Comparing the learning behaviours of Australian and Chinese university students in various situations

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Different and at times contradictory descriptions exist in the literature about the ways in which Asian students approach their learning. While educators with experience in teaching Asian students perceived them as passive, dependent, uncritical, and more prone to rote learning than western students, researchers who investigated empirically the learning approaches of Asian students held that these students were neither more oriented towards a surface approach nor less inclined to use a deep approach than western students. Differences in cultural characteristics and conceptions have been proposed to account for Asian students' learning practices and to explain the discrepancies in views about Asian students. However, there is not much empirical research on comparisons of the learning behaviours of students from different cultures.

This paper reports on a study that explores and compares the learning beliefs and practices of university students from a Chinese (Hong Kong) and a Western (Australian) culture. Comparisons between the students were made on their reporting of: the relative frequencies with which they used the learning behaviours; the frequencies with which they used the behaviours in different learning situations; their use of similar behaviours across various situations; and their preferences for particular types of learning behaviours. The results showed that the Australian and the Hong Kong students were similar in the relative frequencies with which they reported using the various behaviours and in what they reported to engage in most and least frequently in the various learning situations. However, they were different in the frequencies with which they reported using specific learning behaviours, particularly when spending their leisure time. These results suggest that educators should pay more attention to both similarities and subtle differences between students from different cultures or countries, rather than assuming that students from certain cultures or countries behave in certain ways.

It has been proposed that culture determines the characteristics of a human group in a similar way to which personality determines the characteristics of an individual (Hofstede, 1980). Researchers have found that different countries have different, culturally influenced, value systems (Hofstede, 1980, 1997; Schwartz, 1992, 1994), and that people from different cultures differ in their conceptions about the appropriate ways of relating to and interacting with one another and in their perceptions of self and others (Smith & Bond, 1993; Triandis, 1988, 1994).

With the increasing global flow of students (and teachers), it is important to find out whether students from different countries or cultures learn in different ways and what the similarities and differences are. This paper reports on a study that explores and compares the learning beliefs and practices of university students from a Chinese (Hong Kong) and a Western (Australian) culture. Although the study focused on both beliefs and behaviours, this paper will deal with behaviours only.
Review of literature

Observations about Asian learners being passive, uncritical, and more prone to use a reproductive mode of learning were reported by educators who had experience teaching Asian students in Australian universities. For example, the lecturers in Samuelowicz’s (1987) study commented that Asian students relied more on rote learning than Australian students did. Asian students were less inclined than Australian students to think about and apply knowledge (Samuelowicz, 1987).

Ballard and Clanchy (1984, 1991, 1997), from their own experiences of teaching and helping Asian students with English language proficiency and study skills, contended that Asian students were reluctant to ask questions about, raise objections to, or criticise existing knowledge and their teachers. They seldom volunteered an answer or an opinion unless called upon. They learned diligently all the information that their teachers gave them, but were not used to independent, analytical, or critical inquiry. On the other hand, Ballard and Clanchy (1984, 1991, 1997) characterised Australian students as being used to working independently, to speculating, and to thinking critically. Ballard and Clanchy (1991, 1997) argued that these differences in behaviours were due to Asian students being shaped by their previous educational experiences which differed from those of Australian students because of different cultural attitudes.

Similar views about Asian students were also expressed by educators teaching in Asian countries. For example, Murphy (1987), a tertiary educator teaching in Hong Kong, found that Hong Kong students were reluctant to ask questions, to express opinions, and to be critical. Murphy (1987) proposed that these behaviours of the Hong Kong students were due to the Chinese emphases on discipline and proper behaviour.

However, the stereotypic description of Asian learners being more prone to rote learning than western students is not supported by studies that investigated the learning approaches of Asian students. For example, Kember and Gow (1991) investigated the approaches to learning of Hong Kong university students by using the Study Process Questionnaire (Biggs, 1987). They found that Hong Kong students had higher scores on the deep approach scales and lower scores on the surface approach scales than Australian tertiary students. After exploring various possible explanations for their findings, they concluded that Hong Kong students were neither more oriented towards a surface approach nor less inclined to use a deep approach than Australian students. They suggested that any tendency towards rote-learning approaches might be a function of the nature of the curriculum and the teaching practices rather than an innate characteristic of students (Kember & Gow, 1991).

Biggs (1989) found that Hong Kong secondary school students, both male and female and at both middle and upper secondary levels, had significantly lower scores than their Australian counterparts on both the surface strategy and the surface motive scales of the Learning Process Questionnaire (Biggs, 1987). Hong Kong students also scored higher on the deep strategy scale than Australian students (Biggs, 1989). Watkins, Reghi, and Astilla (1991) compared the scores on the Learning Process Questionnaire of Nepalese, Filipino, Hong Kong, and Australian secondary school students, and found that Asian learners were not more prone to rote learning than Australian students. Watkins and Ismail (1994) compared Malaysian students’ responses to the Learning Process Questionnaire with those of the Australian and the Hong Kong students. They found that, compared with Australian students, both groups of Asian students reported less extrinsic motivation and fear of failure, and less use of superficial learning strategies such as verbatim reproduction without understanding.
Volet, Renshaw, and Tietzel (1994) used a reduced version of Biggs’ (1987) Study Process Questionnaire to compare the approaches to studying of local Australian and overseas Asian (mainly Singaporean) undergraduate students who were studying the same course in the same Australian university. They found that, although the Asian students scored higher on the surface approach scales than the Australian students, significant differences were found only on the Maintaining Face item (questioning teachers’ ideas only under special circumstances) when the surface construct was broken down into sub-components for analysis. They also found that the patterns of change in study approaches of the two groups of students over one semester (13 weeks) were similar, and that the Asian students became more similar to the Australian students by the end of their first semester of study in a western institution. Volet, Renshaw, and Tietzel (1994) concluded that study approaches were influenced by students’ perceptions of course requirements rather than by stable personal characteristics of individual students.

From the literature reviewed above, it can be seen that different, or even contradictory, perceptions and descriptions are presented about the ways in which Asian learners approach their learning. Great discrepancies can be found between the views held by educators with experience in teaching Asian students, and those held by researchers who investigated the learning approaches of Asian students.

The aim of the present paper is to investigate if Australian and Chinese (Hong Kong) university students differ in their ways of learning, and what these differences (and similarities) are. Since students from different Asian countries cannot be regarded as the same, the study reported in this paper focused on only one of the Asian cultures, the Chinese culture, which is considered to be very different from the Western culture.

**Research design**

**Participants**

Comparisons were made between 98 Australia-born Australian and 132 Hong Kong-born Hong Kong third year university students. These students were studying in their native countries in the same universities in the Faculties of Arts, Science, and Business and Economics or Social Sciences. The two universities were selected because they are of comparable status and provide similar courses within the various faculties involved. The Australian students were aged between 18 and 30, with a mean age of 21.07 (a standard deviation of 2.32). The Hong Kong students were aged between 19 and 30, with a mean age of 21.39 (a standard deviation of 1.36).

All of the participants completed the questionnaire, and five Australian and seven Hong Kong students were also interviewed.

**Instruments**

A questionnaire and a semi-structured interview schedule were constructed for data collection for this study. The questionnaire assessed how often students use certain learning behaviours under different learning situations and how strongly (positively or negatively) they hold certain beliefs. The interview schedule collected supplementary and explanatory information about students’ learning beliefs and learning behaviours (e.g., factors that affect the use of certain behaviours).

Since the literature showed that the demands of learning tasks and the forms of assessment affect the behaviours employed, five scenarios were constructed to represent situations with and without various kinds of assessment. These scenarios consist of: preparing for an
examination, doing a project, doing homework assignments for which the marks will not contribute to the final grade, auditing a subject, and spending one's free time. The five-point Likert scale format was used for the behaviour items. Respondents had to circle the option which best represented the frequencies with which they used particular behaviours. Options for these items are: always, frequently, regularly, only sometimes, and never.

A list of learning behaviours was constructed for each of the five scenarios. The lists include learning behaviours which learners exhibit when they are attending lectures, tutorials, laboratory sessions, or practical sessions; when they are with their classmates or friends; and when they are studying on their own. The learning behaviours were constructed based on: the characteristics of the surface, deep, and achieving approaches; the behaviours indicating metacognition; the adaptation of some of the questions in the Study Process Questionnaire (Biggs, 1987); the information and insights gained from Purdie’s (1995) and Zimmerman and Martinez-Pons’s (1986) studies on self-regulated learning; and the review of literature on the characteristics of Australian and Chinese learners. Some of these behaviours were included in more than one scenario even though the wordings may not have been the same.

**Data collection and analysis**

After ethics approval and permission were obtained, lecturers of the targeted faculties of the universities were contacted to ask for their permission to recruit students from their classes. During the lectures, the nature and purposes of the study were briefly introduced and copies of the explanatory statements were distributed. Then consent forms and questionnaires were given to those students who had indicated that they were interested in taking part in the study to fill in during their free time. Completed questionnaires were collected at the subsequent lectures over the following two weeks of class.

Next, students from the pool of participants who had agreed to be interviewed were randomly selected for interviewing. All the interviews took place within the universities, and were audio-taped and transcribed literally. The interview transcripts of the Hong Kong students were also translated because the Hong Kong students were interviewed in Chinese (Cantonese) even though they filled in the English version of the questionnaire.

Responses to the questionnaires were converted into numerical values. Means and standard deviations for each of the learning behaviours were calculated separately for the Hong Kong and the Australian students. After checking if the two samples of students differed in their general patterns of responding to Likert scale format items, a multivariate analysis of variance (MANOVA) of the two countries and three faculties was carried out to investigate if the differences between the students were affected by the disciplines studied and if there were any interactions between the cultures and the disciplines. The relation between age and behaviours used was also examined. Then, analysis of variance (ANOVA) tests were conducted to investigate if significant differences existed among the two samples of students in their learning behaviours. The items were also ranked-ordered (according to the means) separately for the two samples of students for each of the five scenarios. These lists of rank orders were used to examine the relative frequencies with which the students reported using the various learning behaviours. In addition to the aforementioned, comparisons were made on the frequencies with which the students used similar behaviours across the five scenarios to investigate whether the students behaved in similar or different ways across different learning situations. An alpha level of 0.05 was used for all the statistical tests reported in this paper.

The interview transcripts of individual interviewees were analysed to identify students' views and explanations regarding their main learning behaviours. Then excerpts of responses from
different interviewees were synthesised and categorised. The interviewees’ responses on
the questionnaire and at interview were compared to investigate the consistency with which
the students responded to the same items in different situations.

Results

The resulting lists of rank orders of the Hong Kong and the Australian students have a
correlation coefficient of 0.875 for all of the 87 items, and a rank order correlation coefficient
of 0.733, 0.940, 0.683, 0.871, and 0.905 respectively for each of the five scenarios.

These results indicate that the relative frequencies with which the two samples of students
used the various behaviours are similar. Nevertheless, similar rank orders do not imply a
similar extent of usage of the behaviours. The Hong Kong and the Australian students may
use the behaviours with similar relative frequencies, but still differ in the magnitudes of the
exact frequencies with which they used each behaviour.

When individual values of the F statistics were inspected, 28 items showed a significant
difference in means. Such a high proportion of items having statistically significantly different
means demonstrated that the differences were not caused by chance alone. These results
indicate that although the two samples of students used the behaviours with similar relative
frequencies, they used certain behaviours with different frequencies.

Similarities and differences of the students in their use of the learning behaviours

In preparing for an examination, both the Hong Kong and the Australian students reported a
high frequency in reviewing past tests and assignments to know the answers, and in
arranging the physical environment to facilitate studying and concentration. They also
frequently made their own notes, went through past work to find out why they went wrong so
that they could avoid making the same mistakes, rewarded themselves, memorised
important points for reproducing them at examination, and looked out for hints about the
examination from teachers. On the other hand, the students seldom expressed
disagreement with their teachers and offered their own ideas. Besides, they reported a low
frequency in thinking about the shame brought onto their family if they failed, and in
questioning their teachers’ ideas.

However, the Hong Kong students engaged statistically significantly more frequently than
the Australian students in working with their classmates to figure out the examination
questions and to prepare answers for these questions ($t = 2.092, p = 0.038$), setting up a
study schedule and revising as planned ($t = 2.602, p = 0.010$), monitoring the progress of
their study and revision ($t = 2.792, p = 0.006$), and thinking about the shame that would be
brought onto their family if they failed ($t = 3.883, p < 0.0005$). The Australian students
reported significantly greater frequency in finding out from teachers hints about the exam ($t =
-9.835, p < 0.0005$) and the content and formats of the exam questions ($t = -2.996, p =
0.003$), reflecting on and linking what they had heard and seen ($t = -3.756, p < 0.0005$),
doing similar exercises to remember how to do them ($t = -3.852, p < 0.0005$) and to improve
the skills needed ($t = -2.729, p = 0.007$), and testing themselves on important topics ($t = -
2.550, p = 0.011$).

In doing a project and then writing an essay or a report on it, both the Hong Kong and the
Australian students reported a high frequency in choosing a topic that they were interested
in and that suited their strengths, making an outline before writing the essay or report, and
revising the drafts. They also frequently asked teachers to specify the requirements of the
task and the allocation of marks, linked what they had known to the project, checked if the
project was completed before handing it in, and arranged the physical environment to
facilitate their work. On the other hand, the students seldom skipped lectures to work on the project. Moreover, they reported a low frequency in asking teachers to let them work in groups, and in modifying old projects and using them as their own.

Nevertheless, the Australian students checked if the project was done properly statistically significantly more frequently than their Hong Kong counterparts ($t = -2.033, p = 0.043$). The Hong Kong students reported significantly greater frequency in requesting teachers to let them work in groups ($t = 2.798, p = 0.006$), finding out teachers' positions on certain issues ($t = 2.593, p = 0.010$) and opinions on their approaches ($t = 3.474, p = 0.001$), working on their own projects by modifying old projects ($t = 5.677, p < 0.0005$), and writing the essay or report based only on information from lectures, textbooks and suggested readings ($t = 3.975, p < 0.0005$).

In doing non-assessed take-home assignments, both the Hong Kong and the Australian students reported frequently discussing with their classmates questions that they did not know how to do, and relating what they had learned to the assignments. They reported a low frequency in copying their friends' work. However, the Hong Kong students engaged statistically significantly more frequently than the Australian students in making sure that the assignments were done correctly before handing them in ($t = 2.272, p = 0.024$), discussing questions ($t = 2.134, p = 0.034$) and sharing useful strategies ($t = 2.147, p = 0.033$) with their classmates, and copying others' work ($t = 3.402, p = 0.001$).

In auditing a subject, both the Hong Kong and the Australian students reported that they did not use most of the behaviours and strategies frequently. They moderately frequently worked on their own, and reflected on and linked what they had learned to the assignments. They reported a low frequency in expressing disagreement with teachers, setting up study schedules, monitoring the progress of their study, doing similar practice exercises, and memorising information. However, the Hong Kong students engaged statistically significantly more frequently than their Australian counterparts in asking teachers questions to clarify their own understanding ($t = 3.196, p = 0.002$), and in expressing disagreement with teachers ($t = 2.270, p = 0.024$). The Australian students significantly more frequently reflected on and linked what they had learned ($t = -3.159, p = 0.002$).

In spending their time after school, both the Hong Kong and the Australian students reported a high frequency in relaxing and doing things not related to their studies. On the other hand, they seldom went over their university work with private tutors. They also reported a low frequency in joining academic activities, and taking art or music lessons. Nevertheless, the Hong Kong students engaged statistically significantly more frequently than the Australian students in taking art or music lessons ($t = 3.415, p = 0.001$), and going over their academic work with private tutors ($t = 5.656, p < 0.0005$). The Australian students significantly more frequently thought about things related to their studies ($t = -3.442, p = 0.001$), engaged in household chores ($t = -3.276, p = 0.001$), and did paid work ($t = -5.049, p < 0.0005$).

Regarding their use of similar behaviours across various situations, both the Hong Kong and the Australian students used most of the behaviours and strategies more frequently when taking a subject for credit than when auditing a subject, and in doing an assessed project than in doing non-assessed assignments. Moreover, both samples of students used different behaviours and strategies more frequently in different learning situations. For example, all respondents were more frequent in setting up schedules and in rewarding themselves when preparing for an examination than when working on a project. When doing a project, they were more frequent in: asking teachers questions when they did not understand; finding out about assessment requirements; reflecting on and linking what they had learned; finding out the aims of the tasks; and sharing strategies with their classmates.
Factors that affect the students’ use of certain learning behaviours

Although both the Hong Kong and the Australian students reported a low frequency in asking teachers questions to clarify their own understanding, the interview responses showed that the students considered asking questions to be an important component of the learning process.

Clarification is important because if you don't understand something, you will give up on it. (AustS2: 16)

I think asking questions is a very important component of the learning process. ... I ask everyone, teachers, fellow students, anyone. Even though they may not be able to give me much, they help me in my search for knowledge. (HKS2: 17)

The students did not frequently ask their teachers questions because their doing that was affected by: whether they had chances to ask questions during lectures; the availability of teachers; the willingness of teachers to accept questions; teachers’ ability to understand students’ problems; teaching techniques of teachers; the atmosphere and setting of the class; and personal characteristics of students.

During lectures, we can't actually ask questions. The lecturers usually talk from the beginning till the end. They don't give us any chances to ask questions. (HKS2: 17)

It depends on the lecturers. Some of them you can never get hold of. Some of them think that you are hindering their work or wasting their time (HKS4: 23)

Not all lecturers welcome questions. Some of them do and some of them don't. ... Also, you are questioning their authority. Quite often you are asking them to justify what they've told you, and they may feel uncomfortable about doing that. (AustS1: 11)

I think some of the teachers are willing to accept questions. Some are unapproachable, like I've got a tutor who just teaches through fear and everyone is too scared to go and meet him if they don't understand. (AustS2: 16)

I think they just don't know how to respond to students. They don't understand what students don't understand. (AustS7: 18)

I think it depends on the atmosphere and the setting. It's easier for us to ask questions if teachers pause for a while after presenting a main concept or idea and ask if we have any questions. It also helps if we sit around a large table, the class is in a light mood, and someone is willing to initiate asking questions. (HKS1: 12)

I don't always ask questions. ... I think it's inertia. And it's also because of the lecturers. Some of them aren't available, and some of them don't welcome questions. (HKS6: 18)
I feel sometimes teachers might not welcome questions, they don't have time for that. ... I feel uncomfortable in a group situation where I ask questions, but on a one-to-one basis, it's OK. (AustS6: 17)

Consequently, the students perceived their teachers as the last resort: they went to their teachers only if they could not get help from other students.

Normally we discuss among ourselves. If we still can't understand after discussions, then we will go and ask the lecturers. (HKS4: 23)

Whenever I have something that I don't understand, I discuss with other students. If we can't find the answer, then we will go and ask the teachers. (HKS7: 22)

Similarly, even though both the Hong Kong and the Australian students reported a very low frequency in questioning teachers' ideas before accepting them, and in expressing disagreement with their teachers and offering their own ideas, it did not mean that they accepted teachers' ideas without thinking about them or had no disagreement with what teachers told them. Responses of the interviewees indicated that the students considered these behaviours as beneficial to their learning.

I think both teachers and students can benefit from this kind of interaction. (HKS5: 16)

If you tell them why you disagree with them, they may be able to tell you what's wrong with your own thinking or which part of your argument is wrong. (HKS4: 23)

However, the students were reluctant to question the ideas of their teachers or express their disagreement because of the worries they had about the appropriateness and the consequences of the behaviours, and the lack of time during lectures to think through what was taught or to voice out their ideas. The significance of the issue and the approachability of the teacher also affected the frequency with which the students used these behaviours.

I just don't feel like I have a personal relationship with them, to feel comfortable to question what they have to say. And I sort of know that I can get away with accepting their ideas. (AustS6: 16)

Lecturers are such professional persons. I think it's hard for them to accept other people's, especially students', opinions. ... Marks are a concern too. You don't know if that would affect your marks and grades. (HKS4: 18)

I think it might be because we have to respect our teachers. (HKS7: 23)

I seldom do it [question teachers' ideas]. I need more time to think over what I've been taught. ... It also depends on the lecturer and what the issue is. If he or she is approachable, and the issue is very important, then I'll go and ask. (HKS1: 15)
There aren’t many chances during lectures for us to do so because lecturers talk all the time. (HKS5: 18)

Instead of directly and openly questioning their teachers’ ideas or expressing their own opinions, some students performed these actions in their minds, wrote down their opinions for their own record, or discussed their disagreement and ideas with other students.

I think I do question them [in my mind] but I never really question them. (AustS6: 16)

I don’t express my disagreement to the lecturers. I only express my disagreement in my mind. (HKS7: 23)

Sometimes, I just write down what I disagree with, as a note for myself. (HKS1: 15)

We discuss with each other what we disagree with, and our own ideas and opinions. (HKS1: 14)

On the other hand, some students tried to express their ideas tactfully to their teachers.

It doesn’t necessarily have to be ‘disagreement’, like sometimes some students voiced their opinions or ideas and asked whether those ideas were reasonable and valid or not. (HKS1: 13)

I think sometimes we do express our disagreement to the lecturers, but not directly. Like, maybe we ask them questions instead of saying that they are wrong. (HKS7: 23)

Time constraints were shown in the interview responses to be a very influential factor in determining what the students did in their learning. Apart from affecting the frequencies with which the students memorised information without understanding, time constraints also influenced how frequently the students made their own notes and searched for more information about topics taught in class.

The only reason why I might memorise knowledge without understanding it is if I don’t have time to try to work out or understand it. (AustS7: 16)

It takes a lot of time. I can’t make my own notes for all the subjects that I study. (HKS4: 22)

It is a good one to do [locate more information], but I’ve never got enough time to do it. (AustS7: 16)

I sometimes do go and find more information, but not very often. ... I don’t have time. (HKS7: 27-28)
Discussion

Results of the study show that the Australian and the Hong Kong students were similar in the relative frequencies with which they reported using the various behaviours and in what they reported to engage in most and least frequently in each of the five scenarios. However, they differed in the frequencies with which they reported using specific learning behaviours.

The results do not support the notions that Chinese students rely mainly on a surface, reproductive mode of learning; and that they are passive, uncritical, and dependent. On the contrary, the Chinese students presented themselves as metacognitive in their learning. They engaged in behaviours such as monitoring their study and their work, going through past work to learn from their mistakes, and linking what they had seen and heard with their work. Although they seldom expressed their disagreements explicitly to their teachers, they did not just accept all the information that their teachers gave them.

These findings suggest that although students from different countries or cultures may differ in their ways of learning, the differences would be more subtle than those represented by the bipolar dichotomies that many educators express. Moreover, the requirements of learning tasks, whether assessment is involved, and the behaviours of teachers also play a crucial role in determining whether and how often students use certain learning behaviours. Therefore, educators should pay more attention to both similarities and subtle differences between students from different cultures or countries, rather than assuming that students from certain cultures or countries behave in certain ways.

In addition, educators should make no assumptions that certain cognitive activities would be linked with specific observable, overt actions. Students from different, or even the same, cultures or countries may differ in the learning behaviours they manifest when they are engaged in the same cognitive activities. For example, when the Hong Kong students disagreed with their teachers, they expressed their disagreement very subtly and indirectly. For people who have a fixed idea of how being critical or expressing one's opinions should be, they may conclude that these students can not think critically.

It is important to recognise that different students may differ in the ways they learn, however, it is equally important to investigate the reasons for these differences. Understanding the reasons for learning behaviours may provide insights both into similarities and differences in students’ learning behaviours across cultures, and into individual students' learning needs. Such information can help teachers teach more effectively.
References


