

# The dark side of education: The need for research in Malaysia

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## Abstract

In recent years, a phenomenon of private supplementary education, which is also referred to as shadow education has expanded considerably. This phenomenon which has historically been confined predominately to East Asia is now spreading across the globe. While the term shadow education was first coined in a study of the phenomenon in Malaysia, little substantial research has been done in the field in Malaysia since the 1990s. The engagement of the shadow education system has proven to bear a very wide implication on the mainstream education system while also impacting students and society in general as seen from studies done in many countries around the world. This paper discusses the various findings from previous studies and the implications they presented, as well as highlighting the need for more research to be done in Malaysia.

*Keywords:* Shadow education, private supplementary tutoring, private tuition, Malaysia, impact on students

## 1. Introduction

The term ‘shadow education’ emerged in the early 1990s (Bray, 2010). Studies conducted in Malaysia (Marimuthu, et al., 1991) and Japan (Stevenson & Baker, 1992) made use of the term; with a Singapore news article following suit (George, 1992). Marimuthu, et al. (1991) stated that the practice of youths obtaining private tutoring in addition to attending formal schooling is “so prevalent that it could be considered as a ‘shadow educational system’” (p.vi), but fell short of defining “shadow education”. Stevenson and Baker (1992) on the other hand defined ‘shadow education’ as “a set of educational activities that occur outside formal schooling and are designed to enhance the student’s formal school career” (p.1639) which are “activities that are firmly rooted within the private sector” (p.1643).

More research on the topic of shadow education (or private supplementary education) has since been conducted by various educational researchers. Professor Mark Bray, the UNESCO Chair Professor in Comparative Education at Hong Kong University has since emerged as the leading expert in this area of study. Professor Bray (1999), in preparing a book on shadow education for UNESCO’s International Institute for Educational Planning (IIEP) limited the scope of ‘shadow education’ to “tutoring which covers [academic] subjects [learned in primary and secondary schools] which are already covered in school ... provided by private entrepreneurs and individuals for profit making purposes” (p.20). Since then, Professor Bray’s definition of ‘shadow education’ has come to be accepted by scholars and researchers.

A similar definition was given to the term ‘private tutoring’ by Silova, Būdienė and Bray (2006), where they defined ‘private tutoring’ to be:

“fee-based instruction in academic school subjects that is supplementary to instruction mainstream schools provide free of charge. Private tutoring includes lessons provided one-on-one or in small groups by individual instructors as well as larger classes provided by individual instructors and companies.” (p.13)

In short, shadow education refers to private supplementary tutoring (Bray, 1999). The metaphor of a shadow system, which Bray (1999, 2003) deemed as aptly suitable, is due to several reasons:

firstly, the existence of private supplementary tutoring is dependent upon the mainstream education system; secondly, the form and manner of private supplementary tutoring changes in accordance to the form and manner of the mainstream education system; and thirdly, the attention of the public has always been on the mainstream education system instead of the shadow of it (Bray, 1999, 2003, 2009).

## 2. Literature Review

### 2.1 Shadow Education

The first major literature and research on shadow education was published in 1991 based upon a large scale survey done in Malaysia (Marimuthu, et al., 1991). That research was the first large scale attempt to measure the expanse of private supplementary tutoring (later coined as ‘shadow education’) in Malaysia, which led to many large scale surveys elsewhere worldwide.

It is argued that shadow education does benefit the educational landscape in some aspect (Bray, 1999, 2003, 2009). Bray (2009) posited that some of the positive consequences of engaging in shadow education include the improvement in students’ learning, the provision of constructive activities for school students outside of school hours as well as providing incomes and employments for the tutors.

Nonetheless, Bray (2003) also posited that such system does bring about adverse effects as well. Some of the adverse effects observed include (but not limited to) “distortion of mainstream curricula, pressure on young pupils, exacerbation of social inequalities, and manipulation of clients by tutors” (p.13). The same sentiments were repeated numerous times in subsequent writings (Bray, 2009, 2010, 2011; Bray & Lykins, 2012).

Engaging in shadow education is costly; hence it is only nature that it is more easily available for the rich than the poor. As such shadow education becomes a mechanism that maintains and even increases social inequalities (Bray, 1999, 2003, 2006, 2009, 2011; Bray & Silova 2006). A study in the Republic of Korea has shown that the richest ten per cent of households spent twelve times the amount spent by the poorest ten per cent of households on procuring supplementary education (Yi 2002).

Furthermore, richer families can more easily afford better quality tutoring services such as one-to-one tutoring which is more tailored to individual needs, which may take place in the comfort of the student’s home, while poorer families would need to settle for the mass-produced forms of tutoring which may not be as effective or as convenient (Bray 2003).

Chugh (2011) studied school dropouts in the slum of Delhi, India and found that 25.9 per cent of the dropouts were due to the inability to bear the costs of shadow education as the common belief and sentiment is that merely attending mainstream schooling does not bear any positive results, thus when students could not afford additional shadow education, they would simply withdraw from school altogether.

The shadow education system also undermines mainstream schooling by removing talent. In Hong Kong and China, school teachers have been known to leave the school system for the greater financial rewards of the shadow education system. Similarly, others who could have become quality teachers are choosing not to enter the schooling system and remain as private tutors, offering their services only to those who could afford. Looking at the big picture, this is a sad inefficient use of the overall resources of society (Bray & Lykins 2012). Critics had even gone as far as to categorically deem the sector as parasitic, and that they waste financial and human resources which could have, and should have, be better allocated to other uses (Bray & Silova 2006).

Even before the turn of this century, concerns were raised that the practice of shadow education may lead to corruption of the players in the education system. Biswal (1999) observed the phenomenon where mainstream school teachers intentionally failed to teach the lesson properly at school and required students to attend the teachers’ private tutoring classes outside of the school. Bray (1999, 2003) observed that it is common in many countries to see supplementary tutoring being provided by the same teachers that are responsible for the students in their mainstream classes.

In short, shadow education could even deprive students from lower income groups from accessing quality education in mainstream education. Given the possible severity of the matter, it is important to examine whether such social injustice does exist in Malaysia, and if so, formulate regulations for the shadow education industry to ensure social justice.

### 2.2 In Malaysia

The terms “supplementary tutoring” and “private tutoring” are rarely used in Malaysia, and the technical term ‘shadow education’ is used even less. Bray (2003) observed that in some English-speaking societies, the more commonly used term is ‘private tuition’. This is consistent with the observation of Marimuthu, et al. (1991) in Malaysia.

The now-dated data collected by Marimuthu, et al. (1991) indicated that 59 per cent of urban students and 28.5 per cent of rural students in Malaysia then received private tutoring. A more recent study of 1,600 students in eight primary schools from the Klang Valley area (the most populated urban area in Malaysia) indicated that 88 per cent of the students surveyed received tutoring during their schooling (Tan, 2011).

As of January 2013, there are 3,107 registered private tutorial centres in Malaysia, and this is despite of the stringent requirements of the need to obtain approval from numerous government agencies – the Health Department, the Fire and Rescue Department and the Local Councils – before the permit to operate such a centre would be granted (Kenayathulla, 2012, 2015). While this is a seemingly small number, one has to bear in mind that it is only reflective of properly registered centres, and does not include private tutorial classes that were conducted in private non-registered venues, nor does it take into account private tutoring conducted on a one-to-one basis. There is currently no available data on the scale of informally-provided tutoring and online tutoring (Kenayathulla, 2015).

Despite the availability of the above data, it is still rather lacking in comparison to available data from other countries. This lacking is apparent from the works of Professor Bray over the last two decades (Bray 1999, 2003, 2009, 2011; Bray & Kwo, 2014; Bray & Lykins, 2012) in which comparisons of the shadow education systems in various countries are being compared. In his earlier works, Bray cited data from Malaysia regularly, namely the data collected by Marimuthu, et al. (1999); but in his more recent works, Malaysia has been omitted completely from the list. This is indicative that the lack of current data is making it difficult for comparative studies to be done of the shadow education in Malaysia; and by extension, stiffened our understanding of the phenomenon in Malaysia.

Shadow education in Malaysia are mainly provided by active and retired school teachers, as the Ministry of Education permits school teachers to tutor outside of school hours as long as they have secured a permit from the ministry to do so (Kenayathulla, 2012). While active school teachers are restricted to four hours of tutoring per week, there are no restrictions on the type of tutoring they may engaged in or students they may tutor; meaning to say they may tutor they own students from the mainstream schooling (Kenayathulla, 2015).

### **3.0 Issues pertaining to shadow education**

#### **3.1 Impact of shadow education on students' academic achievements**

The general perception is that families are willing to pay for shadow education because it helps in improving the academic achievement of the students. However, such perception may not necessarily be accurate (Bray & Lykins, 2012). The numerous studies conducted in several countries produced mixed results as to the impact of the employment of private tutoring upon students' academic achievements (Bray & Silova, 2006).

On the one hand, studies conducted in Mauritius, Greece, Germany and Kenya documented positive impact of private tutoring upon students' academic achievements (Bray, 2006). A study in Taipei found significant positive effects of mathematics tutoring on the students' analytical ability and performance in general, though the positive effects decreased with the lengthening of the tutoring hours (Liu, 2012).

On the other hand, studies in Egypt, however, found that there were no statistical significant correlations between shadow education and achievements of the students (Fergany, 1994 cited by Bray & Silova, 2006). In England, Ireson and Rushforth (2005) also found that students benefited little from the shadow education they received.

On an even more extreme end, in Singapore, Cheo and Quah (2005) reported diminishing returns in the overloading of students with private tutoring and that “contrary to national perceptions ... having a private tutor may be counter-productive” (p.280).

In addition to the above, Bray and Lykins (2012) summarised and compared the studies done in ten different countries only to reach the conclusion there are mixed findings on the actual impact of shadow education on student's academic achievement. They opined that the actual impact depends very much on the circumstances of each specific country as well as the attitude of the students involved and the actual capabilities of the tutors in question.

Bray and Lykins (2012) further noted that despite of the inconclusive findings, the reality of the matter is that most families believe that shadow education does bear a positive impact on the academic achievement of the students, so-much-so that in some societies, it is no longer the question of whether private tutoring is needed, but rather of finding the best fit of tutor-student pairing.

### 3.2 Impact of shadow education on mainstream schooling

It is of utmost importance that the impacts caused by shadow education be thoroughly researched. The fact that it is a shadow may have made it harder to study as well as more difficult to be monitored (Bray & Silova 2006), does not mean we should leave it be, as it was aptly pointed out by Bray (1999) that “[u]nlike most shadows, [shadow education] is not just a passive entity but may negatively affect even the body which it imitates” (p.18).

With that said, private tutoring may, at times, be beneficial and help students to understand and better enjoy their mainstream lessons. De Silva (1994) has observed that shadow education allows the tutors to meet the individual needs of the students, which presumably could not be properly met in a large class setting in mainstream education. In Hong Kong, Yiu (1996) reported that the teachers involved in his study were positive about shadow education as they viewed the efforts of the tutors to be of help in enhancing the students’ learning.

Nonetheless, not all findings are positive. Yasmeeen (1999) reported the “culture of dependency” of the students, where shadow education became more important than the mainstream lessons. This observation is but the continuation of a series of similar reports; Hussein (1987) had previously observed that students in Kuwait displayed a lack of interest in mainstream education as they were more preoccupied with having someone to teach them how to pass their examinations. Similarly, Sawada and Kobayashi (1986) previously reported that students attending *juku* (Japanese equivalent to tutoring centres) do not take their mainstream classes seriously and would refuse to participate in after-school activities.

Further compounding the issue is the vested interests of private tutors that may obstruct educational reforms. Efforts to reform the Romanian education system to a less examination oriented system was restricted by private tutors, including mainstream school teachers who undertook supplementary tutoring on the side, for examinations are the main reason for the demand of private tutoring in Romania (Popa & Acedo, 2006). Similar remarks on the high value given to examinations by private tutors were made in Egypt (Fawzey, 1994; Hargreaves, 1997), Hong Kong (Kwok, 2001) as well as in Taiwan and Russia (Bray, 2003). Kwok (2001) further noted that the marketing styles and pedagogic characteristics of private tutors were heavily reliant upon the reinforcement of examination pressure upon the students.

Even before the turn of this century, concerns were raised that the practice of shadow education may lead to corruption of the players in the education system. Biswal (1999) observed the phenomenon where mainstream school teachers intentionally failed to teach the lesson properly at school and required students to attend the teachers’ private tutoring classes outside of the school. Bray (1999, 2003) observed that while some countries, such as Singapore, Republic of Korea and Morocco, prohibit such practice on the ground of corruption prevention, it is still common in other countries without such prohibition to see supplementary tutoring being provided by the same teachers that are responsible for the students in their mainstream classes.

Bray (2003) further observed that some mainstream teachers would deliberately fail their students in order to increase the demand for private classes. Previously, Bray (1999) presented a case study in Cambodia where the same mainstream school teacher continued on with private schooling in the same classroom in the public school for the same group of students, who were required to pay a daily fee directly to the teacher for each lesson. More recently, Dawson (2009) confirmed that such practice is still very much in place in Cambodia. Similar practices was also observed in Nepal (Jayachandran, 2008).

Bray and Lykins (2012) observed that in countries such as India, Lebanon and Nigeria, it is common practice for mainstream school teachers to provide remunerated shadow education for their own students, and in some cases, it became a form of blackmailing, where the teachers would intentionally not complete the curriculum in school, requiring the students to attend the supplementary classes in order to learn the remainder of the curriculum.

### 3.3 Impact of shadow education on students’ learning

The actual impact of shadow education upon the academic achievement of students remains questionable with mixed indicators from various studies.

Further, many providers of shadow education relied upon the pressure of examinations to keep up the demand for the services. Mainstream schooling aims to achieve a variety of goals in addition to pure academic achievement, for example the development of rounded individuals, the promotion of civic awareness and national pride. This is very much different from the aim of shadow education, which is often examination-oriented,

focusing mainly on examination skills rather than actual mastering of the knowledge (Roesgaard, 2006; Kim & Chang, 2010; Liu, 2012).

With the single focus of securing good examination results, shadow education may distort the overall curriculum, thus affecting the overall learning of the students (Bray & Silova 2006; Bray & Lykins 2012). As observed by Huang (2004), some students would pre-learn the lessons with their private tutors thus gaining a false impression of their competence and be less attentive in their mainstream schooling; this would inevitably affect their performance. This is because the private tutors place emphasis only on producing the correct answers rather than proper exploring of the knowledge to be gained.

Another related concern is the pressure that students have to endure when attending both mainstream and shadow education. Foondun (1992) quoted the then Minister of Education of Mauritius querying the appropriateness of having school students enduring longer hours of schooling than the work hours of adults. As Bray (2003) commented, it is “obvious that children who attend both mainstream and supplementary classes are placed under considerable pressure” (p.33). It was further pointed out by Bray and Silova (2006) that some quarters accuse shadow education for contributing toward a stifling of creativity, which if left unchecked, can damage the basis of economic production.

### **3.4 Impact of shadow education on societies**

Shadow education is costly, and given that, it is only nature that it is more easily available for the rich than the poor. As such, shadow education becomes a mechanism that maintains and even increases social inequalities (Bray, 1999, 2003, 2006, 2009; Bray & Silova, 2006), so much so that the richest ten per cent of households in South Korea spent twelve times the amount spent by the poorest ten per cent of households on procuring shadow education (Yi, 2002).

In addition to that, richer families have the means to afford better quality tutoring services, which translates to more tutoring more tailored to individual needs; and most likely taking place in the student’s home; while poorer families would have to settle for mass-produced forms of tutoring, which would not be as effective or as convenient (Bray, 2003).

In some cultures, such as in Sri Lanka, supplementary private tutoring has become a norm of students’ daily life experiences. The end result is that children are denied of a proper childhood and this denial would have long term implications on the students in their future lives. (Wijetunge, 1994, cited by Bray 2003). Wijetunge (1994) observed that students are drawn to private tutoring just like moths to flame.

More than a quarter of the school dropouts in the slum of Delhi, India did so due to their inability to bear the high costs of shadow education; for it is public sentiment that merely attending mainstream schooling does not bear any positive result; thus students who are unable to engage in shadow education would simply withdraw from school altogether (Chugh, 2011).

School teachers in Hong Kong and China have been known to leave the school system for the greater financial rewards of the being private tutors. Others who could have become quality teachers are choosing to become private tutors over entering the schooling system, offering their services only to those who could afford. This is a sad inefficient use of the overall resources of society as shadow education system undermines mainstream schooling by removing talent (Bray & Lykins, 2012).

### **4.0 The Lack of Research in Malaysia**

Unfortunately, if compared with neighbouring countries in the Southeast Asia region, such as Singapore, Cambodia and Thailand, and other Asia countries like Japan and the Republic of Korea, as mentioned above, there is a lack of large scale research conducted to ascertain the expanse of shadow education in Malaysia since the effort of Marimuthu, et al (1991); hence, to-date, the true expanse of the Malaysian shadow education system remains very vague.

The only data available which may reflect the extent of the existence of a shadow education system in Malaysia are either outdated or were data obtained for other fields of research. Studies by Marimuthu, et al. (1991) and Chew and Leong (1995), which relied upon the data of Marimuthu, et al. (1991), would be examples of the former, which sadly no longer present an accurate reflection of today’s situation; while the later were never meant to measure the extent of shadow education in Malaysia; the study by Kenayathulla (2012) was focused upon the economics of household educational decision, while the focus of Tan (2011) was the economic impacts of migrant maids. Furthermore, the sample sizes of both Tan (2011) and Kenayathulla (2012) are rather restrictive, both in term of sampling population and geographical area sampled, thus would be insufficient to be used as an accurate reflection of the current situation in Malaysia.

## 5.0 The Need for Research in Malaysia

In order to allow for comparative studies to be done in the field of shadow education in Malaysia, it would be of upmost importance to close the information gap that currently exists. Thus, it is necessary for there to be a large scale collection of comprehensive data on the engagement of shadow education in Malaysia. From the collected data thereof, a comparative study could be done to map out the developments and changes in the landscape of shadow education in Malaysia since the work done by Marimuthu, et al. (1991).

With such data collection, it would also be possible to close of gap of data for comparison with other countries as well, thus bringing the study of shadow education in Malaysia on par with the research done in other countries; which in the long run, would provide a base of continuous tracking of the development and growth of shadow education in Malaysia as well as providing data for comparative studies.

In addition to statistical information, by analysing the data collected, it would also be possible to examine the actual relationship between the mainstream education system with the shadow education system in Malaysia. It would be possible to map out the evolution of both systems and examine if there is any positive or negative correlation between the evolutions of the two systems.

Further, with a greater understanding of the situation of the shadow education system in Malaysia, it would then be possible to formulate policies in consideration to either control, guide manipulate and curtail the inorganic growth of the shadow education industry or to encourage, stimulate and promote it. In other words, with a better understanding of the actual situation, it would be then possible to formulate policies to better regulate the industry.

## 6.0 Conclusion

As mentioned earlier, while there are a lot of literatures on shadow education, there is a lack of current literature on shadow education in Malaysia. The available data on shadow education in Malaysia is either out-dated data that may no longer be an accurate reflection, or data collected for purposes other than in-depth evaluation of the situation of shadow education in Malaysia.

As can be seen from the discussion above, the impact of shadow education is vast and wide, and may even impact the society as a whole beyond the reign of education. The phenomenon is definitely growing in Malaysia, but the lack of research in this area made it difficult, if at all, for any proper planning to be done to formulate measures and policies to react to this growth and to limit any adverse effects it may have on the society.

Thus, it would be of upmost importance that this phenomenon is being studied and monitored.

## Reference

- Biswal, B. P. (1999). Private tutoring and public corruption: A cost-effective education system for developing countries. *The Developing Economies*, 36(2), 222-240.
- Bray, M. (1999). *The shadow education system: Private tutoring and its implication for planners*. Paris: International Institute for Educational Planning, United Nations Educational, Scientific and Cultural Organisation.
- Bray, M. (2003). *Adverse effects of private supplementary tutoring: Dimensions, implications and government responses*. Paris: International Institute for Educational Planning, United Nations Educational, Scientific and Cultural Organisation.
- Bray, M. (2006). Private supplementary tutoring: Comparative perspectives on patterns and implications. *Compare: A Journal of Comparative and International Education*, 36(4), 515-530.
- Bray, M. (2009). *Confronting the shadow education system: What government policies for what private tutoring?* Paris: International Institute for Educational Planning, United Nations Educational, Scientific and Cultural Organisation.
- Bray, M. (2010). Researching shadow education: Methodological challenges and directions. *Asia Pacific Education Review*, 11, 3-13, DOI: 10.1007/s12564-009-9056-6.
- Bray, M. (2011). *The challenge of shadow education: Private tutoring and its implications for policy maker in the European Union*. Brussels: Directorate-General for Education and Culture, European Commission.
- Bray, M. & Kwo, O. (2014). *Regulating private tutoring for public good: Policy options for supplementary education in Asia*. Hong Kong: Comparative Education Research Centre, University of Hong Kong.
- Bray, M. & Lykins, C. (2012). *Shadow education: Private supplementary tutoring and its implication for policy makers in Asia*. Mandaluyong City: Asian Development Bank.
- Bray, M. & Silova, I. (2006). The private tutoring phenomenon: International patterns and perspectives. In I. Silova, V. Būdienē & M. Bray (Eds.), *Education in a hidden marketplace: Monitoring of private tutoring* (pp.24-70). New York: Open Society Institute.

- Cheo, R. & Quah, E. (2005). Mothers, maids and tutors: An empirical evaluation of their effect on children's academic grades in Singapore. *Education Economics*, 13(3), 269-285, DOI:10.1080/09645290500073746.
- Chew, S. B. & Leong, Y. C. (1995). *Private tutoring in Malaysia and Sri Lanka: A comparative study*. Kuala Lumpur: Department of Social Foundations in Education, University of Malaya.
- Chugh, S. (2011). *Dropout in secondary education: A study of children living in slums of Delhi*. New Delhi: National University of Educational Planning and Administration.
- Dawson, W. (2010). Private tutoring and mass schooling in East Asia: Reflections of inequality in Japan, South Korea, and Cambodia. *Asia Pacific Education Review*, 11, 14-24, DOI: 10.1007/s12564-009-9058-4.
- De Silva, W. A. (1994). *Extra-school tutoring in the Asian context with special reference to Sri Lanka*. Maharagama: Department of Education Research, National Institute of Education.
- Fawzey, F. (1994). *Private tutoring: Analysis and foundation*. Tanta: Dara Al Kotob.
- Fergany, N. (1994). *Survey of access to primary education and acquisition of basic literary skills in three generations in Egypt*. Cairo: United Nation's Children's Fund.
- Foondum, A. R. (1992). *Private tuition in Mauritius: The mad race for a place in a 'five star' secondary school*. Paris: International Institute of Education Planning, United Nations Education, Scientific and Cultural Organisation.
- George, C. (1992, April 4). Time to come out of the shadows. *Straits Times*, p.28.
- Hargreaves, E. (1997). The diploma disease of Egypt: Learning, teaching and the monster of the secondary leaving certificate. *Assessment in Education*, 4(1), 161-176.
- Huang, H. M. (2004). Effects of cram schools on children's mathematics learning. In L. Fan, N. Y. Wong & S. Li (Eds.), *How Chinese learn mathematics: Perspective from insiders* (pp.284-304). Singapore: World Scientific Publishing.
- Hussien, M. G. A. (1987). Private tutoring: A hidden educational problem. *Educational Studies in Mathematics*, 18(1), 91-96.
- Ireson, J. & Rushfoth, K. (2005). *Mapping and evaluating shadow education*. London, United Kingdom: Institute of Education, University of London.
- Jayachandran, S. (2014). Incentives to teach badly: After-school tutoring in developing countries. *Journal of Developing Economics*, 108, 190-205, DOI: 10.1016/j.jdeveco.2014.08.008.
- Kenayathulla, H. B. (2012). *An economic analysis of household educational decisions in Malaysia* (PhD thesis). Indiana University, Bloomington.
- Kenayathulla, H. B. (2015). Research on private tutoring in Malaysia: Methodological insights from a quantitative study. In M. Bray, O. Kwo & B. Jokić (Eds.), *Researching private supplementary tutoring: Methodological lessons from diverse cultures* (pp.49-58). Hong Kong: Comparative Education Research Centre, University of Hong Kong.
- Kim, J.-H. & Chang, J. (2010). Do governmental regulations for cram schools decrease the number of hours students spend on private tutoring? *KEDI Journal of Educational Policy*, 7(1), 3-21.
- Kwok, P. (2001). Local knowledge and value transformation in East Asian mass tutorial schools. *International Education Journal*, 2(5), 86-97.
- Liu, J. (2012). Does cram schooling matter? Who goes to cram schools? Evidence from Taiwan. *International Journal of Educational Development*, 32, 46-52, DOI:10.1016/k.ijedudev.2011.01.014.
- Marimuthu, T., Singh, J. S., Ahmad, K., Lim, H. K., Mukherjee, H., Osman, S., ... Jamaluddin, W. (1991). *Extra-school instruction, social equity and educational quality*. Singapore: International Development Research Centre.
- Popa, S. & Acedo, C. (2006). Redefining professionalism: Romanian secondary education teachers and the private tutoring system. *International Journal of Education Development*, 26, 98-110, DOI: 10.1016/j.ijedudev.2005.07.019.
- Roesgaard, M. H. (2006). *Japanese education and the cram school business: Functions, challenges and perspectives of Juku*. Copenhagen, Nordic Institute of Asian Studies Press.
- Sawada, T. & Kobayashi, S. (1986). *An analysis of the effect of arithmetic and mathematics education at Juku*. (P. Harváth, Trans.). Tokyo, Japan: National Institute for Educational Research.
- Silova, I., Būdienė, V. & Bray, M. (Eds.) (2006). *Education in a hidden marketplace: Monitoring of private tutoring*. New York, NY: Open Society Institute.
- Stevenson, D. L. & Baker, D. P. (1992). Shadow education and allocation in formal schooling: Transition to university in Japan. *American Journal of Sociology*, 97(6), 1639-1657.
- Tan, P. L. (2011). *The economic impact of migrant maids in Malaysia* (PhD thesis), University of Waikato, Hamilton.
- Wijetunge, S. (1994). Some psychological aspects of the private tuition system. *Economic Review*, 20(3), 15-17.
- Yasmeen, S. (1999). The spreading private tuitions epidemic. *Journal of Education Excellence*, 21-25.
- Yi, P. (2002). *Household spending on private tutoring in South Korea*. Paper presented at the Annual Conference of the Comparative & International Education Society, Orlando, FL.
- Yiu, J. M. T. (1996). *A study of curriculum change in Hong Kong: The case of advanced level economics* (M.Ed. thesis). University of Hong Kong, Hong Kong.