

**Evolving Ecosystems in Education:  
The Nature and Implications of Private Supplementary Tutoring in Hong Kong**

Mark Bray and Magda Nutsa Kobakhidze  
Comparative Education Research Centre, Faculty of Education, The University of Hong Kong,  
Pokfulam, Hong Kong, China  
[mbray@hku.hk](mailto:mbray@hku.hk); [nkobakhidze@gmail.com](mailto:nkobakhidze@gmail.com)

**Abstract**

An established literature draws on ecological concepts to analyse interrelationships within education structures and processes, and the impact of shifting balances. Private supplementary tutoring is a relatively new actor in ecosystems of education around the world. It is creating significant changes in relationships, particularly as they concern the roles of teachers. This paper draws on data from Hong Kong, where private tutoring has become very visible. It presents perspectives on the phenomenon from students and teachers, drawing especially on interview data. It shows that teachers and tutors may sometimes play complementary roles, but that teachers may in some respects be marginalised by the new actors in the ecosystem. Insights from these perspectives suggest a research agenda for other parts of the world as well as for Hong Kong.

Keywords: ecology of education, ecosystems, private supplementary tutoring, shadow education

Particularly since the work of Cremin (1976) in the domains of history and administration of education, and of Bronfenbrenner (1976, 1979, 1994) in the domain of human development, analysts have been familiar with the notion of ecosystems as applied to education. The basic idea, as in ecological sciences (see e.g. Odum, 1997; Odum & Barrett, 2005; Pickett & Cadenasso, 2002), is that different actors are related to each other in wider systems, and that the introduction, expansion, contraction or elimination of various species may significantly change overall balances.

While this theme has been applied more recently than in Cremin's and Bronfenbrenner's original works in various analyses of education (e.g. Barton et al., 2004; Wensing and Torre, 2009), it has received little attention in connection with private supplementary tutoring. Such tutoring, widely known as shadow education because of the ways in which its curriculum mimics that of regular schooling (see e.g. Aslam and Atherton, 2014; Bray, 1999; Buchmann, 2002; Kassotakis and Verdis, 2013), has become a global phenomenon but is under-researched. Hong Kong is among the locations in which private supplementary

tutoring is especially visible. This paper draws on interviews of students and teachers to identify ways in which private supplementary tutoring has impacted on their lives and has changed the ecosystems in which they work. In some dimensions tutoring complements schooling, but it may also compete. Teachers tended to identify more dissonance than students, in part because they were more mature and analytical but also because they could recall times before tutoring had become so widespread. Although the geographic focus of the paper is specific to Hong Kong, the fact that private supplementary tutoring exists worldwide means that its perspectives are also likely to be pertinent elsewhere.

The paper commences by outlining the literatures on ecosystems, particularly as they apply to education, and on private supplementary tutoring. The next section presents the Hong Kong setting, following which the paper explains the scope and methods on which it is based. Sections on findings focus first on the students and second on the teachers. The paper concludes by reviewing these findings in the context of the wider literature to demonstrate what the research adds.

### **Ecosystems and Education**

Pickett and Cadenasso (2002) pointed out that ecological concepts are applied broadly across multiple fields but not always with clarity in terms. They underlined the value of looking separately at meanings, models and metaphors. Beginning with meanings, Pickett and Cadenasso indicated (p.2) that the word ecosystem was first articulated in 1935 to describe “a biotic community or assemblage and its associated physical environment in its specific place”. This basic concept remains valid and stresses a spatial component. Nevertheless, within the space an ecosystem can be of any size so long as it has a physical environment, organisms and interactions. Thus “ecosystems can be as small as a patch of soil supporting plants and microbes; or as large as the entire biosphere of the Earth” (p.2).

Turning to models, Pickett and Cadenasso (2002: 2) noted great diversity according to foci and disciplines. Ecologists, they observed (p.3), “are increasingly exploring their links with the human sciences”, and the authors considered the relevance of the concept of the ecosystem across such a broad spectrum “a testament to its rigor”. The models lead to metaphors, which may be either scientific or social. In the latter category, which concerns the present paper, are uses “in support of societally important, if sometimes controversial, values” (p.6). Concepts may be used to highlight equilibrium, adaptability, resistance and resilience.

In the field of education, Cremin (1976) was among the first to apply the concept of ecology. He was especially concerned with what he called “configurations of education”. Elaborating, he explained (p.30) that:

Each of the institutions within a configuration interacts with the others and with the larger society that sustains it and that is in turn affected by it. Configurations of education also interact, as configurations, with the society of which they are part.

Relationships within configurations, Cremin pointed out (pp.30-31), may be political, pedagogical or personal; and they may be complementary or contradictory, consonant or dissonant. Cremin added (p.32) that the

analysis of these relationships “must be ascertained in their particularity rather than assumed in some sort of generality”. This implied that the experiences of individual students and teachers may differ from those of their classmates and colleagues, even within the same institution. This point is relevant to the present study, which considers both individuals and groups of actors.

Dimensions of individual differences were also at the core of Bronfenbrenner’s (1976, 1979, 1994) work on human development. Bronfenbrenner identified five socially-organised subsystems which supported and guided human growth. The immediate environment within which individuals operate was the *microsystem* of family, school, peer group and/or workplace interactions. At a higher level was the *mesosystem* grouping microsystems and comprising processes and linkages between two or more settings, such the school and workplace, or home and school. Next in the hierarchy was the *exosystem* comprising two or more settings among which at least one did not contain the person being considered but in which events indirectly influenced processes in the setting that the person inhabited. At the fourth level were *macrosystems* consisting of overarching patterns of micro-, meso- and exosystems with identifiable cultures or subcultures. And finally were *chronosystems* which encompassed change or consistency over time. The present paper is chiefly concerned with the lowest of these levels, i.e. microsystems and mesosystems, but also to some extent with macrosystems of values and cultures.

More recent literature, some of it in the domains of human development and psychology (e.g. Atzaba-Poria et al., 2004; Darling, 2007; Moen et al., 1995), has elaborated on these themes. Some insights from this work are relevant to the present paper, although it is not directly concerned with either human development or psychology. Other work has been concerned with government-initiated reform, to explain why innovations have been effective or ineffective (e.g. Joong, 2012; Lo, 2010). This work may also relate to the present paper, even though the paper focuses on private sector initiatives which governments have commonly tried to ignore. The paper shows ways in which a new actor from the private sector has changed balances within public institutions.

### **Private Supplementary Tutoring**

Although private supplementary tutoring was clearly visible in such countries as Sri Lanka, Japan and South Korea towards the end of the 20<sup>th</sup> century (de Silva, 1994; Harnisch, 1994; Seth, 2002), even in those countries it has grown further (Bray and Lykins, 2012). Since the arrival of the 21<sup>st</sup> century, tutoring has also expanded significantly in almost all other parts of the world. In Egypt, for example, an official study noted by Sobhy (2012: 49) indicated that 50% of households with children in primary schooling paid for private tutoring, and that the proportion was 81% at the secondary stage. In Bangladesh, a 2008 household survey indicated that 38% of primary students and 68% of secondary students were receiving private tutoring (Nath, 2011). In Greece, about 22% of secondary school students were attending tutorial centres in 2010/11, with percentages over double that number among the academically-oriented students (Kassotakis and Verdis, 2013: 99). And in England a 2008 random telephone survey of 1,500 parents found that 12% of primary school

pupils and 8% of secondary school pupils were receiving private tutoring (Peters et al., 2009: 2). These examples indicate significant amounts of tutoring in countries with diverse income levels and cultures.

The tutoring takes a range of forms. Some provision is one-to-one or in small groups in the homes of either the tutors or the students, while other tutoring is in large classes and even lecture theatres (Bray, 2009; Bray and Lykins, 2012). Most tutoring is provided live, but some is provided in recorded form. Diversity may also be found in the suppliers of tutoring. In one category are university students and others who provide tutoring informally with no official registration or payment of tax. At the other end of the scale are large companies that are quoted on stock exchanges and operate internationally.

As might be expected, the research literature has diverse foci and methodological approaches. Most has investigated the scale of tutoring and such matters as the implications for social inequalities. Only recently have the content and mode of delivery of private tutoring begun to come into focus, sometimes including comparisons with regular schooling (e.g. Chan & Bray, 2014; Yung, 2015). A significant group of studies assesses the scale of tutoring quantitatively using questionnaires (e.g. Safarzyńska, 2013; Zhang, 2013). In contrast are qualitative studies focusing on individual students and their environments (e.g. Altinyelken, 2013; Hartmann, 2013). Fewer qualitative studies have concentrated on supply-side issues such as teachers' professional identities and the benefits and challenges associated with tutoring, though some valuable work has been done in Romania (Popa, 2007; Popa & Acedo, 2006). To the authors' knowledge, only one study in this domain has an ecological perspective that, in its own words, was "loosely based on Bronfenbrenner's (1976) model" (Jokić, 2013: 306). This was a qualitative study in Azerbaijan, Bosnia & Herzegovina, Croatia, Estonia, and Georgia. However, while Bronfenbrenner, like the study reported here, placed individuals at the centre of the ecosystem, Jokić and his team placed at the centre the decision to use private tutoring services. The orientation was thus rather different from the present study and from most others based on Bronfenbrenner's work.

### **The Hong Kong Setting**

Hong Kong is a prosperous society, with a per capita Gross Domestic Product in 2013 of US\$38,100 (Hong Kong, Information Services Department, 2014: 37). This means that the majority of families are able to afford at least some types of private tutoring. Hong Kong is also highly competitive. Families are much aware that the labour market welcomes not only their immediate neighbours but also people from the rest of China, more widely in Asia, and globally. Education is viewed as a major instrument to survive and prosper in this competition, and is generally seen as a good investment (Marsh & Lee, 2014).

In structure, Hong Kong's education system follows a 6+3+3+4 model, i.e. six years of primary schooling, three years of lower secondary schooling, three years of upper secondary schooling, and four years for a basic university degree. The present study focuses on Grades 9 and 12, i.e. the last grades in lower and upper secondary schooling. Almost all students proceed from lower to upper secondary schooling, but Grade 9 is a watershed insofar as it is the last step before specialization at the higher level. Students in Grade 12 sit the

Hong Kong Diploma of Secondary Education (HKDSE) examination, which determines the nature of opportunities for post-secondary studies.

Although private tutoring was identifiable as a phenomenon in Hong Kong during the 1990s, since the turn of the century it has greatly expanded. A 1996 telephone survey found that 34% of middle secondary and 41% of upper secondary students were receiving tutoring (Lee 1996); but a similar survey in 2010 found proportions of 81.9% and 85.5% (Caritas, 2010). At the senior secondary level, commercial companies advertise aggressively and attract students to large classes taught by ‘star tutors’ and their assistants (Kwo and Bray, 2011; Koh 2014). These classes secure economies of scale and thus can be relatively inexpensive. Cheaper still are video-recorded classes which also attract many students. These classes – both live and recorded – have tutor-centred didactic approaches. Other classes with smaller numbers can be more student-centred. Such classes may be operated by commercial companies or may be informal operations commonly in the homes of students or tutors.

### **Scope and Methods in the Hong Kong Study**

This article is based on a segment of data from a larger project. The first year of the project collected quantitative data through questionnaires administered to 1,646 students in 16 schools. The schools were selected to cover a range of administrative categories and socio-economic groups, and represented 3.0% of the total number of secondary schools in Hong Kong. The project also collected interview data from 105 students in 15 of the schools (with one being dropped because the school authorities did not wish the students to be disturbed). The second year collected quantitative data through questionnaires from 160 teachers in 14 of the schools, and through 48 interviews in the same number of schools. The article is principally based on findings from the interviews of the students and teachers.

The original plan was to interview students in focus groups on the assumption that classmates would stimulate each other when recounting their experiences and observations. However, during piloting the researchers found that students were shy to talk about private tutoring in front of peers, partly for fear that they would be viewed either as purchasing an unfair advantage or as slow learners in need of supplementary help. The research design envisaged interviewing four students for each grade in each school: a male who had received tutoring within the previous 12 months, and a male who had not; and a female who had received tutoring, and a female who had not. This was largely achieved, but two schools were single-sex institutions and in three schools it was difficult to find a student willing to be interviewed who had not received tutoring. The analysis did not show significant gender differences, so this dimension is not reported in the present paper. The students to be interviewed were identified by a “lucky draw” at the time of distribution of the questionnaires. Students ticked boxes on a paper to indicate if they were (a) male or female, (b) had or had not received tutoring during the previous 12 months, and (c) were or were not willing to be interviewed. Parental approval had already been obtained as part of the procedure prior to distribution of the questionnaire, so the matter of consent in this form only concerned the students.

The interviewers included the authors of this paper and other team members. The interviews all took place on the school premises, commonly in a corner of the library, an empty classroom, or a science laboratory preparation room. Usually at least some interviewing was undertaken immediately after administration of the questionnaires; but sometimes this would have required students to miss important class time, in which case alternative arrangements were made such as during the school break, during a vacant period, or after the end of the school day.

Depending on the linguistic competences and preferences of the interviewers and interviewees, the interviews were conducted in English, in Cantonese-Chinese or in Putonghua-Chinese. The team was mindful that different types of interviewer (male/female, older/younger, Cantonese-speaking/non-Cantonese-speaking, etc.) would have different implications for the interview process. To promote consistency, the team operated with standardised guidelines. Before commencing data collection, the team members undertook role plays with mutual critique; and during the research processes the team members compared experiences and impressions. These actions could not ensure complete uniformity in interviewing styles, but did at least help. At the same time, a limitation in consistency across interviews arises from the fact that interviewers followed conversational paths to maintain a smooth flow, and the details in the interview transcripts reflected what the interviewees were inspired to say as well as the questions that the interviewers asked. Most interviews lasted between 20 and 30 minutes.

The teachers were selected on the basis of whether they taught at least one Grade 9 or Grade 12 class and, of course, their willingness to be interviewed. Again, the interviews were conducted in English, Cantonese or Putonghua according to the preferences of the people concerned and with a standardised set of questions. Most interviews lasted between 30 and 40 minutes.

The completed interviews were transcribed and if necessary translated into English. They were then analysed using NVivo software, in the first instance with pre-set codes based on themes that had been anticipated from previous research and in the second instance with additional codes to capture themes that had emerged from the data.

## **Students' Perspectives**

This section, drawing on the students' perspectives, first analyses the family microsystem as it relates to schooling and private tutoring. It then turns to the school and tutoring microsystems, before considering the interactions between them.

### *The family microsystem*

Bronfenbrenner's (1994) ecological structure views the family as an immediate environment in which learners' social and cognitive development takes place (p.38). Bronfenbrenner called interactions in the immediate environment *proximal processes* which, in the case of a family microsystem, may include interactions between a child and parents and/or siblings. Although the research reported here did not directly

collect data from parents or siblings, interviewees commented extensively on parental attitudes and sometimes on siblings' attitudes towards schooling, private tutoring and related themes.

One descriptor frequently used by students in both Grades 9 and 12 about their parents was "busy". Statements included:

- My parents are quite busy.
- They [parents] are not available.
- My mom is quite busy.
- I see them [parents] on Sunday, once a week.

Most students mentioned that they met their parents only during dinnertime and/or at weekends, and that although parents were interested in students' school lives, the parents were often physically unavailable. Other individuals mentioned as part of the immediate family environment were siblings and domestic helpers. From Bronfenbrenner's (1994) perspective, such people are *members of a system*. While siblings are natural members, the mention of domestic helpers as integral parts of the Hong Kong family is noteworthy. Domestic helpers actively participate in students' school lives, and some students reported that English-speaking helpers – many of whom came from the Philippines and Indonesia, and some of whom did not speak Chinese – enhanced the students' linguistic competences in English. One Grade 9 student stated that his reason for taking private tutoring in English was the absence of an English-speaking domestic helper: "I was brought up by a maid who does not know English, so my mother suggested me to take tutoring in this subject".

Few students reported that parents or siblings assisted with homework. Some students indicated that parents only checked if the homework had been done, and others stated that parents did not even do that. Yet among students who mentioned that parents did not help, the majority identified parents' lack of knowledge in that particular subject rather than lack of desire to help. Typical comments included:

- Usually they [parents] are not able to [help in homework].
- I can't ask them [parents], because they can't help.
- [My parents'] English level is no longer competent with my study as all my textbooks are in English. They can't really help.

Comparing students who received private tutoring with those who did not, similarities were found in both parental help (or lack of help) with homework and parental (non-)involvement in students' learning.

In addition to the structure, composition and level of support in the family microsystem, the data showed variation in the quality of proximal processes. The chief concern of parents, when available, was with marks and examination results. In the ecological model, Bronfenbrenner (1994) described parental monitoring as "the effort by parents to keep informed about, and set limits on, their children's activities outside home" (p.39). This theme became evident when students talked about parental pressure to study. Students' comments ranged from: "No, [my parents] do not give me pressure at all," to "[My parents] sometime threaten me that if I do not do well, I cannot use the computer or go out. [They] even confiscate my mobile phone." Students

commonly reported that parents scolded them for poor performance, but some students reported parental encouragement even after failure in examinations.

Perhaps the first intersection, and therefore interaction, between the family microsystem and private tutoring microsystem takes place when a student or another family member decides that private tutoring is needed. According to Bronfenbrenner’s (1976) ecological model, this type of interrelationship between microsystems creates a more complex mesosystem (p.163). The data demonstrated that in the family/private-tutoring mesosystem, for students in both Grade 9 and Grade 12 the initiative to seek tutoring often came from parents. Yet some students said that they themselves took the initiative, and a few named friends, teachers and relatives.

### *The school and tutoring microsystems*

Variations in students’ descriptions of their experiences and expectations at school and in tutorial centres to some extent reflected both individual differences and diversity in settings. Most students described tutorial centres as places to develop their skills, while schools were places in which teachers taught the whole curriculum. The distinction between the two was clear in almost every interview, and evidenced by the narrowed curriculum and emphasis on examinations skills in tutoring. Table 1 describes the classroom activities that students reported in tutorial centres and in schools.

*Table 1: Learning and teaching activities in tutorial centres and schools*

<b>Activities</b>	<b>Tutorial centres</b>	<b>Schools</b>
What students do	Students write mock examination papers.	Students write passages.
	Students watch videos and write notes.	Sometime students have group discussions.
	Students read notes and do many exercises.	Students do exercises from textbooks.
What tutors and teachers do	Tutors commonly review past examination papers.	Teachers seldom review past examination papers.
	Tutors give many exercises – sometimes more difficult ones than teachers.	Teachers give some exercises, and also play songs for analysis.
	Tutors supplement the textbooks with tailored materials.	Teachers teach full concepts.
	Tutors give worksheets about the topics covered at school.	Teachers explain new materials.
	Tutors give booklets with many examples and useful expressions.	Teachers are less test-oriented. They demand written work, but do not give detailed feedback.

The statements summarised in Table 1 shed light on the manner in which the tutorial centres operated, i.e. focusing mainly on learning strategies. The key-word-in-context method (Bernard and Ryan, 2010: 191-192) used for data analysis revealed that when students reported on their tutors’ teaching styles, the word most



frequently used in conjunction with “tutors” was “skills”. Students reported that tutors usually taught them how to answer examination questions, manage examination time, do comprehension, write beautifully, remember topics, read faster, enhance oral and listening skills, and remember key points.

The tutorial centres’ emphasis on skills that were needed for both school and external examinations diminished the students’ appreciation of the full curriculum in their schools. The contrast in emphases helped the tutoring businesses to flourish, and led students to consider that their school education, in the words of one interviewee, was “not serious”.

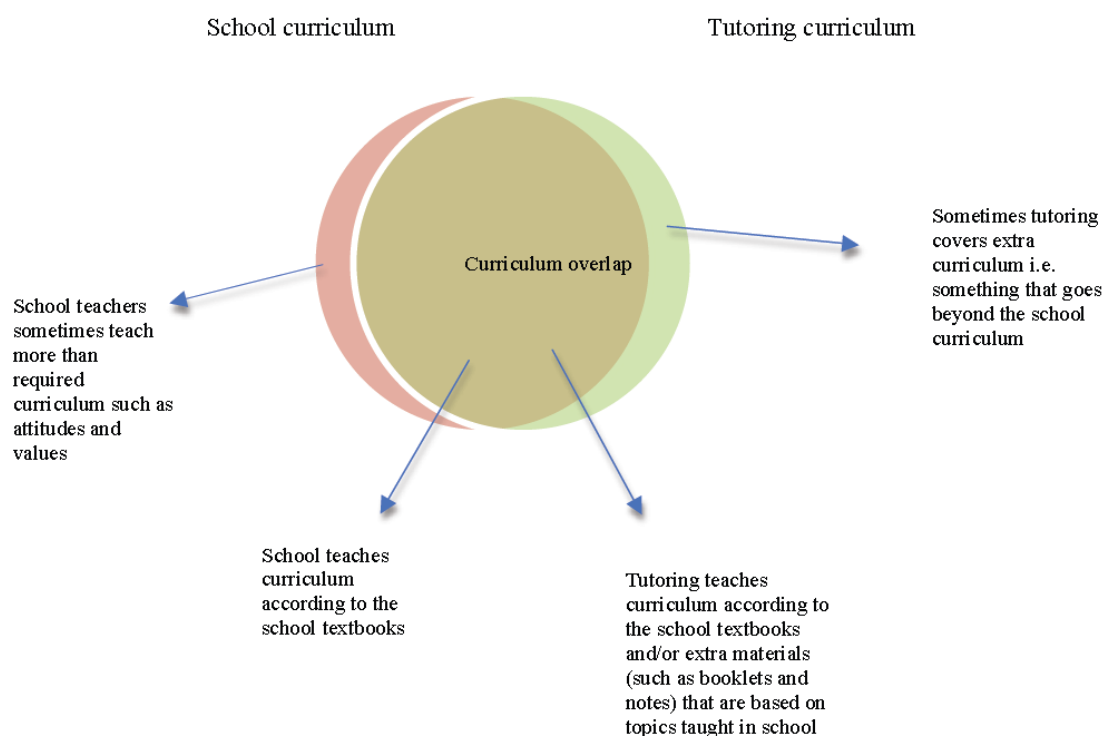
*Intersection between schooling and tutoring microsystems*

The ecological model observes that events and activities in one setting may influence a learner’s behaviour in another. Bronfenbrenner (1976: 174) wrote not only about influences within settings but also about the “principle of reciprocity” between systems. Three categories of intersection are noted here. They concern curriculum, homework, and relationships with teachers and tutors.

Curriculum

Under this heading, three domains may be noted. The first concerns curriculum overlap between schooling and tutoring; the second concerns curriculum materials, and particularly school textbooks and notes from tutors; and the third concerns the sequence of studies, i.e. whether students first encounter topics at school or in tutoring (Figure 1).

*Figure 1: Relationships between school and tutoring curricula*



Curriculum overlap was very clear in the students' accounts: it was mentioned 23 times by interviewees. In 18 reports the students said that their tutors usually followed the school curriculum, only five reports indicated that the tutors did not follow it. Among the 18 cases in which students reported curriculum overlap, seven added that tutors supplemented their teaching with other topics and materials. Tutors of mathematics and science followed the curriculum closely, while tutors of English and Chinese were more likely to supplement it with other resources. This may be explained by the reliance in mathematics and science on a fixed curriculum, while skills for learning languages can be developed in multiple ways.

Curriculum overlap necessarily occurred when students sought tutoring in order to facilitate their handling of school exercises. One student described the situation clearly: "The tutors give me worksheets about the topics I learned in school. If I did not understand, they explain to me." Another student noted the similarity between the school and tutoring curricula, but mentioned that extra content was provided by the tutorial centre: "[The curriculum in the tutorial centre] is nearly the same but more comprehensive, and extra knowledge is covered." For another student, tutoring was a necessary supplement to schooling because "the school teacher only teaches some topics and leaves other topics uncovered, so I must take tutoring to learn those other uncovered topics."

Concerning teaching materials, the tutorial centres rarely used textbooks and instead created their own booklets and notes. These materials, as described by the students, had many exercises for training in examination skills rather than explanation of concepts. In other words, booklets and notes were like shortcuts in contrast to the "boring school textbooks".

On the matter of sequence, although the tutoring curriculum mainly followed school curriculum, some tutors explained school materials in advance. As a result, these students knew content before the teacher explained it to them, and felt that "teaching in school is behind the tutorial centre". This attitude contributed to discontent with school teaching, which was already considered "backward" and "old fashioned". One-to-one tutoring, whether provided through a centre or through informal channels, provided particularly strong opportunities for learning ahead of the school schedule. A Grade 9 student stated that he himself initiated learning with his personal tutor before his teachers reached the topics: "I tell him what subject I am going to do in class or what I am going to do next, and he explains it to me. He does some notes for me, and he guides me through some questions." Learning ahead of the school schedules delivered positive outcomes for students whose teachers considered them diligent and smart. However, for some students it increased boredom and therefore dissonance with their school lessons.

### Double homework

A related matter concerns what may be called double homework. Students in both grades who received individual or small-group tutoring reported that they usually completed their school homework in the centres. However, many students received homework from both teachers and tutors.

Among the 16 students receiving tutoring who remarked on this matter, only two reported that they never received homework from tutors. The others did not find it problematic that they had to complete similar tasks twice. Instead, they reported that homework from tutors helped them to understand topics. In addition, homework from tutors was considered “adequate” because it was “not mandatory”. As explained by one student, “tutors give you according to your request”, and “it is not compulsory to finish”. Four students indicated that tutors regularly marked their homework and gave useful feedback. In contrast, two students said that their tutors never checked if students finished the homework. All interviewed students who referred to this theme confirmed their tutors’ soft attitudes regarding homework. One student explained: “Tutors know that we also have homework from school. So it does not matter if we do not finish their homework. However, I try my best to finish it because I find it helpful.” Another student echoed: “Most of the time I do [homework from tutors]. If I have too much homework from school teachers, I would do it later.” This statement was revealing in its prioritisation of tutors over teachers.

#### Students’ Relationships with teachers and tutors

The students seemed to prefer the ways in which tutors interacted with them to the ways in which their teachers interacted. The tutorial centres were considered student-friendly, compared with “boring” schools in which teachers emphasised discipline. In any case, the students attending tutoring classes were self-selected and tried to benefit from the paid service as much as they could. By contrast, schooling was compulsory and the students had no choice in their teachers. Since the students were attending the tutorial classes voluntarily, the tutors were less likely to encounter discipline problems. Students typically reported that the tutors made jokes and, in the words of one interviewee, were “more flexible” than their teachers.

The students also appreciated communication with tutors via online platforms. As expressed by one Grade 12 student:

I think the advantage of the tutorial centres is that they can meet the youths’ needs and stay with fashion. The tutors can be contacted through online forum and Facebook. They know contemporary youth like using online communication. The tutors teach us on the forum and add us in the Facebook as our friends, and sometimes there are also activities to promote relationship.

The student added that the tutors provided their telephone numbers and were “available for 24 hours a day”. By contrast, another Grade 12 student indicated that he had communicated with teachers a few times through e-mail but had only received in return “very limited notes”. The e-mail communication with teachers, he added, happens “just one or two times each year”.

Nevertheless, two students held different views. One who attended a large tutorial centre stated that students could only contact the tutor’s assistant rather than the tutor himself. The other was in a video class, and therefore did not have direct contact with a tutor.

## Teachers' Perspectives

Many of the 48 interviewed teachers saw the emergence of private tutoring as a shift in ecosystem balances, even if not with that specific vocabulary. They were commonly positive about one-to-one and small-group tutoring, but negative about market-oriented tutorial centres with large classes and especially negative about the lessons delivered by video recording. This section commences with the teachers' understandings of changing times and the reasons why students sought private tutoring. It then turns to reflections on the curriculum materials provided by tutorial centres, and to remarks on role differentiations, partnerships and conflicts.

### *Changing times and students' reasons for seeking tutoring*

When asked why the students sought tutoring, the dominant answers were:

- examination pressure (mentioned by 20 teachers);
- influence from tutoring advertisements (mentioned by 15 teachers); and
- peer influence (mentioned by 14 teachers).

Concerning examinations, one teacher elaborated:

Now the situation is different. Now we tend to teach to the test. When we teach a particular topic, we tend to choose things that are related to the exam. When we know some parts that are not very related, we just go through them quickly. So it is not good for learning, as they don't learn in an all-round manner, but in Hong Kong, it is the situation, and there is no alternative. It is exam-oriented, so naturally we ask students to "recite it, and you just change certain words, you can get five marks", so it is exam-oriented. You need to cover the whole syllabus, but you tend to focus more on the important parts and put less weight on the less important bits. We cover everything, but tutoring does not cover everything.

The teacher was especially referring to the external examinations taken by Grade 12 students, but schools also had many internal examinations. The teacher identified a changed emphasis which had impacted on both schooling and supplementary support. The Grade 12 students were the principal target for the tutorial companies with large classes. Small-group and one-to-one tutoring was more common among students in lower grades, who were more likely to be seeking help with homework and internal examinations. One teacher explained that because the syllabuses in junior forms were relatively broad, the large tutorial companies did not consider programmes for these clients to be economically worthwhile. By contrast, senior students concerned with public examinations converged on a narrower focus in which the tutoring companies felt able cost-effectively to deliver guidelines and tips.

To secure their clients, the large companies engaged in aggressive advertising in the streets, on television, in newspapers, and on the exterior of buses. Several teachers remarked that this had not been part

of the environment when they had been students, and many were critical of the style and content of these advertisements. One felt that:

It is difficult for students to judge whether these tutors are good or not, and if their tutoring is useful or not. However, these advertisements have already penetrated students' memories and lead students to feel they could help them.

Another noted that the companies "always emphasise their ability of predicting the exam questions" as part of their marketing strategy. However, this teacher doubted the veracity of the claims.

Concerning peer influence, teachers observed that many students joined the tutoring classes because they feared being left behind when others were doing so. One interviewee suggested that most students participate:

because it is a trend. They think that if they do not attend any of these courses, they will lose. It is a psychological effect.

This led to the question whether the tutoring was actually effective. The teachers observed that the effectiveness depended on students' motivation to learn and on modes of tutoring. The majority (27 teachers) considered individual and small-group tutoring more effective than large tutorial classes, but noted that individual and small-group tutoring were more costly. One teacher was particularly critical of tutoring in large classes, either by video or live, calling it "a nonsense". However, another teacher recognised that:

It depends on how we define learning. If learning is just about exams, then tutoring is very effective since they have a lot of skills for exam.

Only one teacher raised the issue of quality of tutors. In her understanding, students can really learn something from tutoring if tutors are "skilful".

#### *Teachers' reflections on the tutors' curriculum materials*

When asked what students could get from tutoring that they could not get from schools, the curriculum materials provided by the tutorial companies came to the fore among almost all interviewees (45 teachers). One teacher described these materials as "tables and charts" and/or "model essays". Another teacher stated that the tutorial notes were "copied from different textbooks and provide vocabulary in English, tests [and] phrase words". Some teachers showed interest in the materials from tutorial centres and even asked students to share the notes. This was an instructive example of intersection between microsystems, thereby forming what Bronfenbrenner (1976, 1979, 1994) called a mesosystem.

Another interesting dynamic was exemplified by two teachers who reported that students had requested help to answer questions in their tutorial notes. Both teachers responded positively because they appreciated the students' strong motivations. Teachers' help with tutoring notes and tutors' help with school tests and examinations showed bidirectional assistance in learning.

Positive perspectives on the tutorial notes were evident in such adjectives as “well-organised”, “colourful”, “attractive”, and “good-looking”. One teacher even remarked that the tutors’ materials were “of higher quality than those of the schools”. When asked why, teachers reported that the notes were prepared by support staff rather than by the tutors themselves:

A professional team is doing the work of preparing notes and they give colour notes to students with many references, examples and exercises. They really do well in this aspect.

In contrast, the teachers felt that they had fewer resources. In this category they included “available time”, because they were busy with multiple roles including administrative tasks.

Nevertheless, some teachers were critical of the tutorial notes, considering them “wrong” or “very exam-oriented”. Quotations from two teachers illustrate these sentiments:

When I read their notes, I found some mistakes ... [and] encouraged them not to read and rely on those materials. Tutors may sometimes distribute some useless materials to students, which do not help their studies at all. It is just a gimmick to attract students.

[Notes are] very exam-oriented. [This approach] teaches students to identify the common problems in the exams and common mistakes. In my opinion, the materials cannot raise students’ ability in solving high-order questions.

#### *Role-differentiations, partnerships and conflicts*

The teachers commonly saw themselves as moral educators responsible for the whole curriculum, i.e. more than could be evaluated by examinations. They also perceived tutors as being dominated by the marketplace. One teacher who had previously worked in a tutorial centre remarked that in the centre the appearance of the tutors really mattered: they were required to dress up, while teachers in schools did not have to think about dressing provided they were tidy and serious. She noted that the tutors have to “please the students and draw their attention”. In contrast, she said: “We [teachers] are not only teaching students on academic aspects but also their moral standard. We have to demonstrate our moral standard to students as a role model.”

Another teacher felt that tutoring and schooling could be a partnership, but that the companies sometimes sought to denigrate the schools in order to expand their markets:

I would say it is like a partnership, but I may not agree with some of the things they do, because they will undermine some of the values of education. I heard from my students that the tutor said that your teachers may not explain in English and cannot help you much.

Another teacher echoed:

Within one hour [the typical class duration in a large centre], they can do nothing about moral education... [In any case,] their mission is to tell the students the tips and examination skills. Their aim is to help students quickly understand old/existing knowledge, not to impart new knowledge.

Nevertheless, this teacher felt that a partnership in roles “would be the best for the students”.

At the same time, teachers recognised that the students only had 24 hours each day, and that pressures from both sides could impact on extra-curricular and other activities. Further, even within the academic arena a conflict could arise in the competition for students’ time:

Some students are rushing for tutoring as soon as the school finishes. Then they learn new things from there, yet they have not completely handled their school assignments. We, as teachers, also find it difficult to deal with the situation, especially when we want them to stay after school to finish up their homework or to attend the remedial classes.

Several teachers raised concerns about tutoring late in the evening. In the words of one:

When I chatted with some students, I knew that they went to tutoring immediately after school until 9 pm or 10 pm. Then dinner at home and they missed out the family life.

Other teachers complained about loss of attention in school as a result of tutoring. Six teachers reported that students slept in class because they were tired from tutoring the previous evening. In the words of one teacher:

It forms a vicious cycle as time goes by. They sleep in school because they had too much tutoring the night before. But they still need to complete the works in school so they have no extra time. They have no energy to learn in school and rely only on tutoring.

Another teacher reported on a reversal in priorities between schooling and tutoring:

Tutoring used to be a supplement to learning but not a major learning place; but now school becomes a place to play and sleep. I think some students have reversed this routine.

Thus these teachers felt that there could be some useful role differentiation and even partnership, but that in many cases the tutoring competed with schooling.

### **Ecological Understanding and Beyond**

The above accounts show that, at least in the views of these teachers, the rise of supplementary tutoring in Hong Kong has significantly changed the ecosystems in which they operate. Because they were younger, the students did not make statements about changing times; but they did clearly indicate a significant role of tutoring in their lives. This point applies to the students who did not receive tutoring as well as those who did. The quantitative part of the study indicated that 53.8% of sampled Grade 9 students and 71.8% of sampled Grade 12 students reported having received private supplementary tutoring during the previous 12 months (Bray, 2013: 21). The Grade 12 proportion is especially striking in showing that just 28.2% had not received tutoring. Questionnaire and interview data showed that some of the 28.2% had strong self-confidence and did not consider themselves in need of tutoring, but that others would have liked to have received tutoring if they could have afforded and fitted it with other priorities. Further, as noted, some students who did receive

tutoring were influenced by peer pressures as well as by perceptions of real need. Also, the rise of tutoring had changed the nature of schooling for all students by shaping the attitudes and actions of at least some teachers.

Turning to the conceptual framework with which the paper commenced, the rise of tutoring significantly shifted the balance of interactions within mesosystems. The families, schools and tutorial centres can be viewed as microsystems, and they are linked within mesosystems. Cremin (1976) had referred to interactions between configurations of education. Some of the actors reported here viewed developments in the configurations positively, while others viewed them negatively. The research found more dissonance in the teachers' interviews than in the students' views, in part reflecting the teachers' memories of times before tutoring became so widespread. Although the paper has only reported on the perspectives of students and teachers, similar ambivalence could be anticipated among parents. Future research could also usefully look at the perspectives of tutors, though of course they may be described as the "invasive species" in the ecosystems.

Use of vocabulary about invasive species may assist understanding of dynamics in another way. In the domain of biology, a well-known example of ecological competition concerns the decline of population of red squirrels in England during the 20<sup>th</sup> century following the introduction of grey squirrels (Reynolds, 1985). Perhaps the teachers and tutors may be considered analogous to the red and grey squirrels, competing for space and livelihood. Dynamics are not simple in either case: the literature on squirrels identifies a range of factors and interpretations of the observed patterns, and the same would apply in the domain of education. However, the parallel from ecology may at least help to promote understanding. A major theme emerging from this research was of competition rather than cooperation between the microsystems of tutorial centres and schools. Both microsystems sought students' time and attention; and the tutorial centres asserted themselves through aggressive advertising and messages in which they stressed their superiority over schools. The teachers were broadly respondents to the changed environment, and did not seem to have much control over whether and how the students sought and then utilized private supplementary tutoring. The tutorial activities affected students' learning in each setting, and to some extent changed students' values about teaching and learning. These values may thus be shaped not only by the macrosystem of policies and social institutions (Bronfenbrenner, 1976: 6) but also by the operations and interactions of microsystems.

Insights from the ecological literature might also be used to raise questions for further research. Among the questions would be the extent to which the tutors (and the companies that employ them) see themselves as helping the students to achieve overall desirable goals rather than operating merely as profit-oriented businesses. It is likely that the tutors would find at least some ways to portray themselves as being on the side of the students in a competitive environment dominated by examinations. Such an answer would then require further investigation of why the environment is competitive, and why it is dominated by examinations. The questions could go further to look at the nature of the examinations and the extent to which the format rewards tutoring of certain types.

At the same time, while the paper has highlighted different categories of actors, it has also noted diversity in the perspectives of individuals within categories. Again the work of Cremin (1976) assists understanding. As noted above, Cremin observed (p.32) that analysis of relationships "must be ascertained in



their particularity rather than assumed in some sort of generality”. Such texturing is important for understanding that not all students or teachers (or families, tutors and other actors) behave in the same way. Chan and Bray (2014) made this point by looking at the reasons why students sought tutoring in one particular subject (Liberal Studies) in Hong Kong. The present paper elaborates on this understanding with a wider lens.

Yet while the above paragraph refers again to Hong Kong, the point should be underlined that this paper has relevance to many other societies. As noted at the outset, private supplementary tutoring has greatly expanded globally since the turn of the century. The nature of this tutoring varies across and within countries, and research has not yet caught up with the scale and implications of the phenomenon. The present study suggests domains of enquiry for other parts of the world as well as for Hong Kong. The most obvious concerns relationships between the various actors in the ecosystems and the directions of change, but others include the content of learning in schooling and in tutoring. Thus, some parts of the literature refer to private tutoring as shadow education (e.g. Aslam and Atherton, 2014; Bray and Lykins, 2012; Kassotakis and Verdis, 2013). The metaphor has value as a broad term in many circumstances, but also has limitations. The present paper has included remarks on ways in which tutoring mimics regular schooling but also on ways in which it complements regular schooling. Further, some types of tutoring have reversed the sequence and priority to the extent that aspects of tutoring have become the dominant component and aspects of schooling have become part of the shadow.

A significant number of interviewed teachers in this study felt that the tutoring sector would continue to expand in Hong Kong, even beyond its existing level of quantity and intensity. Their reasons included increasing social competition, shrinking family size, and the power of commercial advertising. Such factors are evident in many other countries, both high-income and low-income (Aurini et al., 2013; Bray & Lykins 2012). Private tutoring certainly needs further research from many dimensions. Among them may be analysis of similarities and differences in the ecosystems in different locations, both cross-sectional and with focus on changes over time.

**Acknowledgement:** The research reported in this paper was funded by the General Research Fund (GRF) of the Hong Kong Research Grants Council (RGC), project 741111. Team members included Ora Kwo, Chad Lykins, Emily Mang, Wang Dan and Zhan Shengli.

## References

- Altinyelken, Hülya Koşar 2013. “The Demand for Private Tutoring in Turkey: Challenges and Policy Implications”. In *Private Tutoring across the Mediterranean: Power Dynamics and Implications for Learning and Equity*, edited by Mark Bray, André E. Mazawi, and Ronald G. Sultana, 177-186. Rotterdam: Sense.
- Aslam, Monazza and Atherton, Paul 2014. “The Shadow Education Sector in India and Pakistan: Opening Pandora’s Box”. In *Education, Privatisation and Social Justice: Case Studies from Africa, South Asia and South East Asia*, edited by Ian Macpherson, Susan Robertson, and Geoffrey Walford, 137-158. Oxford: Symposium.

- Atzaba-Poria, Naama; Pike, Alison and Keater-Deckard 2004. "Do Risk Factors for Problem Behaviour Act in a Cumulative Manner? An Examination of Ethnic Minority and Majority Children through an Ecological Perspective." *The Journal of Child Psychology and Psychiatry*, 45 (4): 707-718.
- Aurini, Janice; Davies, Scott & Dierkes, Julian (eds.) 2013. *Out of the Shadows: The Global Intensification of Supplementary Education*. Bingley: Emerald.
- Barton, Angela Calabrese; Drake, Corey; Perez, Jose Gustavo; St. Louis, Kathleen and George, Magnia 2004. "Ecologies of Parental Engagement in Urban Education". *Educational Researcher*, 44 (4): 3-12.
- Bernard, H. Russell and Ryan, Gery W. 2010. *Analyzing Qualitative Data: Systematic Approaches*. Thousand Oaks: Sage.
- Bray, Mark 1999. *The Shadow Education System: Private Tutoring and its Implications for Planners*. Fundamentals of Educational Planning 61, Paris: UNESCO International Institute for Educational Planning (IIEP).
- Bray, Mark 2009. *Confronting the Shadow Education System: What Government Policies for What Private Tutoring?* Paris: UNESCO International Institute for Educational Planning (IIEP).
- Bray, Mark 2013. "Benefits and Tensions of Shadow Education: Comparative Perspectives on the Roles and Impact of Private Supplementary Tutoring in the Lives of Hong Kong Students". *Journal of International and Comparative Education*, 2 (1): 18-30.
- Bray, Mark & Lykins, Chad 2012. *Shadow Education: Private Supplementary Tutoring and its Implications for Policy Makers in Asia*. Mandaluyong City: Asian Development Bank, and Hong Kong: Comparative Education Research Centre, The University of Hong Kong.
- Bronfenbrenner, Urie 1976. "The Experimental Ecology of Education". *Teachers College Record*, 78 (2): 157-204.
- Bronfenbrenner, Urie 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, Urie 1994. "Ecological Models of Human Development". In *International Encyclopedia of Education*, edited by Mary Gauvain and Michael Cole, 37-43. New York: W.H. Freeman.
- Buchmann, Claudia 2002. "Getting Ahead in Kenya: Social Capital, Shadow Education, and Achievement". In *Schooling and social capital in diverse cultures*, edited by Bruce Fuller and Emily Hannum, 133-159. Amsterdam: JAI Press.
- Caritas, Community and Higher Education Service 2010. *Private Supplementary Tutoring of Secondary Students: Investigation Report*. Hong Kong: Caritas. (In Chinese) Available online: <http://klncc.caritas.org.hk/private/document/644.pdf>
- Chan, Claudia and Bray, Mark 2014. "Marketized Private Tutoring as a Supplement to Regular Schooling: Liberal Studies and the Shadow Sector in Hong Kong Secondary Education". *Journal of Curriculum Studies*, 46 (3): 361-388.
- Cremin, Lawrence A. 1976. *Public Education*. New York: Basic Books.
- Darling, Nancy 2007. "Ecological Systems Theory: The Person in the Center of the Circles". *Research in Human Development*, 4 (3-4): 203-217.
- de Silva, W.A. 1994. *Extra-school Tutoring in the Asian Context with Special Reference to Sri Lanka*. Maharagama: Department of Educational Research, National Institute of Education.
- Harnisch, Delwyn L. 1994. "Supplemental Education in Japan: *Juku* Schooling and its Implication". *Journal of Curriculum Studies*, 26 (3): 323-334.
- Hartmann, Sarah 2013. "Education 'Home Delivery' in Egypt: Private Tutoring and Social Stratification". In *Private Tutoring across the Mediterranean: Power Dynamics and Implications for Learning and Equity*, edited by Mark Bray, André E. Mazawi, and Ronald G. Sultana, 57-75. Rotterdam: Sense.

- Hong Kong, Information Services Department 2014. *Hong Kong 2013*. Hong Kong: Information Services Department.
- Jokić, Boris 2013. "Conclusions". In *Emerging from the Shadow: A Comparative Qualitative Exploration of Private Tutoring in Eurasia*, edited by Boris Jokić, 305-315. Zagreb: Network of Education Policy Centers.
- Joong, Yee Han Peter 2012. "Understanding the Ecologies of Education Reforms: Comparing the Perceptions of Parents and Secondary Teachers and Students in China". *Peabody Journal of Education*, 87 (2): 267-282.
- Kassotakis, Michael and Verdis, Athanasios 2013. "Shadow Education in Greece: Characteristics, Consequences and Eradication Efforts". In *Private Tutoring across the Mediterranean: Power Dynamics and Implications for Learning and Equity*, edited by Mark Bray, André E. Mazawi, and Ronald G. Sultana, 93-113. Rotterdam: Sense.
- Koh, Aaron 2014. "The 'magic' of Tutorial Centres in Hong Kong: An Analysis of Media Marketing and Pedagogy in a Tutorial Centre". *International Review of Education*. DOI 10.1007/s11159-014-9460-y
- Kwo, Ora and Bray, Mark 2011. "Facing the Shadow Education System in Hong Kong". *IAS Newsletter* (University of Leiden, International Institute for Asian Studies), 56: 20. Available online: <http://www.ias.nl/the-newsletter/article/facing-shadow-education-system-hong-kong>
- Lee, Ching 1996. *Children and Private Tuition*. Youth Poll Series 34, Hong Kong: Hong Kong Federation of Youth Groups.
- Lo, William Yat Wai 2010. "Decentralization of Higher Education and its Implications for Educational Autonomy in Taiwan". *Asia Pacific Journal of Education*, 30 (2): 127-139.
- Marsh, Colin and Lee, John Chi-Kin (eds.) 2014. *Asia's High Performing Education Systems: The Case of Hong Kong*. New York: Routledge.
- Moen, Phyllis; Elder, Glen H. and Luscher, Kurt (eds.) 1995. *Examining Lives in Context: Perspectives on the Ecology of Human Development*. Washington DC: American Psychological Association.
- Nath, Samir Ranjan 2011. "Shadow Education in Bangladesh". Presentation at a seminar organized by UNESCO in conjunction with the National Academy of Educational Management (NAEM), Dhaka, 11 August.
- Odum, Eugene P. 1997. *Ecology: A Bridge between Science and Society*. Sunderland: Sinauer Associates.
- Odum, Eugene P. and Barrett, Gary W. 2005. *Fundamentals of Ecology*. 5<sup>th</sup> edition. Belmont: Thomson Brooks/Cole.
- Peters, M., Carpenter, H., Edwards, G., and Coleman, N. 2009. *Private Tuition: Survey of Parents and Carers*. Research Brief DCSF-RBX-09-01. London: Department for Children, Schools and Families. Retrieved from: <https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DCSF-RBX-09-01>
- Pickett, S.T.A. and Cadenasso, M.L. 2002. "The Ecosystem as a Multidimensional Concept: Meaning, Model, and Metaphor". *Ecosystems*, 5: 1-10.
- Popa, Simona 2007. *Defensible Spaces: Ideologies of Professionalism and Teachers' Work in the Romanian Private Tutoring System*. PhD dissertation, University of Pittsburgh.
- Popa, Simona and Acedo, Clementina 2006. "Redefining Professionalism: Romanian Secondary Education Teachers and the Private Tutoring System". *International Journal of Educational Development*, 26 (1): 98-110.
- Reynolds, J.C. 1985. "Details of the Geographic replacement of the Red Squirrel (*Sciurus Vulgaris*) by the Grey Squirrel (*Sciurus Carolinensis*) in Eastern England". *Journal of Animal Ecology*, 54 (1): 149-162.
- Seth, Michael J. 2002. *Education Fever: Society, Politics, and the Pursuit of Schooling in South Korea*. Honolulu: University of Hawai'i Press.

- Safarzyńska, K. 2013. "Socio-economic Determinants of Demand for Private Tutoring". *European Sociological Review*, 29 (2): 139-154.
- Sobhy, Hania 2012. "The De-facto Privatization of Secondary Education in Egypt: A Study of Private Tutoring in Technical and General Schools". *Compare: A Journal of Comparative and International Education*, 42 (1): 47-67.
- Wensing, E.J. and Torre, Carlos A. 2009. "The Ecology of Education: Knowledge Systems for Sustainable Development and Sustainability". *Journal of Teacher Education for Sustainability*, 11 (1): 3-17.
- Yung, Kevin 2015. "Learning English in the Shadows: Understanding Chinese Learners' Experiences of Private Tutoring". *TESOL Quarterly*, DOI 10.1002/tesq.193.
- Zhang, Yu 2013. "Does Private Tutoring Improve Students' National College Entrance Exam Performance? A Case Study from Jinan, China." *Economics of Education Review*, 32 (1): 1-28.

**Mark Bray (United Kingdom)** is UNESCO Chair Professor in Comparative Education and Director of the Comparative Education Research Centre at the University of Hong Kong. He has taught at that University since 1986, prior to which he taught at the Universities of Edinburgh, Papua New Guinea and London and in secondary schools in Kenya and Nigeria. Between 2006 and 2010 he took leave from Hong Kong to work in Paris as Director of UNESCO's International Institute for Educational Planning (IIEP). He has written extensively in the field of comparative education, with particular focus on aspects of methodology and on the administration and financing of education.

**Magda Nutsa Kobakhidze (Republic of Georgia)** is a PhD candidate in the Faculty of Education of the University of Hong Kong. Her research interests include private supplementary tutoring in a cross-national perspective, teacher professional development policy, and large-scale international assessments. She has extensive working experience with the Ministry of Education of Georgia, international organizations and educational institutions. Prior to joining the University of Hong Kong in 2012, she served as a National Research Coordinator of the international study PIRLS in Georgia. She holds a Master's degree in international education policy from International Educational Development Program at Teachers College, Columbia University, USA.