Learning Diversity in the Chinese Classroom

Contexts and Practice for Students with Special Needs

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Hong Kong University Press is honoured that Xu Bing, whose art explores the complex themes of language across cultures, has written the Press's name in his Square Word Calligraphy. This signals our commitment to cross-cultural thinking and the distinctive nature of our English-language books published in China.

"At first glance, Square Word Calligraphy appears to be nothing more unusual than Chinese characters, but in fact it is a new way of rendering English words in the format of a square so they resemble Chinese characters. Chinese viewers expect to be able to read Square Word Calligraphy but cannot. Western viewers, however are surprised to find they can read it. Delight erupts when meaning is unexpectedly revealed."

— Britta Erickson, The Art of Xu Bing

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The *Regular* Chinese Classroom

Shane N. PHILLIPSON

Jade which has not been polished is of no use. (Chinese proverb)

If you work at it you can do it. (Japanese proverb)

The unique nature of the Chinese classroom is discussed in this chapter, including:

- What is meant by a Confucian-heritage culture, and where it is to be found;
- The approach to learning in a Confucian-heritage culture;
- What it means to be a "Chinese" learner;
- The motivation for learning in a Confucian-heritage culture;
- The role of the English language in a Confucian-heritage culture; and
- The role of parents in their children's learning.

Introduction

Schools are places where students come to learn. Behind this truism, however, lies a great deal of diversity. Each school develops a unique culture as a consequence of its importance in the wider community; and, as pointed out in Marsh (2000), the culture of a school has both an anthropological and aesthetic basis, which contribute to its unique character. For Chinese schools, the anthropological basis of a school's culture originates from its Confucian heritage, including its specific values, rituals and ceremonies, as well as its geographical location and status within the community. Of course, the school's location and other factors such as the social-economic status of the students' families determine the relative influences of other

cultures (see Figure 1.1 on p. 5). In terms of its aesthetic basis, the culture of Chinese schools is also determined by the subjects taught, the skills of the teachers and the support from the school's immediate community.

This chapter begins with a discussion of the influence of Confucian-heritage culture (CHC) on learning and then describes the role of parental expectations in this process. The components of the Chinese classroom are then explored, including the processes that occur within the classroom, the physical environment, and curriculum and pedagogical approaches, such as the use of information communication technologies and the medium of instruction. Next, the CHC approach to the nature and development of knowledge is explained, followed by its approach to learning, including the values placed on education, motivation and learning styles. The goal of this chapter is to describe the Chinese learner within the wider context of the classroom as a basis for understanding the diversity of learning within Chinese classrooms.

The Chinese classroom will generally mirror the school's culture, although there will always be some diversity between classrooms in the same school. Within the classroom, the Chinese learner will both influence and be influenced by the school's culture. Despite school cultures changing over time (Marsh, 2000), there will be some common elements that make the Chinese school and classroom readily identifiable. For this book, the Chinese classroom is construed as having an anthropological basis in the CHC, as well as the aesthetic influences of teachers and involvement in communities that also derive predominantly from the CHC. Accordingly, for students who participate in these schools the generic term "Chinese learners" is used, despite the fact that many of these students come from countries other than China. However, many studies refer to differences between East and West, using participants from the USA and East Asia. As these studies do not refer specifically to the CHC, care must be taken when applying their findings.

Globalization and the Confucian-heritage Culture

Rather than reducing cultural diversity, the increasing globalization of education has produced a growing sense of ethnic identity (Smelser, 1994, cited in Torres, 2002). In the field of special education, the movement toward the full inclusion of children with disabilities in the regular classroom is subject to the pressures of globalization. Significantly, these pressures on education in general contrast with the specific goals of inclusion. At the curriculum level, globalization encourages a competitive and outcomes-based curriculum which values high ability and skills in areas such as mathematics, languages (especially English) and science, as well as higher-order thinking processes, including comprehension, analysis and abstract thought (Naidoo & Jamieson, 2005; Pereira dos Santos, 2001). At the level of

economic resources, inclusive education requires support that may not necessarily have an obvious financial return, thus generating a tension with the forces of globalization that require a return on economic investment (Parmenter, 2001; Pereira dos Santos, 2001).

Because globalization also affects Chinese learners — whether or not they are in countries with a CHC — the next section describes the unique nature of the Chinese classroom and provides a firm foundation for recognizing the learner diversity it contains.

The Approach to Learning in the Confucian-heritage Culture

A central component of the Chinese classroom is its cultural context. In order to understand the basis of the phenomenal success of East Asian students, both studying abroad and in their country of birth, Lee (1996) outlined the view of learning within the CHC, the features of which are shared to a greater or lesser extent by societies in China (including Hong Kong), Taiwan, Singapore, Korea and Japan. The source materials for Lee's analysis were the translated works of *The Great Learning*, one of the four books of Confucianism. Lee identified four important themes in the attitudes toward education and learning in the CHC: (1) educability and perfectionism; (2) learning, effort, will-power and the attainment of perfectionism; (3) learning for self-realization; and (4) the role of personal reflection and enquiry in developing deep approaches to learning.

In broad terms, the CHC is characterized by a high level of enthusiasm for education, in the belief that it is the key to both societal and personal development (Lee, 1996). More specifically, Confucianism maintains that all people are educable, although to different degrees because of individual differences in intelligence and propensities for study. Confucius also identified four groups of people based on the origin of knowledge as well as attitudes towards study — namely those who are born with knowledge, those who study to acquire knowledge, those who study after being beset with difficulties, and those who do not study despite having difficulties (Lee, 1996, p. 28).

Human perfection, or sagehood, in the CHC is closely aligned with the acquisition of knowledge, for which an individual's conscious and considered effort is essential. Furthermore, effort often involves experiencing and overcoming hardship (Lee, 1996, p. 32). Central to the idea of perfectibility is the emphasis on self rather than collective perfection — it is only through the efforts of the individual that knowledge can be gained. Once gained, however, the family shares in the economic and social rewards that come from these individual efforts.

In drawing attention to the "paradox" of the Chinese learner, Watkins and Biggs (1996) described Western misperceptions about learning within the CHC,

including alleged reliance on "low-level, rote based strategies" (p. 49). It is clear, however, that the CHC encourages a deep approach to learning (Lee, 1996), where the memorization of information merely provides a foundation for deeper kinds of thinking such as reflection and enquiry. Also considered important for the development of deep understanding is open-mindedness, and teachers who challenge rather than push students towards learning (Lee, 1996). These ideas are explored in greater depth later in this chapter.

The value of education in the Confucian-heritage culture

Lee (1996) also showed that learning in the CHC was not just concerned with the development of perfection. Learning had a utilitarian purpose, allowing individuals to attain positions of influence beyond those they exercised in their families. Attaining a position in the government or civil service was one way of achieving such influence. Along the way, the individual may also acquire extrinsic rewards such as "… fame, wealth, a beautiful wife, and upward social mobility …" (p. 37). Biggs (1995a) has argued that in Hong Kong, achievement motivation is both individualistic and collective, reflecting an international as well as CHC influence on the education system. It is individualistic because of the highly competitive nature of society (and education) in Hong Kong; but at the same time, it is collective since the wider family benefits economically and through the gaining of face.

The main purpose of education in ancient China was to secure a position in the Imperial government, which brought with it the promise of wealth and fame. The Chinese people, as well as other East Asians, have long held a strong belief in the utilitarian value of education, prompting one emperor in the Sung Dynasty (AD 960–1279) to proclaim that "in books one finds golden mansions and women as beautiful as jewels." The CHC has affected many of China's neighboring countries, especially Korea and Japan. For example, Rohlen (1983, p. 78) noted that the relentless pursuit of educational excellence by Japanese high school students "which is followed by a good job, economic security, respect, and status in a technocratic world" is no different from the earlier Chinese view.

While countries such as China, Taiwan, Singapore, Korea and Japan share the CHC, it would be incorrect to assume that they are influenced equally by this heritage. For example, the influence of the West on education in Hong Kong (Hong et al., 2000) extended over many decades, producing an idiosyncratic system in which assessment is pervasive and intensive, and possibly more conducive to surface than deep learning. Also, at the tertiary level, many examiners are external to Hong Kong, which restricts the types of assessment tasks that can be used (Tang & Biggs, 1996). In addition, the long-running and continuing debate regarding the use of English as the medium of instruction in both primary and secondary schools has

produced perceived inequities and, hence, pressures on the schools and education system unparalleled elsewhere (Li, Leung, & Kember, 2001; S. N. Phillipson, 2005; Tung, Lam, & Tsang, 1997). Some of these issues are examined in greater detail later in this chapter.

The Confucian-heritage culture and models of learning

Li (2000) argued that attempts to understand the psychological effects on Chinese students of changes to school systems cannot be based on research conducted in Western cultures. The unique nature of learning in Chinese societies, epitomized in Chinese classrooms, makes it difficult to interpret meaningfully the findings of studies that were not conducted in the Chinese culture or classrooms. According to Li's commentary, models of learning and achievement in the West focus on the individual, including their cognitive processes, motivations for learning, intelligence and narrow school and social environment. For example, in the USA, adult learners focus on:

- externally existing and discrete bodies of knowledge such as mathematics and biology;
- institutional resources such as libraries;
- mental processes such as logic and critical reasoning;
- learner capabilities such as intelligence; and
- learning activities.

In contrast, Li (2000, p. 181) maintained that Chinese models of adult learning emphasize the attainment of self-perfection through complex interactions between individuals and their wider social environment. Chinese learners are concerned with:

- seeking knowledge and cultivating a passion for lifelong learning;
- fostering diligence, endurance of hardship, persistence and concentration;
- feeling "shame-guilt" for a lack of desire to learn;
- achieving breadth and depth of knowledge, social honors and material benefits; and
- making contributions to society.

In Li's view, when these two different orientations to learning are placed in a social context, learning in the CHC involves a clear relationship between the intellectual, social and moral aspects of individuals in developing their life purposes, goals of learning, attitudes and courses of actions — whereas learning in the West lacks a clear notion of purpose. For him, the Western orientation to learning is more concerned with self and the mental processes that most effectively acquire and distinguish between different types of knowledge; and, furthermore, knowledge and learning are "neutral" in value (p. 182).

Li (2000) concluded that it is naïve to assume that the psychological pressure placed on Chinese students (including those from Hong Kong) because of changes to school systems is the same as for those in other cultures. Taking the argument one step further, the stresses under which Chinese students and their families are placed when they are studying in Western classrooms, or when Western pedagogies or curricula are adopted, may not necessarily be the same as for their Western peers. In societies such as China, Japan and Korea, the process of self-cultivation and self-empowerment is not only an individual pursuit but also the fulfillment of family duties and social obligations, and is more explicitly expressed by students.

The Student from the Confucian-heritage Culture

A number of studies have suggested that Chinese learners are qualitatively different from their Western peers. Based on the results from the Third International Mathematics and Science Study (TIMSS), Leung (2002) and Papanastasiou (2002) argued that the success of students from Hong Kong, Singapore, Japan and Korea, in comparison with similar students from Western countries, cannot be explained simply by the importance they assign to the study of mathematics, or by sheer hard work. Leung showed that their high achievement was not associated with a "… corresponding level of positive attitudes towards mathematics" (p. 105); and Papanastasiou also found that students' attitudes towards mathematics did not always predict high achievement, and that the relationships between instructional variables and mathematics achievement were dependent on the cultural context (p. 144). Both Leung and Papanastasiou suggested that an experimental approach to research was required in order to unlock the secrets behind the success of students from these countries. To date, this research is yet to be completed.

Other recent studies have provided strong evidence for differences between East and West in a number of thinking and social tasks. These include numerical tasks involving memory and speed of thinking (Hedden et al., 2002), categorization (Ji, Zhang, & Nisbett, 2004), causal reasoning (Norenzayan & Nisbett, 2000) and modes of communication (Sanchez-Burks et al., 2003), particularly among younger members of the culture (Park, Nisbett, & Hedden, 1999). At a social level, some work has shown that East Asians view behavior as involving complex interactions between the person, the object and other contextual factors — unlike Americans who see it as resulting from a person's disposition (Norenzayan & Nisbett, 2000). In their review of a number of studies, Norenzayan and Nisbett concluded that it is more difficult for Euro-Americans to separate the person from their expressed point of view. For Asian participants, in contrast, the context of the situation dictates whether a given viewpoint is believed to be an accurate reflection of a person's opinion. Norenzayan and Nisbett proposed that these differences reflect a

fundamental difference in cognitive processes, with Asians tending to think holistically rather than analytically.

Holistic cognitive processes include communication styles. In an experimental study involving adults, Sanchez-Burks et al. (2003) showed that people from East Asia (Korea, China, Singapore, Taiwan, and Japan) paid more attention to indirect information compared to those of an Euro-American origin, particularly in formal situations such as work. In another study designed to measure the relative importance of language and culture, people who used languages such as Japanese or Tagalog, compared to English speakers from the USA, paid more attention to tone than verbal content when interpreting words (Ishii, Reyes, & Kitayama, 2003).

Although all the above work originated outside the classroom, there is every reason to expect that these and other differences can also be found inside it. If both Chinese students and their teachers think holistically, then more attention is given to the field within which an object is found. In physics, for example, explanations for the behavior of a projectile lie not just in the attributes of the object, but in the properties of the space in which it is traveling. The consequences of any mismatch between "analytic" explanations by Western teachers that focus only on the properties of the projectile and holistic thinking by Chinese students remain to be studied (see "Points for Discussion and Learning Activities 1"). In general, however, mismatches between teaching and learning styles are recognized as important variables affecting the outcomes of learning. When the teaching and learning styles reflect fundamental differences in thinking processes, the consequences of the mismatch may be more dramatic.

How students from a Confucian-heritage culture learn

Research into the learning and pedagogical approaches used by students and teachers within the CHC classroom have identified memorization as a key strategy in the development of understanding (Marton, Dall'Alba, & Kun, 1996). However, as Marton and his colleagues have pointed out, memorization does not equate to rote learning and deep understanding, as opposed to surface learning, is possible through the process of memorization. Using a number of case studies, they showed how repetition can bring about understanding over a period of time:

> In the process of repetition, it is not a simple repetition. Because each time I repeat, I would have some new idea of understanding, that is to say I can understand better. (p. 81)

In studying the development of learning from primary through to secondary schooling in Hong Kong using a cross-sectional (rather than longitudinal) approach,

Watkins (1996) showed four clear stages. The first stage took place in the primary school (years 1 to 6), when the intention of learning was accurate reproduction of the content of the lessons and the learning strategy was rote memorization. At the beginning of secondary school, when the workload increased to the point where it became impossible to remember everything, students became selective in what they memorized. At this second stage, they began to exercise a degree of metacognition and the locus shifted from teacher-dependent selection of content to self-selection of what was considered important.

At the third stage, the goal of learning was still the reproduction of learned material, using the combined strategies of understanding and memorization, but the students became even more metacognitive and the locus of control even more learner-centered. Assessment now consists of more flexible questions rather than simply requiring the reproduction of content. The aim of learning in the fourth stage was to both understand and achieve in the examinations, using a combined strategy of understanding and memorization, but Watkins noted that this stage was not reached by any of the students in his study.

To summarize, understanding in the CHC is seen as developmental. Only through effort and seeing the relationships between fewer pieces of a problem will a complete and full understanding of the whole problem finally be possible — in contrast to the West where understanding is often seen as a "process of sudden insight" (Watkins & Biggs, 2001, p. 6). Only when the problem is fully comprehended can the complete problem be memorized. Also, memorization is often viewed as a lower or inferior form of thinking compared with analysis, synthesis (creativity) or evaluation, and consequently proportionally more time is spent in Western schools, including primary schools, on these higher forms of thinking.

Motivations for learning in the Confucian-heritage culture

Student motivation is an important aspect of the CHC classroom. Because a detailed description of the various models of motivation is beyond the scope of this chapter, the reader is directed to "Further Reading' on educational psychology at the end of the chapter. This section is limited to reviewing some of the studies that have highlighted the peculiarities of motivation in the CHC. However, as Biggs and Watkins (1996) have pointed out, the distinction between the various forms of motivation, and the widespread notion that intrinsic motivation is the only "meaningful and worthwhile" (p. 273) way to achieve deep understanding, is not applicable in the CHC. Instead, motivation is better understood as a potent amalgam of many "energizing" forces, making the intrinsic/extrinsic polarity of limited practical value.

Expectancy value theory of motivation: There are several ways of understanding how and why students are motivated to learn, including making learning both important and possible. The relationship between importance and possibility has been referred to as the expectancy value theory of motivation (see Biggs, 1995a; Eggen & Kauchak, 2004). The importance, or value, of a learning task can be increased through an understanding of four different models of motivation, namely *extrinsic*, *social*, *achievement* and *intrinsic motivation* (Biggs, 1995a). As Biggs indicated, explanations of why students are motivated to learn can be based on more than one these models at the same time.

***Extrinsic motivation*:** Briefly, *extrinsic motivation* can be explained by the consequences of behavior. Some consequences — *rewards* — lead to an increase in the likelihood that the same sort of behavior will be seen in the future, while others outcomes — *punishments* — result in a decrease in this likelihood. The value of the learning task is then determined by the associated reward or punishment. It is often difficult for a teacher to predict whether a consequence will reward (increase a desired behavior) or punish (decrease an undesirable behavior) in any one student.

Many studies have shown that, in a variety of ways, Chinese students in Hong Kong are similar to those in the West in their responses to rewards and punishments (Salili, 2001). For example, Hong Kong students consider teachers' use of rewards as more effective in producing good behavior and improving performance than punishment. More specifically, the use of term reports and certificates was rated the most effective strategy for improved performance and behavior, unlike students from the West.

Good grades, positive comments and notes sent to parents were also considered to achieve the desired effect, as was public praise. In addition, giving students roles of responsibility was considered effective for behavior-related tasks, particularly for students with low achievement. Approaches that were considered most successful in reducing poor performance included repositioning the student closest to the teacher, followed by referral to the discipline master or principal.

As regards punishment, Hong Kong students believed that extra work and explicit instructions from teachers on how to make the necessary changes were the most effective strategies; and punishments related to the issuing of demerit points were considered the least effective.

However, the approaches perceived by students as most successful were not those used by teachers. Surveys of teachers' strategies have shown that they most commonly employ punishments, particularly "black marks, demerits, writing lines, standing in class, extra work" (Salili, 2001, p. 90) — but, as Salili pointed out, no definitive work has yet been carried out on the effectiveness of these strategies.

Social motivation: According to Biggs (1995a), social motivation is concerned with the value placed on an activity by someone else. If a task is given a high value by someone admired or considered important, then the task is also assigned high

value and importance. A particular form of social motivation, achievement motivation, relates to the need for "some people … to perform a task better than someone else' (p. 88). Students who are motivated to achieve success (and gain face) are called "high-need achievers," while those who are concerned with avoiding failure (and loss of face) are referred to as "low-need achievers." As Biggs indicated, achievement motivation was originally concerned with the individual, but is particularly important in collective societies such as the CHC, since individuals identify strongly with their extended families, making this type of motivation "a particularly powerful motivating stimulus" (p. 89) when used effectively.

Intrinsic motivation: The value of a task can also be increased through intrinsic motivation, which is concerned with the human need to develop, build competencies and understand how the world works. For Biggs (1995a), an important aspect of intrinsic motivation is curiosity, which occurs when there is an optimal mismatch between what an individual knows and what he/she senses as challenging — and he suggested that it can be encouraged in the classroom by using discrepant events and effective questioning, rather than by just providing facts.

Success motivation: Several factors are significant in influencing the likelihood, or expectation, of students' success in any given task, such as teachers' expectations of a successful outcome, and student beliefs about their ability to carry out the task successfully (referred to as "self-efficacy") and perceptions of the task difficulty. Important in developing self-efficacy are the possible attributions (or causes) of past successes and failures, including effort, ability, task difficulty and luck (Weiner, 1986), and whether or not these attributions are stable, controllable, or internal. Attribution theory allows the prediction of future behavior, including that of students from the CHC, on the basis of these attributions and their dimensions (Biggs, 1995a).

Causes of success and failure: Research conducted in Hong Kong to determine the cultural contexts of the effects of causal attributions has shown that there are some differences in the ways teachers use praise and criticism to convey information to their students. In a series of experiments reported by Salili (2001), students' estimates of their teachers' perceptions of their *ability* and *effort* were based on differences in the teachers' comments as well as whether or not they succeeded or failed in a series of difficult or easy mathematics tasks. The results showed that younger students could not distinguish between *ability* and *effort* and that, for them, praise for success reflected both high *ability* and greater *effort*. Among older Chinese students, apportioning blame for failure to a partner in a learning task was not an indicator of *ability*, in contrast to students from the West. For these Chinese students, the results also showed a positive correlation between *ability* and *effort*, suggesting to Salili a strong cultural influence in which *ability* is less important than *effort* in determining the source of the praise or blame.

These experiments confirmed the conclusions of earlier studies that Chinese students attribute success and failure primarily to *effort* and *learning strategies* rather than *ability*; for them, ability is a modifiable and controllable attribute that is largely determined by *effort* (Salili, 1996). In noting the causal attributions for success and failure, Ho et al. (1999) found that students rated internal factors (*effort*, *ability*, *interest*, *study skills*) as more important than external ones (*teacher's help*, *course difficulty*, *English instruction*, *family's help* and *luck*) for both success and failure. When looking specifically at success, the rank order of importance of the attributions was *effort*, *teacher's help*, *study skills*, *interest*, *course difficulty*, *ability*, *English instruction*, *family's help* and *luck*; and for failure, the rank order was *course difficulty*, *effort*, *interest*, *teacher's help*, *English instruction*, *study skills*, *ability*, *family's help* and *luck*.

Goal orientations in the Confucian-heritage culture

Also of relevance to the coverage of this chapter are goal orientation theories whereby students set goals and then manage their behavior toward their attainment (Salili, Chiu, & Lai, 2001). In reviewing this area, Salili, Chiu and Lai identified two themes as important in the context of the CHC, namely learning (or mastery) goal orientations and performance goals. Students who engage in learning orientations typically use deep learning strategies and are able to direct their cognitive and metacognitive skills more effectively. They are also more likely to attribute success (and failure) to effort rather than ability and have a higher sense of self-efficacy and self-esteem.

Students with performance goals, however, are more concerned with ego-enhancement and "… judge their ability in comparison with their classmates" (Salili, Chiu, & Lai, p. 223), using grades and approval from teachers as the basis of their comparisons; and they are also more inclined to use surface approaches to learning. Consequently, they may avoid challenging tasks in order to protect their self-worth as this is judged in relation to the achievements of others.

The same study also investigated the cultural context of goal orientations, self-efficacy, test anxiety, effort and achievement in Chinese senior high school students from Hong Kong, expatriate Chinese students in Canada and European Canadian students. The results indicated that the cultural context played a significant role in both motivation and achievement. The following points paraphrase their main findings and interpretations:

1. Competition was more intense in Hong Kong schools than in Canadian schools.
2. Hong Kong students spent more time studying, but received lower grades than their Canadian counterparts. Although the levels of achievement were much higher in Hong Kong, fewer students were able to attain this standard.

3. In contrast to Canadian schools — where Chinese Canadian students spend more time studying and receive higher grades than European Canadians — examination results in Hong Kong were not linked to effort. Disturbingly, the results suggested that "those who worked harder tended to have poorer examination results' (p. 233), especially students who were relatively low achievers. Chinese Canadian students are thought to work harder to meet the demands of a filial society as well as to fulfill the immediate expectations of their families who are supporting them financially.
4. Hong Kong Chinese students had higher test anxiety than their Canadian counterparts, the origins of which, according to the authors, lies in the highly competitive nature of the examination system in Hong Kong, a point also made more recently in Yan and Chow (2002).
5. Hong Kong Chinese students scored lower in estimates of self-efficacy than both groups of Canadian students, which possibly reflects a culture that values modesty and humility. Salili, Chiu and Lai also proposed that self-efficacy is linked to achievement in examinations: when students consistently receive low grades over a long period of time, as in Hong Kong, self-perceptions of their competence may also be lower. Once again, Yan and Chow's (2002) study drew similar conclusions.
6. All students placed a heavier emphasis on performance goals than learning goals, and more so for both groups of Chinese students. In comparing learning goals, European Canadian students were placed highest and Hong Kong students last, and it was suggested that this reflected both an education system that was preoccupied with examinations and the additional pressures arising from the use of English as the medium of instruction.
7. For Chinese students in Hong Kong, learning and performance goals were correlated positively, suggesting that they adopted both strategies in their studies; but for both groups of Canadian students, they were correlated negatively — which indicates a teacher-centered and student-centered focus respectively in these two education systems.
8. For all three groups, family-related goals were rated the highest of the three socially-oriented goals (the other two being teacher- and peer-orientations), and socially-oriented goals were more important for the Chinese students than the European Canadian students.

Salili, Chiu and Lai (2001) concluded that a harsh education system is particularly damaging for students with low ability or special needs and that self-efficacy is "… the single most important predictor of academic achievement." Consequently, educations systems should focus on the development of self-efficacy as well as the motivational beliefs of students, particularly those related to effort for high-ability students and study skills. Also, family-related goals correlated

highly with performance for all students, indicating that family influences remain an essential aspect of student performance in the CHC.

Concluding remarks on motivations for learning in the Confucian-heritage culture

Education in the CHC principally serves a pragmatic purpose. Studies have shown that students from a CHC are motivated by a variety of factors, with intrinsic motivation per se being of little importance. It is not altogether surprising that CHC classrooms generally do not reward students who are motivated by interest alone. Interestingly, students in Hong Kong who are more intrinsically motivated have lower levels of achievement than their extrinsically motivated peers in primary and secondary schools and universities (Hong, 2001; Moneta & Siu, 2002).

As discussed previously, the value of education in the CHC is not determined by the needs of the individual alone, but by the needs of the wider social and cultural group. For example, Kim's (2002) study of Korean parents' views on the benefits of higher education demonstrated that their major concerns for their children included giving them opportunities to experience the "joy of learning", increasing their self-esteem, reducing their socio-economic disadvantage, and providing them with opportunities to form social networks.

The Use of English as the Medium of Instruction

In some classrooms in the CHC, English is used as the medium of instruction (EMI). English-medium schools hope that, in addition to teaching the curriculum, they will improve their students' English language proficiency. However, a range of studies have shown the difficulties facing Chinese students when studying using EMI, and two studies (Li, Leung, & Kember, 2001; Tung, Lam, & Tsang, 1997) have grouped these problems into four broad areas: *reading*, *writing*, *speaking* and *listening*.

Reading: When reading texts and study materials written in English, Chinese students want clarification in Chinese from their teachers; and given a choice between reading full Chinese or English texts, they prefer to read the full Chinese text first and then refer to the English text (Tung, Lam, & Tsang, 1997). When asked about their reading skills after a course of study using EMI, more than half of the Cantonese-speaking university students reported that their reading abilities in English remained unchanged or became worse (Li, Leung, & Kember, 2001).

Writing: Cantonese-speaking tertiary students have claimed that many of their previous courses of study at the secondary level did not require them to write very often, particularly in science and applied sciences. If given the chance, students at

secondary level have reported that they would choose courses that placed less emphasis on writing skills, particularly for subjects using EMI (Li, Leung, & Kember, 2001).

Speaking: In EMI secondary schools, Chinese students have many opportunities to speak in English with their teachers. However, their preference is to use Cantonese wherever possible (Tung, Lam, & Tsang, 1997) for a variety of reasons, including difficulties in finding equivalent English words to express their ideas; that is, they often have problems with the clarification of meaning in English (Lam & Wong, 2000). Lam and Wong (2000) also found that the use of English affected relationships with other students, as peers are often perceived as lacking sympathy for those who have difficulty in expressing themselves in English, thus discouraging them from using the language in class.

Listening: According to Li, Leung and Kember (2001), two-thirds of Cantonese-speaking tertiary students believed that taking classes using English improved their listening skills because of the increased exposure to the language; and of those who considered that their listening skills had deteriorated, some attributed this to the lack of opportunities to listen to English outside class while others specifically mentioned that Cantonese was used in their other classes, implying that the use of the two languages interfered with their overall listening skills. The same research also showed that there was a "psychological influence" (p. 305) that reduced students' propensity for speaking in English to both peers and their foreign lecturers.

In an interesting qualitative study, Liu (2002) observed and interviewed three Chinese graduate students who studied in prestigious American universities. These students had high scores in the Test of English as a Foreign Language (TOEFL), as well as good results in examinations and assignments, but they seldom participated in class discussions. Liu found that these students responded only when they were (1) well prepared for the class and (2) familiar with and had confidence in their understanding of the issue to be discussed.

Language plays a fundamental part in the cognitive processing of students. For example, Ho (2001) found that, in Hong Kong, bilingual primary students used a unique mixture of Cantonese and English to support their learning, even though the materials they were studying were solely in English. Also, studies in the Philippines have shown that teaching in the mother tongue can facilitate children's cognitive development in mathematics (Bernardo, 2002).

The Classroom in the Chinese-heritage Culture

Educators consider that the classroom environment generally reflects the pervading cultural practices. Positive classrooms are normally "culture-neutral", as few studies

mention cultural differences in their climate (Marsh, 2000). Li (2000) argued that serious problems occur when the teaching methods and content do not meet students' expectations, or when students perceive that their teachers do not understand "… their needs and lacked competence in teaching methods and Chinese culture" (p. 63). This study concluded that it is crucial to appreciate cultural differences if teaching and learning are to be successful.

By Western standards, Asian classrooms generally appear to be very harsh with few resources, large classes and relentless norm-referenced testing (Watkins & Biggs, 2001). Moreover, when Western teachers come to work in Asian countries for the first time they notice that students are more attentive and quiet in class (Kennedy, 2002). Although they seldom respond to their teachers' questions, they are happy to sit and copy notes; and when they do answer questions, they give short replies such as "yes", "no", or "I don't know". Some Western teachers feel that this reflects the students' poor language skills, but this is equally common among university students, who are supposed to have a higher level of English communication skills.

In contrast to the West, silence in the CHC classroom is a sign of respect (Kennedy, 2002), meaning that students are listening attentively to the teachers and not distracting them from their teaching. It is also a face-saving strategy to avoid making unnecessary mistakes and thereby protect their self-esteem.

Curriculum in the Confucian-heritage classroom

After examining the education systems in China, Taiwan and Japan, Stevenson, Lee and Chen (1994) concluded that the curricula of these countries were highly controlled by their governments. They are often criticized as being rigid and standardized, in a schooling system which "predominantly emphasizes the learning of basic knowledge and analytical skills" (Niu & Sternberg, 2003, p. 111). The rationale behind this control and rigidity is that each child should have an equal opportunity to be educated and gain a high-level position in society. Those who work hard can be high achievers, and the early years of schooling should ensure "fair" competition by offering the same opportunities to all. For instance, when Stevenson, Lee and Chen interviewed a Japanese former education official, he expressed pride in this system, saying that:

> We need to ensure that they will have the basic skills they need to compete. As long as they have these basic skills, it is up to them where to go or how much effort they want to give in order to succeed in competition. (p. 120)

Examinations are an important aspect of the CHC, their function being to select students for places at senior high schools and universities. Countries within this culture tend to adopt an elitist approach to higher education, with only a small proportion of school-age children being able to enter colleges and universities. Since the examinations are highly competitive, parents prepare their children earnestly for them, often chiding teachers when they feel the schools do not give enough homework. In addition, parents often pay to send their children to after-school tutorial classes, or private "cramming" schools (Yan & Chow, 2002).

The psychological effects of such intensely competitive examinations on students within the CHC are beginning to be understood (Yan & Chow, 2002). For example, many Hong Kong Chinese students suffer from high test anxiety and low self-efficacy; and those who have expended a great deal of effort with little return begin to believe that they are of low ability, thus reinforcing the link between attributions of effort and ability (Hong, 2001).

Pedagogical Approaches in Confucian-heritage Cultures

The classroom environment is also affected by the teaching strategies adopted. As Biggs (1996) pointed out, there are pervasive misconceptions about the pedagogical approaches taken by teachers in the CHC that have continued to persist.

A directive teaching approach, from a young age, is common practice in many Asian countries, and writers such as Brauchli (1994, cited in Podgorecki, 1997) have expressed concern about this style of education in the Chinese schooling system: "The problem with China's schools is that, instead of teaching students how to think, they still teach what to think" (p. 78).

Gardner's (1989) experience provided an insight into this Chinese practice. When he and his family visited China, he found that the Chinese who interacted with their one and a half year old son in the hotel lobby were much more directive in attempting to shape the toddler's responses than were Gardner and his wife. The role of the teacher is not to allow children to learn through trial-and-error and experience, but to direct them in the correct procedures with care and gentleness. Creativity in the Chinese culture, as Gardner found, comes after the mastery of technique and not, as is encouraged in the West, before the acquisition of knowledge.

Teachers in the CHC spend a great deal of time on teaching their students and assessing their homework assignments, and parents and students follow this pattern of learning. As mentioned previously, parents in the CHC place a greater emphasis than in the West on the training of their children, and are more willing to participate in their daily activities (Leung, Lau, & Lam, 1998).

Information and communication technologies in the Confucian-heritage culture

The development of information and communication technology (ICT) is having a profound effect on the scope of education. It is important, therefore, to understand the ways in which ICTs are utilized in CHC classrooms. Several recent studies have suggested that these tools have potential limitations, and that only the more motivated and independent learners are likely to benefit from this teaching mode (Weiner, 2002).

Six primary schools in Hong Kong recently participated in a research project on the benefits of ICTs for their students which revealed that teachers can become a barrier to ICT-based learning. For example, during the half-year investigation, Yuen (2003) observed that teachers who were inclined to the conventional view of education and learning resisted adapting to the new role of online mentor. During the interview sessions, some teachers said that they could not allow their students to discuss issues by themselves, and that they must provide knowledge to support students' learning. Therefore, one of the biggest advantages of ICTs — the opening up of knowledge — challenges the traditional role of the Asian teacher as it emphasizes an interactive guidance and support role rather than a directive one (Smith, Ferguson, & Caris, 2003).

Learning style preferences of students from Confucian-heritage cultures

> *I hear and I forget; I see and I remember; I do and I understand.*
> (Chinese proverb)

Oxford and Anderson (1995) highlighted four characteristics of Chinese learners. In their cross-cultural investigation, they found that Chinese learners:

1. Prefer classrooms where rules are emphasized and learning is inductive;
2. Adopt a concrete-sequential cognitive style (i.e. they prefer to follow the teacher to the letter and use strategies such as memorization, lists and repetition);
3. Adopt a reflective learning style (i.e. they prefer a slow, accurate, systematic approach and are less comfortable with guessing or predicting); and
4. Seldom work in groups in class but cooperate readily outside the classroom.

A recent study of the learning style preferences of Asian American secondary school students in US schools showed no differences in *auditory*, *kinesthetic* or *tactile* learning style preferences, irrespective of their ethnic origin, length of residency in the USA, achievement level or gender (Park, 1997). The results suggested that all students used a variety of learning styles, although tactile learning

was the least preferred, and there was a greater preference for *visual* learning among Asian-Americans — particularly those from China, the Philippines, and Korea, irrespective of their length of residency — compared to Anglo-Americans. Furthermore, Chinese, Korean and Anglo-American students showed little preference for *group* learning within the classroom, although low-achieving students of any origin preferred *group* learning more than those who were achieving at the high or middle levels.

In terms of individual learning, the study found that Asian Americans who were born in Asia preferred individual learning more than those born in the USA and Anglo-Americans. Park (1997) concluded that the preference for visual learning is sufficiently important to warrant teaching strategies that are based on, for example, charts, maps and graphic organizers.

Researchers from the West have described the East Asian style of learning as "rote learning." While criticizing it as a shallow way of learning, they have been puzzled by the exceptional achievement of these students in international competitions and graduate schools around the world. Recently, some studies have recognized that East Asian learners are not simply using rote learning but repetitive learning (Watkins & Biggs, 2001) or deep learning (Biggs, 1995b). The difference between these learning styles is that the former does not require the learner to understand material: rote learners superficially process (or memorize) the material and reproduce it. However, repetitive or deep learning requires a thorough understanding of the material before mastering it. Oxford and Anderson (1995) proposed an interlocking process: students learn and memorize independently during the class, while teachers provide the basic concepts in the materials. This process takes a longer time, as students need to absorb and analyze what they have learned in class and, if necessary, revise the material again and again until they fully understand it. While East Asian students prefer to study individually within the classroom, they collaborate spontaneously outside it, exchanging their ideas and understandings through discussion. Only when they cannot resolve problems through textbooks and discussion with classmates will they seek a teacher's assistance.

Parents' Expectations within the Confucian-heritage Culture

Many previous studies and accounts have described Chinese parents as authoritarian, tightly controlling their children's academic activities. Compared to their Western counterparts, they are seen as focusing more heavily on their children's academic results, and forcing them to work relentlessly on an excessive number of assignments and worksheets. However, this picture is more stereotypical than factual and it is important to understand the values inherent in the CHC and the behavior expected by parents as a basis for explaining this aspect of the Chinese learner's experience.

Chinese parents' views on diligence, intelligence and academic achievement

Studies on the ways in which Chinese parents intervene in their children's academic activities, have generally concluded that they are more heavily involved than are European and American parents (Chen, 2001; Chen & Uttal, 1988; Hong & Lee, 2003). This results from their belief that effort is very important for academic achievement and, if possible, they are more willing to invest time and energy in assisting their children in their schoolwork, give more encouragement and feedback and set a higher standard for their children (Hong & Lee, 2003; Huntsinger et al., 1997; Wan et al., 2003).

In a study of 160 Australian school children from three ethnic groups, Dandy and Nettelbeck (2002a) found that Chinese and Vietnamese communities did better in mathematics, spent more time in studying and had higher educational aspirations than those from an Anglo-Celtic background. The researchers claimed that their findings were suggestive of complex socio-cultural relationships that contributed to ethnic differences in achievement.

The same authors carried out a second study in which 239 Australian parents from Chinese, Vietnamese and Anglo-Celtic communities were asked to describe their educational standards for their children (Dandy & Nettelbeck, 2002b). They found that parents from Chinese and Vietnamese backgrounds had higher educational expectations and aspirations for tertiary education for their children, while parents from an Anglo-Celtic background, especially those of lower socio-economic status, preferred their children to attend some form of vocational training. Once again, the authors suggested that there were significant cultural factors acting on the parents from the Chinese and Vietnamese communities that may influence their children's academic achievement.

Parental expectations and attitudes toward science education were examined in a cross-cultural study involving secondary school students (Chen, 2001). This research found that Chinese parents and students from China had a more positive attitude toward the value of science than their US counterparts. The attitudes of Chinese students studying in America showed evidence of cultural influences from both China and the USA. The study also revealed a significantly greater involvement by Chinese parents in their children's homework, and a higher expectation for success and belief in their children's abilities, compared to parents from the USA.

Traditional values in the CHC maintain that diligence is the key that unlocks an individual's potential, as expressed in Chinese proverbs such as *jade which has not been polished is of no use* and *fierce fire reveals true gold*. Instead of uncovering innate abilities, Chinese teachers focus more on encouraging their students' self-improvement through working hard. Furthermore, it is believed that there is always room for gradual improvement and to excel in life should not be at the expense of someone else. This belief is shared by parents from Japan where it is thought that

effort, rather than ability, is the single most important determinant of academic achievement (Stevenson, Lee, & Chen, 1994).

A recent study has, however, provided evidence for cultural variability between two Chinese classrooms in Hong Kong in parental and child achievement attributions, suggesting that it is unwise to generalize about Chinese classrooms (S. Phillipson, 2006). It was found that in a Chinese primary school in a catchment area of high socio-economic status (SES), students' attributions for their *success* in both mathematics and languages were dependent on both *effort* and *strategy*. In contrast, students from a Chinese primary school in a low SES catchment area were more inclined to attribute *success* and *failure* in these two subjects, as expected, to *effort* alone.

In addition, S. Phillipson (2006) found that students' achievement is dependent on both the SES and the subject itself, with parental attributions of their child's failure to *effort* being a significant predictor of achievement in languages but not mathematics for the high SES parents. For the low SES parents, the best predictors of achievement in languages are parents attributing their child's failure to *effort*, and children attributing their failure to lack of *ability* and their success to *effort*.

In terms of intelligence, Furnham, Rakow and Mak (2002) found that Western parents commonly believed that their children were significantly more intelligent than they actually were. Although, in broad terms, this view is shared by parents in Hong Kong, they did not consider their sons more intelligent than their daughters, reflecting the belief that intelligence or ability is related more to effort than to innate factors. A Chinese proverb explains that there is always a higher mountain ahead on your journey, meaning that ability increases according to the future challenges.

Ability and prayer: An additional piece of the puzzle

As well as diligence, many Chinese parents also believe that prayer is important for academic success, an additional aspect of the achievement "puzzle" which is often neglected by researchers interested in understanding the Chinese learner. In describing the role of religion in the increasingly examination-oriented East Asian culture, Zeng (1996) noted that during the examination period in many East Asian countries, many of the candidates and their families visit temples and shrines, particularly those related to success in examinations — and that the number of prayers made by students and their parents at temples and shrines increased with the growing importance of examinations as "… gateway[s] to socioacademic mobility" (p. 264). Because examinations are seen as unpredictable, anonymous and beyond the control of the individual, success cannot be guaranteed. Accordingly, many students and parents resort to shrines and temples for guidance, confidence and, if required, consolation.

While prayers related to examination success are commonly used, parents (usually the mother) also resort to self-inflicted "torment" (Zeng, 1996, p. 266) such as repeating rituals a hundred times, or bowing three thousand times, or praying for a hundred days (pp. 266–7). Parents in Japan also pay priests to chant on behalf of their sons or daughters, or purchase an *ema*, a small wooden tablet containing prayers asking for scholastic success in general or examination achievement in particular. Variations of the *ema* exist in Taiwan, Korea and China. When the practice began, the focus of the academic-orientated *ema* was the university entrance examination (Zeng, 1996). However, in modern times, it has included high school, middle school and even kindergarten entrance examinations. Although there has been no comparable study since Zeng's work, there is no reason to suggest that the focus has changed.

According to Zeng (1996), the content of the *emas* reflects the three major features of the modern examination systems in these cultures, namely its highly symbolic and war-like competitive nature, its intense socio-economic ramifications, and its almost superstitious manifestations. Zeng reported that the content of the prayers does not pass responsibility for success to the deity or ancestor, but asks them to increase the confidence of the candidate. Also, the candidates often resolve to work harder, practice self-control and forgo simple pleasures such as watching TV or reading comic books. The prayers are often placed in auspicious positions on the plum tree in the temple grounds, particularly in relation to the *emas* of rivals. Although examination results are still dependent on the diligence and ability of the students, many unpredictable events can occur before, during and after the examination, ruining the efforts of the candidates. Parents may not be able to give their children guidance in academic matters, but they can be involved by praying for their children in temples and shrines, an involvement which does not seem to exist among parents from Western cultures.

Interactions within the Chinese family

It is a common perception in the West that Chinese parents engage in one-way communication with their children. The view that their children listen passively and carry out their parents' orders comes from an overgeneralization of filial piety. Within CHCs, filial piety (hsiao) is the primary duty of all Chinese people. In simple terms, being a filial son means complete obedience to one's parents during their lifetime and, as the parents grow older, taking the best possible care of them. In terms of academic performance, however, Chinese families tend to engage in two-way communication when discussing their expectations with their children. In this relationship, children constantly communicate and provide feedback on their parents' expectations, and parents are expected to respond to these comments.

On the other hand, Chinese and Japanese mothers are more critical of their children's achievements, compared to US mothers (Stevenson, Chen, & Lee, 1993; Stevenson, Lee & Chen, 1994). In describing their children, Chinese parents used more descriptors involving aspects of conscientiousness, including carefulness, faithfulness and diligence, and they were more critical than a comparable group of Dutch parents (Zhang et al., 2002). For other descriptors related to intellect, such as intelligence, openness and interest, there was no marked difference. Zhang et al. proposed that the role of these critical comments was to provide practical directions for children about the best way to improve their academic work.

Although many parents actively convey their expectations, their children may not always act according to their wishes. Japanese adolescents treated different expectations with different strategies: when an expectation was perceived as positive, they acted accordingly, but when it was perceived as negative, they either changed themselves or attempted to persuade their parents to change their expectations (Kawamura, 2002).

In another study, S. Phillipson and S. N. Phillipson (2007) used a Vygotskian perspective to examine the relationship between parental expectations of success, parental beliefs about their children's memory and involvement in their child's school with the academic achievement of Chinese students. They found that parents' *expected scores* in mathematics and languages, irrespective of their SES, were very strong predictors of achievement in each of these subjects, but not their assessment of their child's episodic memory. However, the results of a study of one British international school in Hong Kong showed that parents' assessment of their child's episodic memory was a positive predictor for language achievement and that parental involvement in their children's education (at home and school) was a negative predictor of achievement.

Children with Special Needs in the Confucian-heritage Culture

This chapter has established that the classroom in the CHC is different from that in the West. In the CHC classroom, education is valued more for pragmatic reasons, not only for the individual but also for the students' wider family group. The motivations for learning, therefore, are a complex mixture where the distinction between *intrinsic* and *extrinsic* motivation becomes meaningless. Accordingly, *effort* is a highly valued commodity and it is only in the face of persistent low achievement that the child's ability will be questioned.

As regards the classroom, the curriculum is much more rigid, reflecting the belief that competency must be developed before creativity can be cultivated. Students in the CHC develop a deep understanding through a process of memorization (rather than rote learning); and the pedagogy is appropriately targeted

to developing knowledge and skills, rather than exploration, so the teaching is teacher-directed rather than student-centered.

Parents from the CHC are highly involved in their childrens' education, reflecting the belief that effort is highly controllable and broadly "additive". They also have higher expectations for their children compared with parents from the West.

Against this cultural backdrop, there is a growing awareness in the CHC of the needs of all children, including those with special educational needs. Many tertiary institutions in the Asian region offer teacher education awards with specialized studies on children with special needs. The Hong Kong Institute of Education, for example, offers qualifications in this area in response to government and public pressure. However, many of the technologies and practices for working with these children are imported from the West and, to date, little thought has been given to the possible negative interactions between educational technology and practices and the unique nature of the CHC. As Li (2000) warned, the school system does matter for children's learning, but not necessarily in ways that can be predicted from studies originating from cultures outside the CHC.

Summary

In this chapter, it has been argued that the approach to learning in Confucian-heritage cultures (CHCs) is different from that taken elsewhere. Because students are influenced by and, in turn, influence the society around them, classrooms in the CHC differ in the way that students learn and lessons are conducted. These learner differences include a greater reliance on memorization to achieve deep understanding, motivations for learning, goal orientations and learning style preferences. An examination of the pedagogical approaches taken by teachers from the CHC concluded that there are important differences in the way teachers teach. The role of parents in the education of their children also differs in the CHC compared with parents from the West. Because of these differences, it is appropriate to look more closely at research and best practice regarding the learning of students with special educational needs.

Points for Discussion and Learning Activities

1. How would you explain the following discrepant event?
   A round object is dropped into a tank of water. After passing through the surface of the water, the object then returns to its original position at the surface of the water.

Compare the explanations from Chinese students and those from a Euro-American background. What similarities and differences do you find?

2. Beare et al. (1991) described a structure for identifying the four aspects of a school's culture, including tangible expressions and symbolism (values, philosophies, ideologies), conceptual and verbal manifestations (aims and objectives of schools, curriculum, metaphors, organizations stories/structures/heroes), behavioral manifestations (rituals, ceremonies, ways of teaching, ways of learning, rules and regulations, psychological and social supports, parental and community support structures), and visual and material manifestations and symbols (facilities and equipment, artifacts and memorabilia, crests and mottoes, uniforms).

   Describe your school's culture according to this structure. Identify those elements that are common to all schools from a Confucian-heritage culture.

3. The 1996 study in Marton, Dall'Alba and Kun involved twenty teacher-educators from China. It developed a model of learning, describing the relationship between memorization and understanding, and made the point that memorization with understanding is one of the differences between Western and Chinese ways of learning. The study also referred to the distinction between deep and surface learning (Biggs, 1996).

   What are the key features of the model and what is the difference between the two types of learning? Is the memorization with understanding model of learning constructivist in its approach?

   Use the techniques described in the study to determine the way your students learn.

4. How are ICTs being used in your school? Are they used in an interactive way, or a more directive fashion, reflecting the pedagogical style commonly seen in the CHC?

Glossary

Attribution theory is a model of motivation that describes how students explain the reasons (or attributes) for their past successes or failures. For students from a Confucian-heritage culture, the main reasons include *effort*, *interest in the topic*, *mood* and *ability*. Other possible reasons include *task difficulty* and *luck*.

Confucian-heritage culture is a culture that is heavily influenced by the teachings of Confucius (551–479 BC). Although often equated with Chinese culture, the two are not synonymous. Confucianism has influenced a number of different cultures, including Japanese and Korean.

Expectancy value theory is a model of motivation that posits that students learn when they both value the task and expect success.

Extrinsic motivation is a theory of motivation that explains that students learn because of the expectation of a reward. The model is based on B. F. Skinner's theory of "operant conditioning".

Intrinsic motivation is a model of motivation that explains that students learn because of their inherent curiosity, and their need to build competency and make sense of the world.

Social motivation is a model of motivation that explains that students learn because the outcomes of learning, such as high achievement, are valued by people who are important to them.

Success (or achievement) motivation is a model of motivation that describes the need of some students to achieve success in a competitive situation.

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Useful Website

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