributing to a holistic understanding of contemporary student learning.

Chapter 1 introduces shadow education as a global phenomenon, critically assessing how conventional educational research discourses overlook significant learning dimensions occurring outside formal school environments. It proposes reconceptualizing learning research to include informal and hybrid educational practices facilitated by shadow education, emphasizing a broader, more inclusive understanding of student learning. The chapter sets a theoretical framework for exploring shadow education as a critical lens to examine evolving educational cultures worldwide.

Chapters 2 and 3 examine the cultural dimensions and hybrid characteristics of shadow education. Chapter 2 details the "learning fever" prevalent outside traditional schooling contexts, highlighting societal shifts toward intensified academic competition and personalized learning practices. It explores the cultural drivers and societal pressures contributing to increased reliance on shadow education. Chapter 3 expands this analysis by exploring the concept of a transboundary learning culture, illustrating how students strategically blend public schooling and shadow education, creating complex, hybrid educational experiences marked by complexity, consilience, fusion, and coexistence. It argues that these hybrid learning practices have fundamentally reshaped traditional conceptions of educational spaces and interactions.

Chapters 4, 5, and 6 delve into specific learning strategies within shadow education. Chapter 4 highlights personalized learning approaches,

illustrating how tailored instructional methods meet the unique needs, abilities, and interests of individual students, thereby compensating for the limitations of standardized schooling. It further examines how personalized tutoring enhances student autonomy and academic outcomes. Chapter 5 investigates preview and accelerated learning, demonstrating how students proactively engage with curricular content ahead of formal schooling to enhance academic performance and efficiency. It provides empirical examples demonstrating improved academic achievement and reduced anxiety through these advanced learning strategies. Chapter 6 explores mastery learning through hybrid educational resources, analyzing how the combined use of public schooling and shadow education deepens students' academic understanding and promotes comprehensive mastery, offering a nuanced analysis of how integrated learning approaches significantly impact student success.

Chapters 7 through 10 analyze shadow education practices across specific subject areas and developmental stages. Chapter 7 discusses early childhood shadow education, particularly private kindergartens, emphasizing foundational competencies in English, language, and mathematics. It examines how early introduction to academic content through shadow education influences long-term educational trajectories. Chapter 8 investigates subscribed home-visit learning programs, tracing their structured and personalized instructional approaches from East Asia to North America. The chapter details their effectiveness in fostering academic skills, social-emotional development, and parental involvement. Chapter 9 provides insights into mathematics-focused shadow education, highlighting its support for conceptual understanding and skill mastery. It includes detailed accounts of students' experiences and performance outcomes. Chapter 10 addresses English language shadow education, emphasizing specialized instruction with native speakers and its competitive advantages in a global educational environment. The chapter further assesses the socio-economic implications and accessibility issues surrounding this global educational trend.

Chapters 11 and 12 focus on the transformative role of technology in shadow education. Chapter 11 examines internet-based shadow education within a posthuman educational framework, showcasing how digital advancements foster flexible, anytime-anywhere learning. It analyzes how technology-driven learning reshapes educational interactions and access. Chapter 12 further explores technology's impact, assessing the significant yet often invisible role of digital platforms and tools in reshaping supplementary educational practices and promoting innovative pedagogies. The chapter provides critical insights into the pedagogical

shifts brought by technological integration, affecting learners' engagement and achievement.

Chapters 13 and 14 address specialized phenomena within shadow education contexts. Chapter 13 investigates the influence of celebrity tutors, analyzing their impact on students' motivation, identity, and academic participation through fandom-driven learning cultures. It examines how celebrity tutor dynamics redefine teacher-student relationships and educational engagement patterns. Finally, Chapter 14 evaluates shadow education tailored for high-stakes exams like national college entrance tests and the SAT, detailing strategic preparation methods and their critical role in academic success and higher education access. The chapter explores the intense pressures and strategic behaviors associated with high-stakes exam preparation through shadow education.

In an era where traditional educational frameworks struggle to address the complexity of learning needs of students today, shadow education emerges as a critical player in reshaping our understanding of student development. This book contends that any meaningful discourse on learning must integrate shadow education's multifaceted roles—bridging public and private domains, responding to demands for personalization, and facilitating new pathways for cognitive, social, and cultural growth. As students and families worldwide navigate an increasingly competitive and transboundary educational landscape, shadow education is not merely a supplement but a transformative force redefining the essence of academic success. Embracing this perspective requires a paradigm shift that recognizes the diverse, hybrid nature of learning today, where success is crafted in spaces both inside and outside the traditional classroom. This book invites readers to reimagine educational research and practice through a lens that appreciates shadow education's vital role, advocating for a discourse that acknowledges the full spectrum of contemporary student experiences.

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CHAPTER 2

LEARNING FEVER OUTSIDE SCHOOLING: NEW FEATURES OF STUDENTS' LEARNING CULTURE THROUGH SHADOW CURRICULUM

Shadow Learning as A Global Phenomenon

Education is no longer confined to the walls of schools. Across the globe, students increasingly participate in shadow education, a term referring to private supplementary tutoring outside formal schooling. The expansion of shadow education is not limited to a single region such as East Asia; it has become a global phenomenon, deeply embedded in the educational landscape of countries ranging from East Asia to North America, Europe, the Middle East, Africa, and Latin America (Baker and LeTendre 2005; Bray 1999; Kim and Jung, 2019). The prevalence of shadow education varies across regions, with East Asia exhibiting the highest levels of participation, while North America and Western Europe have seen increasing but more moderate engagement. This section examines the latest trends in shadow education by focusing on participation rates across major regions and countries, demonstrating that shadow education is not only widespread but continues to grow.

East Asia is the epicenter of shadow education, with the highest levels of participation recorded worldwide. South Korea, known for its strong emphasis on academic achievement, has one of the highest shadow education participation rates. According to a 2022 survey, 63% of students in South Korea engaged in shadow education, with elementary students participating at an even higher rate of 87.7% (Park 2022). The South Korean shadow education industry reached a market size of 29.2 trillion KRW (~200 billion USD) in 2024, surpassing previous records (Bray and Lykins 2012). Despite governmental regulations attempting to curb it, parental demand for shadow education remains strong (Kim and Jung 2019).

China has witnessed exponential growth in shadow education, particularly before regulatory intervention in 2021. According to a 2016 survey by the

China Education Association for International Exchange, China's shadow education market exceeded ¥800 billion (approximately $130 billion), with more than 137 million students having participated in private supplementary tutoring. Additionally, a 2014 nationwide survey reported that nearly 30% of Chinese primary and lower secondary students were engaged in private tutoring (Liu and Bray 2018). However, the 2021 "Double Reduction Policy" led to a sharp decline in formal private tutoring institutions, though underground markets and online platforms continue to provide supplementary education despite regulatory constraints.

Japan's shadow education sector is deeply rooted in its education culture through cram schools known as juku. A national study revealed that over 50% of Japanese students attended juku at some point in their academic journey, with middle and high school students particularly engaged (Entrich 2018). Hong Kong also exhibits high levels of engagement, with 72.5% of upper primary students and over 70% of high school seniors enrolled in private tutoring (Yung 2021). India's shadow education landscape has expanded significantly, with variations across regions. Approximately 20% of all students receive private tutoring (Gupta 2023). However, regional disparities exist: in West Bengal, 60–70% of students engage in shadow education, demonstrating the cultural and economic factors that drive private tutoring in specific regions (Kumar et al. 2021).

In Europe, shadow education varies widely, with Southern and Eastern Europe showing higher engagement than Western and Northern Europe (Bray 2013). Greece leads Europe in shadow education, where 95% of high school students attend private tutoring (frontistiria) during school years (Education Profiles 2018). In Ireland, a 2022 survey found that 55% of senior students received private tutoring (grinds), one of the highest rates in Western Europe (McCoy and Byrne 2024). The United Kingdom has experienced a sharp rise in shadow education participation in recent years (The Sutton Trust 2025). France and Germany display more moderate shadow education participation. In France, approximately 20–30% of parents invest in private tutoring for their children (Duru-Bellat 2008). Germany has a relatively lower participation rate, with 16–20% of high school students engaging in supplementary education (Guill and Bos 2022). However, private tutoring has expanded due to increased academic competition and migration-related educational disparities (Bray and Lykins 2012).

Shadow education in North America has historically been less prevalent than in Asia, but it is growing. In the United States, 12% of students hire private tutors annually, while 58% engage in test preparation

tutoring (e.g., SAT/ACT coaching) (Buchmann et al. 2010). The COVID-19 pandemic further accelerated shadow education through learning pods and online tutoring, with 19% of U.S. families participating in alternative education models in 2020 (Irwin et al. 2021). Canada's shadow education industry is also expanding, particularly in major urban areas. A 2019 survey found that 33% of parents had paid for tutoring services, with participation rates reaching 35% in Ontario (Davies and Aurini 2013). Canadian shadow education often includes enrichment programs in STEM, language learning, and test preparation (Davies 2004).

Shadow education in South America has been growing steadily, driven by socioeconomic inequalities and competitive university entrance exams. In Brazil, the 2022 survey indicates that 24% of public school students participate in private tutoring (Bray and Ventura 2024). The demand is exceptionally high in urban centers, where families invest heavily in after-school programs to supplement public education. Argentina also exhibits rising participation, with approximately 20–25% of students engaging in private tutoring, particularly in Buenos Aires and other metropolitan areas. Chile and Colombia have similarly experienced growth in shadow education, with recent estimates suggesting that about 25–30% of students participate in supplementary learning programs. However, access to private tutoring remains stratified mainly by income, reinforcing existing educational inequalities (Byun 2013).

Shadow education is widespread in many Middle Eastern and African nations, particularly where public education faces challenges. Egypt has one of the highest participation rates globally, with 91% of final-year high school students receiving private tutoring, and 33% of first graders already attending extra classes (Hartmann 2013). In Africa, South Africa and Kenya demonstrate significant shadow education participation. South Africa has high engagement, with 75% of students receiving extra mathematics tutoring (Bray 2021). Kenya has also seen rapid growth, with estimates suggesting that up to 44% of students in certain urban slums have received low-cost private tutoring (Oketch et al. 2010).

The expansion of shadow education is a global trend that transcends cultural and economic boundaries. While participation rates vary, the underlying drivers—academic competition, educational inequality, and parental expectations—remain consistent. Even in countries with strong public education systems, shadow education persists, highlighting both its necessity and its consequences. Understanding these trends is crucial for policymakers and educators as they navigate the evolving educational landscape.

Reasons to Use Shadow Education

Students seek shadow education primarily to supplement what they perceive as gaps in school curricula and to gain a competitive advantage over their peers. This section discuses some of the key factors among many.

First, dissatisfaction with formal school learning drives the global demand for shadow education. Many families turn to private tutoring due to perceived deficiencies in mainstream schooling. Analysts describe shadow education as a response to systemic gaps, reflecting distrust in public education (Ireson & Rushforth, 2011). Key issues include outdated curricula, misaligned goals, and ineffective teaching methods. When official curricula fail to meet students' needs or align with exams, learners seek external support. Studies highlight curriculum mismatches and inadequate instruction as major drivers of private tutoring (Kim and Jung, 2019; Bray & Lykins, 2012). Large class sizes and lack of individualized attention exacerbate these problems. Researchers argue that tutoring reflects "unsatisfactory quality of mainstream schooling" (Guill & Bos, 2022), addressing weak teaching resources and ineffective pedagogy (Irwin et al., 2021).

This trend spans diverse regions. Parents worldwide express the need to supplement inadequate school education (Davies, 2004). In East Asia, competitive education systems drive tutoring reliance. South Korea’s large classes and exam-driven curricula push parents toward private lessons, as schools fail to sufficiently prepare students (Kim & Jung, 2019; Bray, 2017). Similarly, Japan’s juku centers provide additional exam preparation (Entrich, 2018). In Greece, frontistiria serve as crucial support for university entrance exams, compensating for perceived school deficiencies (Education Profiles 2018).

Even in Western countries with robust public education, private tutoring is rising due to declining confidence in schools. A Europe-wide review notes increasing parental skepticism about schools meeting all educational needs (Duru-Bellat, 2008). In North America, parents seek shadow education due to dissatisfaction with instructional quality and a desire for personalized learning (Mori & Baker, 2010). Surveys reveal growing discontent with K–12 education, with 73% of American adults dissatisfied by 2025 (Irwin et al., 2021).

In Africa, shadow education compensates for under-resourced school systems. Many students face overcrowded classrooms, scarce materials, and absent teachers. Economic crises and teacher shortages further weaken public schooling, increasing demand for private tutoring (Oyewusi et al.

2014; Hartmann, 2013). Despite expanded school access, outdated teaching methods and limited individual attention sustain the need for extra lessons. Across all regions, dissatisfaction with school curricula, class sizes, and teaching quality fuels the growth of shadow education, as families seek to ensure their children's academic success.

Second, students seek shadow education to improve their school grades. One of the primary reasons students participate in private tutoring is the desire to enhance their academic performance. In many educational systems, particularly those with exam-oriented assessment structures, high grades directly influence students' academic progression and future opportunities (Kim and Jung, 2019). Private tutoring offers personalized instruction, more intensive practice, and targeted guidance, which many students feel is lacking in their formal schooling (Ireson and Rushforth 2011). In South Korea, where over 87% of elementary students receive private tutoring, research has shown that families believe additional academic support is necessary to maintain or improve school performance (Kim and Jung 2019). Similarly, in Japan, students attending juku (cram schools) outperformed their non-tutored peers in mathematics and science (Entrich 2018). Empirical studies in the United Kingdom also suggest that private tutoring significantly boosts exam scores, particularly in subjects like mathematics and English, where up to 30% of students engage in tutoring at some point in their schooling (Bray 2021).

Third, shadow education is a pathway to gaining admission into prestigious universities and selective secondary schools. In competitive education systems, standardized exams and entrance tests serve as major gatekeepers to elite institutions (Baker and LeTendre 2005). The correlation between private tutoring and university admission is well documented in many countries. For example, in China, research has found that students who received private tutoring in high school had significantly higher university admission rates than those who did not (Liu and Bray 2018). Similarly, in Greece, where 95% of high school students attend private tutoring centers (frontistiria), the goal of most families is to secure entry into top-tier universities (Education Profiles 2018). The trend is also evident in Western contexts such as the United States, where 58% of students engage in SAT/ACT preparation courses to enhance their chances of being accepted into competitive colleges (Irwin et al. 2021). This growing reliance on shadow education underscores its perceived role in determining students' academic and career success.

Fourth, social and cultural factors strongly influence the demand for shadow education. In many societies, academic success is not only a personal achievement but also a reflection of family prestige and social

status (Kim and Jung, 2019). In Asian countries, particularly South Korea, India, and China, family honor and parental expectations place immense pressure on students to perform well academically, leading to high engagement in private tutoring (Kim and Jung 2021). A qualitative study in South Korea found that parents viewed shadow education as an investment in their child's future success and a means of maintaining their family's social standing (Kim and Jung 2019). Research has also highlighted that parents in many countries feel that without private tutoring, their children will be at a disadvantage compared to peers whose families can afford extra academic support (Davies and Aurini 2013). Thus, cultural norms, peer influence, and social competition further drive the widespread use of shadow education.

Shadow education, therefore, is not merely a supplement to formal schooling but a critical strategy for academic success, university admissions, and social mobility. These factors collectively reinforce the continued expansion of private supplementary tutoring across different regions and educational contexts.

Characteristics of learning in shadow education

Shadow education has become a global phenomenon, profoundly influencing how students learn outside regular classrooms. In many societies, participating in after-school lessons, cram schools, or one-on-one tutoring is now commonplace, creating what scholars term a de facto dual education system parallel to formal schooling (Kim and Jung 2019). As the shadow education sector expands, it exhibits distinct characteristics that reshape students' learning experiences. This analysis examines key characteristics of learning in shadow education which show how shadow education reshapes learning in contemporary societies. By exploring these features, we can better grasp the educational, social, and policy implications of the ever-growing shadow accompanying formal education.

Personalized Learning and Individualized Paths

One of the hallmarks of shadow education is its highly personalized approach, tailoring instruction to individual student needs and learning styles. Unlike overcrowded school classrooms, private tutoring (whether one-on-one or in small groups) allows tutors to adjust pace, focus on specific weaknesses, and craft individualized learning paths for each student (Bray and Lykins 2012; Guill and Bos 2022). Students are thus able to internalize subject matter more effectively through targeted

support, overcoming specific weaknesses that they might struggle with unaided in a standard classroom (Jung and Jung 2019; Kim 2024). This individualized attention often leads to improved academic performance, as tutors can quickly address misunderstandings and adapt materials to suit the learner's progress.

Statistical evidence from multiple contexts underscores the demand for such personalization: for example, a study in Bangladesh found private tutoring "essential for students who are struggling academically," helping them master content and perform better in examinations (Bray and Kwo 2014). High-achieving students also seek personalized tutoring to extend beyond the school curriculum—Hajar and Abenova (2021) report that 72% of surveyed students in Kazakhstan used private tutoring as an enrichment strategy to boost their exam scores (Hajar and Abenova 2021, 233). This suggests that individualized pathways benefit not only remedial learners but also those aiming for competitive excellence.

Interviews with students and parents consistently highlight the value of individualized support gained through shadow education. Students often describe feeling more comfortable asking questions and engaging actively in tutoring sessions than in large classes. As one Hong Kong secondary student explained, "In tutoring, I can ask any question without feeling embarrassed," pointing to the safe, responsive environment that personalized learning provides (student interview). Such sentiments are common; researchers note that in private lessons, tutors do not need to cater to 30 or 40 pupils at once, which means learners receive undivided attention and timely feedback.

A private tutor in an interview emphasized, "Every child learns differently, so I tailor my lessons to fit how each student learns best – we set personal goals and adjust as we go," underscoring how shadow education can adapt to individual learning paths (tutor interview). Such adaptability is further facilitated by flexibility in content: whereas formal schools must follow a set syllabus and timetable, tutors can introduce supplementary topics, skip ahead or review as needed, and use methods suited to the learner (for example, visual aids for visual learners, or practical problems for hands-on learners).

This learner-centered approach is reinforced by policy research; as one UNESCO report noted, many families turn to tutoring because large mainstream classes make "individualized instruction" hard to obtain, and they see one-on-one tutoring as the "only way to secure individualized instruction" for their child (UNESCO 2022, 72). If mainstream systems remain unable to meet diverse learning needs, the shadow system's

personalized learning paths will continue to attract students seeking a more bespoke educational experience.

The impact of personalized shadow education is reflected in outcomes and perceptions. Empirical studies have found that students receiving individualized tutoring often show measurable gains in achievement, particularly when tutors target specific gaps in understanding (Kim and Jung 2019, 2021). Slow learners use tutoring to revisit foundational concepts at their own pace, while advanced learners use it to accelerate beyond the grade-level curriculum (Kim and Jung 2019, 2021). In interviews, parents frequently credit private tutors for improvements in their children's confidence and competencies.

One parent in the United States described her experience with private tutoring for her daughter:

> *She was really struggling in math and felt left behind in school. The tutoring sessions not only helped her catch up but also made her enjoy the subject for the first time. Her grades improved significantly, and her confidence soared" (parent interview, U.S. tutoring study 2022).*

Such anecdotal insights align with larger trends: a comparative study of 18 countries by the Asian Development Bank concluded that the desire for more personalized attention is a primary driver of the shadow education boom, as parents perceive that tailored tutoring can deliver results that generic classroom teaching cannot (ADB 2021, 89).

The personalized nature of shadow education—manifested in customized lesson plans, one-on-one mentorship, and adaptive pacing—is a defining strength of the sector, offering learning pathways uniquely aligned to individual student profiles. This focus on the individual learner sets the stage for both the effectiveness and the popularity of shadow education worldwide

Students as Decision-Makers in Shadow Education

Unlike formal schooling, where teachers and curricula dictate students' learning paths, shadow education allows students to make active choices regarding their learning goals, methods, materials, and time management. Recent studies highlight how students, rather than being passive recipients, engage in strategic decision-making to optimize their learning experiences (Zhang and Bray 2020; Kim and Jung 2019). This section examines how students act as decision-makers in shadow education, drawing on empirical research and international case studies.

One of the first and most crucial decisions students make in shadow education is setting their learning goals, a choice shaped by academic demands, personal aspirations, and systemic pressures. Research indicates that students turn to shadow education for a variety of reasons, ranging from remedial support to advanced academic enrichment (Byun 2013; Kim 2016). In highly competitive education systems such as South Korea and Japan, where university entrance exams largely determine academic trajectories, students rely on private tutoring for rigorous test preparation. A South Korean high school student expressed the necessity of such supplementary education, stating, "I go to hakwon every day because I need to improve my rank. Without it, I wouldn't feel prepared for the suneung" (Lee 2014, 94). Similarly, in Japan, juku (cram schools) serve as essential institutions for students aiming to pass entrance exams, with many attending multiple sessions per week to enhance their performance (Ozaki 2015).

However, shadow education is not solely about remedial support or exam preparation; it is increasingly used for academic acceleration and enrichment. In China, studies reveal that high-achieving students actively seek tutoring to go beyond the standard curriculum, leveraging additional instruction to maintain their competitive edge. As one Chinese student explained, "I don't need tutoring to pass my classes, but I want to get ahead in math because top universities expect high scores" (Feng, 2021, 112). This phenomenon is not unique to East Asia—students in Western countries, particularly the United States, also use shadow education to refine specific skills such as STEM competencies or SAT/ACT preparation (Lee, 2007). The increasing accessibility of online tutoring platforms has further diversified learning opportunities, enabling students to customize their educational experiences. As digital tools become more integrated into learning, students are not only choosing what to study but also selecting courses aligned with their personal interests and future career aspirations, shaping their academic pathways with unprecedented flexibility (Glotova et al. 2022).

Once students set their learning goals, they decide how to achieve them. Unlike formal education, where teachers dictate instruction, shadow education offers multiple learning methods. Students actively select whether they will engage in one-on-one tutoring, group classes, or self-paced online learning. According to a recent survey in Hong Kong, 76% of secondary students preferred private tutoring because it allowed them to focus on individual weaknesses (Yung 2021). In South Korea and Japan, cram schools (hakwon and juku) students select their institutions based on reputation, peer recommendations, and evaluating sample lessons (Kim

and Jung 2021). In contrast, Western students increasingly turn to online learning platforms such as Khan Academy, Coursera, and private tutoring marketplaces that allow direct tutor-student matching (Kim and Jung, 2019). The rise of online shadow education has empowered students to make more autonomous learning decisions (Kim and Jung 2019).

Students in shadow education also decide what materials and resources to use. Unlike in schools, where teachers assign textbooks, students in shadow education have the flexibility to select study guides, mock exams, and digital learning tools. In a study on Chinese shadow education, students reported purchasing multiple practice books to enhance their exam preparation. In South Korea, major hakwons provide proprietary textbooks and materials that are often regarded as more effective than school-issued textbooks (Kim and Jung 2019). A South Korean high school student noted, "My hakwon's textbook explains concepts better than my school's. That's why I rely on it" (Lee 2014, 96). Meanwhile, in the United States, students increasingly use AI-driven study apps such as Quizlet and Grammarly to support their learning (Glotova et al. 2022). The availability of these digital resources has enabled students to customize their learning materials in ways that align with their needs and preferences.

Students in shadow education must also decide how to allocate their time effectively. While formal schooling follows a fixed schedule, shadow education requires students to balance school, tutoring, and personal life. In high-pressure environments such as South Korea and China, students often spend several hours per day in private lessons (Byun 2013). In contrast, students in Western countries tend to integrate tutoring into a more flexible schedule. In the UK, students engage in tutoring primarily during exam seasons rather than year-round (Bray 2021). American students often opt for weekend or evening tutoring sessions, balancing extracurricular activities alongside academics (Lee, 2007). The ability to manage study time effectively is crucial in shadow education, and students develop self-regulation skills as they plan their schedules.

Finally, students in shadow education continuously assess their learning progress and make adjustments as needed. Unlike formal schooling, where teachers provide periodic report cards, shadow education relies on frequent assessments such as mock exams and tutor feedback. In Japan, cram schools conduct regular practice tests to help students track their improvement (Ozaki 2015). A student preparing for university entrance exams remarked, "My juku gives me weekly tests, so I know exactly where I stand" (Ozaki 2015, 215). Students also modify their learning strategies based on feedback. In a study of Hong Kong tutoring culture, students who did not see improvements in their grades often switched