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**CULTURAL DIFFERENCES IN LEARNING
MOTIVATION AND LEARNING STRATEGIES:
A COMPARISON OF OVERSEAS AND AUSTRALIAN
STUDENTS AT AN AUSTRALIAN UNIVERSITY**

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ABSTRACT. *Influenced by Weber's protestant work ethic ideology, McClelland proposed that the economic development of societies could be attributed to differences in achievement motivation. Early empirical evidence from many developing countries seemed to support this hypothesis. More recently, however, writers have come to acknowledge that achievement motivation is not a universal construct and that motivation in a cultural context is multidimensional. They propose that in many developing countries a social approval motive could be stronger. There has also been a tendency to stereotype Asian learners as rote learners. Although recent research has challenged this view, we need strong evidence to counter this belief. A study was undertaken to compare the patterns of motivation and learning strategies of Australian and Asian students at an Australian university. The results show that there are some similarities and differences between cultures in what motivates students and how they approach learning. The most important finding of this study is that McClelland's N_{Ach} operationalized more narrowly, as the need for "competition" seems to be an important dimension of motivation for Australian students, but an equally potent motivating factor for Asian students seems to be social approval. Furthermore, this study lends support to the argument that Asian learners are not rote learners.*

Variations in achievement patterns between cultures, especially between Third-World and Western cultures, are too obvious for social scientists not to try to find explanations for them. However, much of the literature concerning this issue seems to implicate motivation especially the lack of it as rational explanation. It is argued that the economic development of societies and the rise and fall of civilisations, could be attributed to differences in achievement motivation. Some pioneering work in this area was carried out by McClelland (1961), who was greatly inspired by Weber (1904) and his Protestant work ethic hypothesis, which seemed to provide an explanation for differences in productivity in different cultural settings.

McClelland's work seemed to imply that cross-cultural variations in modal levels of a need for achievement (designated by the symbol N_{Ach}) were largely attributable to differences in personality generated by differing child-rearing practices and also to the eco-cultural forces that are likely to produce the kinds of socialisation practices that instil varying levels of N_{Ach} . Research conducted by LeVine (1966) supported McClelland's notion that an individualistic, high-self-esteem ideology can provide the psychological base for high levels of achievement motivation. Many cross-cultural studies were carried out to confirm McClelland's thesis, and they seemed to support the idea that even intellectuals and scientists from developing countries are not very achievement-oriented (e.g., Shils' (1961) work in India). Hence Western individualism and high achievement motivation were placed in opposition to, for example, Indian self-transcendence and low achievement motivation.

A number of criticisms have been levelled at McClelland's hypothesis. Maehr and Nicholls (1980) criticised the overemphasis on personality as a critical variable in determining achievement behaviour. They argue that the interactive role of institutional factors is underplayed. Their counterargument is that achievement behaviour is determined by a variety of situational and contextual factors as well as by societal expectations, norms, task definitions, and social cues. They also argue that in the cross-cultural context, McClelland's hypothesis is particularly vulnerable, since it assumes that achievement motivation is relatively stable across situation and time and not only determines the achievement of individuals but that of societies as well. They therefore proposed a redefinition of achievement motivation in the context of specific cultures and distinguished between different types of motivation: ability-oriented, task-oriented, and *social-approval*-oriented motivations. More recent research (DeVos, 1973, and Doi, 1982 in Japan; and Duda, 1980, 1981, 1986, researching Navajo Indians) question the prevailing belief that achievement motivation is predominantly an individualistic phenomenon and suggest that success could be oriented towards the group as well as towards the individual. DeVos, for instance, found that the Japanese were high on affiliation motive associated with family and group obligations and the internalisation of strong familial expectations for achievement. It is possible, therefore, that the need for approval or affiliation could be as strong a motivating factor as the need for achievement conceptualized by McClelland.

Motivation can be qualitatively different in different cultural contexts, and trying to assess whether some have more or less of some generalised need for achievement can be unprofitable. Cross-cultural research certainly requires the understanding of people on their own terms. However, the vast body of literature that exists seems to suggest that differences in child-rearing practices and associated personality differences influence achievement motivation differently in different cultures. We

do not dispute the argument that differences in child-rearing practices as well as in societal values are likely to influence achievement motivation differently. But it is time that we moved on to identifying more clearly the different types of motivation that seem to provide the impetus for achievement in diverse cultures. A study of Chinese work-related values (The Chinese Culture Connection, 1987) identified a uniquely Chinese value, that the researchers labelled Confucian Work Dynamism. A useful starting point, therefore, would perhaps be to examine the concept of need for achievement more closely as well as examine other sources of motivation. Early definitions of the need for achievement suggested that this was a quest for excellence. Assuming that such a need is low in some cultures, we need to question the assumption that this need is the main ingredient in achievement striving. Recent literature seems to suggest that it is not.

Another line of research in the last decade or so has looked at a study-process complex (Pask, 1976; Marton & Saljo, 1976), and work by Biggs (1976, 1979, 1984) has attempted to link motives with learning strategies. Broadly, two different learning strategies have been identified, which seem to reflect Ausubel's (1968) distinction between meaningful and rote learning. The more common terms used today however are deep-level and superficial-level processing or deep and surface strategies (Biggs, 1984). Work by Biggs and associates in Australia, Canada, and the United States have tried to establish a link between three types of motivation (instrumental, intrinsic, and achieving) and three types of learning strategies (utilising, internalising, and achieving). Generally their work, and that of Marton and Saljo (1976), suggests that there is a congruence between types of motivation and strategies and that students who endorse a particular type of motivation would choose a congruent strategy for learning. Till very recently, however, this research has not addressed cross-cultural differences. However, now there has been research pioneered by Biggs (1990) that seems to be focused on extending his work by examining differences in learning motivation and learning strategies among students of non-Western backgrounds.

Observations made by researchers about overseas (Asian) students in Australia (Ballard & Clanchy, 1984; Bradley & Bradley, 1984; Samuelowicz, 1987) seem to suggest that the perception of these students by academic staff who teach them, is that of rote learners, who are passive and lacking initiative and largely trained in and committed to a surface approach to learning. Many factors related to the overseas students' culture and schooling are cited to explain this. Traditional concepts of teacher-student relationships and teaching methods (such as the use of expository methods and emphasis on assessment, which encourages reproduction of content) and a general ethos that is considerably more authoritarian, all seemed to support such an argument.

There is recent evidence that suggests that Asian students are not rote

learners. Research by Biggs, (1990); Gow and Kember, (1990); Kember and Gow, (1991); Watkins, Regmi, and Estela, (1991) show that students from countries researched, such as Hong Kong, Philippines, and Nepal are not different from Australian students in their approach to learning. Using Biggs's *Study Process Questionnaire* (SPQ; Biggs, 1987), these studies found that Asian students report higher levels of deep and achieving approaches to learning than their Australian counterparts. But there is also some evidence that seems to suggest that since getting a good job is the motive for higher education, Asian students tended to have an examination orientation (Gow, Balla, Kember, Stokes et al., 1989). They also suggest that being educated at the tertiary level in a second language (English) could influence a tendency to learn by rote (this contention was supported by Watkins, Biggs, and Regmi, 1991). We therefore need stronger evidence to counter such a long-held view about Asian students.

Given the cultural differences argued for, when members of different cultural groups are subjected to the same experience, such as education at the same institution, and presumably have a similar goal, that of gaining a qualification, we may hypothesise that should significant differences exist between these groups in motivation and learning strategies they may be attributed to cultural differences. Therefore, a study was undertaken to examine the strength and variation in motivation and learning strategies of overseas students and Australian students, all first year intake, at the Northern Territory University in Darwin.

The majority of overseas students studying at the Northern Territory University are from developing countries. Given the weight of McClelland's thesis one might argue that individuals in these cultures are low in $N_{A.ch}$. However, the fact that these students and their families have invested a great deal (financially and otherwise) should make them strongly motivated to achieve academic success, which could, however, be the product of a need for social approval. Supporting research seems to suggest that in developing countries (as well as in other Asian countries like Japan) significant others, especially family, exert strong pressures towards achievement, so that a social approval orientation to learning seems to be important (SLOG, 1987). Hence, the hypothesis is that a social-approval orientation is stronger for overseas students.

It could be argued that given the cultural stereotype (strongly supported by academics and researchers in Australian universities) and the strong push towards achievement (because education is valued as a means of economic opportunity and status) the dominant type of motivation would be extrinsic (instrumental) and the learning strategy employed by overseas students would be a surface strategy. There are a few studies which seem to lend some support to the argument that students from developing countries show stronger extrinsic or instrumental motivation for a number of reasons such as strong push among individuals

for improved economic status (Bulatao, 1962; Lynch, 1973) and limited interest in analysing ideas because of their emphasis on personalism (Constantino, 1966).

RESEARCH METHODOLOGY

A survey was conducted among overseas and Australian students studying at the Northern Territory University in the faculties of Arts, Education, Business, and Science. The collection of data was first approached through intact classes, but since questionnaires were handed out at the end of a class, nonresponse to questionnaires was in the region of 40% and overseas students seemed not to be sampled at all in some classes. The sample of overseas students was therefore augmented with the help of personnel in the Overseas Students' Centre. The final sample consisted of 136 Australian-born students and 72 overseas students.

The Instrument

An instrument described as the Study Process Questionnaire (SPQ) has been developed and refined by Biggs (1987) and is now marketed as a reliable and valid measure of motivation and learning strategies. It consists of 42 Likert-type items containing seven items for each of the motivations and strategies. The researchers found it necessary to change the wording of some of the items to simplify the language and make it appropriate for a sample of Asian students. Therefore, a modified version of Biggs' instrument was designed. Further, the number of items in each of Biggs' six dimensions was also reduced from 7 to 5 to ensure that the whole test would not be too long. Four items measuring social-approval motivation (couched in terms of family influence only, drawn from an early SLOG scale) were added. The instrument used had 34 items measuring motivations and learning strategies. The questionnaire also contained items pertaining to biographic details such as age, sex, faculty, parental education, and residence status in Australia.

Since the instrument that was used was significantly different from the SPQ (see Appendix), reliability estimates seemed necessary. Internal consistency measures (Cronbach's alpha) compared well with reliability estimates of the subscales of Biggs' SPQ. (See Table 1.) The exception was the subscale SS where it was lower. Biggs (1987) explains lower reliability for this dimension in terms of the existence of both positive and negative aspects of extrinsic motivation and claims that this double meaning is reflected in a lower alpha coefficient. The reliability estimate was, however, high enough to warrant its inclusion. The new subscale, FM (social approval orientation motivation), had satisfactory reliability.

In the analysis of the results, initially means and standard deviations

TABLE 1
Reliability Data for SPQ (Biggs) and SPQ (Revised)

	SPQ (Biggs)		SPQ (Revised)
	CAE	UNI	NTU
SM	.51	.61	.64
DM	.63	.63	.63
AM	.71	.72	.72
FM	—	—	.88
SS	.62	.66	.52
DS	.73	.75	.72
AS	.75	.77	.68

Note: SM–FM = Motivation scales—surface, deep, achieving, and social motivations.

SS–AS = Strategy scales—surface, deep, and achieving strategies. These abbreviations will be used in all further analyses.

for the subscales defined by Biggs were computed. Analysis of variance (ANOVA) was computed to test the statistical significance of these subscale differences. Correlations between subscales for each sample were examined to test Biggs's congruence theory. Finally factor analyses were carried out to test the validity of scale definitions made by Biggs and also to examine the factor structure when the social approval dimension was added to Biggs' model.

RESULTS

Strength of Motivations and Strategies

In order to examine broad differences between the groups (Australian and Overseas students), an inspection of the strength of responses to the different dimensions of motivation and strategies was made. Overall, the overseas students seem to score highly on *all* of the subscales (see Table 2).

Overseas students had higher means than Australian students for all dimensions of motivation and strategies.¹ One-way ANOVA showed that for the different dimensions all mean differences between Australian and

¹This could be a real difference or an artefact of a response set. See comment in discussion section.

TABLE 2
Means and SDs for Subscales

	Australian <i>N</i> = 136		Overseas <i>N</i> = 72		
	Mean	<i>SD</i>	Mean	<i>SD</i>	
SM	3.51	.79	3.75	.74	*
DM	3.66	.62	3.91	.75	*
AM	2.98	.82	3.59	.76	**
FM	2.36	1.04	3.74	1.14	**
SS	3.49	.74	3.75	.73	*
DS	3.12	.74	3.44	.77	**
AS	2.76	.76	3.48	.83	**

* = $p < .05$. ** = $p < .01$

overseas students were statistically significant. This seemed to suggest that overseas students are more highly motivated generally than Australian students and that this difference is not limited to instrumental motivation only. Overall then, overseas students seem to exhibit a strong push to achieve, but this does not seem to detract from their intrinsic interest in learning. They also seem to use many different strategies to achieve their goal.

For both subsamples intrinsic (deep-level) motivation seemed the strongest. For Australian students surface (extrinsic) motivation was second in importance, while social motivation was second for overseas students. For both, surface motivation was stronger than achievement motivation. In the case of strategies; surface strategy was strongest for both Australian and overseas samples. Achieving strategy was the least important for Australians, while overseas students placed this second.

Congruence of Motives and Strategies

Biggs (1984) proposed a congruence theory. He stated that correlations between a motive and its apposite strategy would be higher than the correlation between that motive and other strategies; for example, achievement motivation would correlate higher with achievement strategy than with deep strategy or surface strategy. He found that, although generally this hypothesis was supported, AM correlated with not only achievement strategy AS as expected, but also correlated as strongly with deep strategy DS. The correlations between motives and strategies in our study are reproduced in Table 3.

Just as Biggs found, motives and strategies were congruent for both samples for the surface and deep levels. Achievement motivation and achieving strategy did not hang together. AM correlated more with SM.

TABLE 3
Congruent and Incongruent Motives and Strategies

	SM	DM	AM	FM	SS	DS	AS
SM	—	-.08	.22	.22	.38	-.08	-.09
		.42	.50	.50	.66	.27	.27
DM		—	.17	-.03	.09	.55	.42
			.51	.41	.47	.63	.42
AM			—	.24	.38	.11	.13
				.61	.65	.55	.53
FM				—	.20	-.06	-.07
					.57	.37	.29
SS					—	.04	.05
						.45	.48
DS						—	.62
							.75
AS							—

Note: **Bold** = Australian; other = overseas student

The two achievement dimensions seemed to straddle the two clearly identifiable dimensions of surface and deep level motives and strategies. AM correlated highest with SM and social (family) motivation (FM). But AS correlated very highly with DS. (It is possible that the items in the test did not sample the same dimension of achievement orientation in terms of motives and strategies.) Our data seem to suggest that there are, in fact, only two clearly identifiable motives and strategies: intrinsic or deep level and extrinsic or surface level.

Some of the Australian students did not take very kindly to the family motivation (FM) dimension. In fact there were a few who made rude comments about such items in the margin of the questionnaire! However, for all samples FM correlated significantly high with SM and AM as well as SS. FM correlated negatively and very low with deep-level motives and strategies for Australians. On the other hand, overseas students had significantly high correlations between most of the dimensions.

Patterns of Motivations and Strategies

To examine the differences in motivation between the two samples more thoroughly, factor analyses was carried out initially on items of motivation from the three dimensions identified by Biggs (Instrumental,

Intrinsic, and Achieving).² A varimax rotated factor solution showed that for overseas students there were three factors which together accounted for 51.5% of the variance. The first factor identified an intrinsic (deep-level) motivation. The items that loaded on this factor were "I believe that virtually any topic can be interesting once I get into it"; "I believe my studies will help to make me better equipped to deal with various problems in my future life"; "The more I study the more absorbed I become in my work"; and "I enjoy studying a subject that is interesting and challenging." A second factor suggested an instrumental motivation. Items that loaded high on this factor were: "I chose my present course largely with a view to the job situation when I graduate rather than out of real interest in it"; "One of the most important considerations in choosing a course is whether or not I will be able to get top grades in it"; "I am at university mainly because I feel that I will be able to obtain a better job if I have a tertiary qualification," etc. A third factor seemed to reflect an achieving motive with items like "I see getting high grades as a kind of competitive game and I play to win"; "I would see myself basically as an ambitious person and want to get to the top in whatever I do."

Three similar factors were identified for the Australian sample, too, but the factors were differently ordered. Together they accounted for 43.2% of the variance. The first factor, described an achieving motive with emphasis on competition and winning. Items that loaded on this factor were: "I see getting high grades as a kind of competitive game and I play to win"; "I want to get top grades in most or all my courses so that I will be able to select from among the best positions available when I graduate"; "I would see myself basically as an ambitious person and want to get to the top"; "I believe society is based on competition and schools and universities should reflect this"; and "The most important consideration in choosing a course is whether or not I will be able to get top grades in it", etc. The second factor defined the instrumental motive. Items that loaded on this factor were "I am at university mainly because I feel that I will be able to obtain a better job if I have tertiary qualifications"; "I chose my present course largely with a view to the job situation when I graduate rather than out of real interest in it"; etc. The third factor seemed to describe an intrinsic or deep-level interest in learning. Items that loaded on this factor were: "I find studying gives me a feeling of deep personal satisfaction"; "I feel virtually any topic can be interesting once I get into it"; and "I believe my studies will help to make me better equipped to deal with various problems in my future life."

²Since the sample size was small for overseas students and it is generally believed that the number of items for analysis should be at least of a 2 : 1 ratio if not better, factor analysis was performed on subsets of items from the whole scale (SPQ).

Further analyses were carried out by introducing the dimension of social-approval motivation, which was not included in Biggs's work. The rotated varimax four-factor solution for the Australian sample accounted for a total of 49.0% of the variance. The first factor was the social-approval orientation. Items such as "My parents/spouse will be disappointed if I do not do well in my studies" and "I am working hard because I know that is what my family expects of me" loaded high on this factor. The second factor was the achieving motive. The third factor was instrumental or surface motivation; and intrinsic (deep) motivation was fourth.

For the overseas students the four factors accounted for 58.1% of the variance. The first factor was largely the social approval motivation (FM). However, two items of AM and SM that focused on getting top grades also loaded on this factor. It seemed the family's expectation of success had been internalised. The second factor had items loading on it mainly from the domain of intrinsic (deep) motivation. A third factor seemed to describe a willingness to work hard because of the expected end results ("I am not particularly thrilled about having to spend so many years in studying but I feel the end result will make it worthwhile"). The fourth factor seemed to focus on more instrumental (surface) motivation.

Factor analysis of the learning strategies revealed a great deal of similarity between the two samples. A surface strategy, which included rote learning and seemed to describe expedient and necessary techniques for efficient learning, was identified as the second factor for overseas students and a third factor for Australian students. Both samples endorsed items such as "I learn best from lecturers who work from carefully prepared notes and outline major points on the blackboard" and "I learn some things by rote, going over and over them until I know them by heart." The other two dimensions of deep and achieving strategies, described by Biggs could not be clearly identified. Both samples seemed to separate specific achieving (and sometimes deep) strategies from more global strategies for learning. Factor 1 was similar for the Australian and overseas student sample and seemed to describe general deep-level strategies, emphasising the desire to understand material to be learnt. They endorsed items such as "I try to think through a topic and decide what I am supposed to learn . . ."; "I find most new topics interesting and often spend extra time trying to obtain more information about them"; and "I test myself on important topics until I understand them completely." Factor 2 for Australian students and Factor 3 for overseas students described certain specific strategies such as "After a lecture I read my notes to make sure I understand them" and "I usually supplement my notes with summaries of material from suggested reading."

DISCUSSION

There are some methodological limitations that need to be acknowledged. The sample of overseas students is small and hence there is no differentiation between people from different countries of the Asia-Pacific region. However, over 68% of the sample were of Chinese descent from Hong Kong, Malaysia, Singapore, and China, and a further 22% were of Indian extraction from India and Fiji. The total number of overseas students at this university is small, making it impossible to obtain a sample large enough to limit the study to only one cultural group. However, it seems reasonable to argue that overseas students may be classified as a distinct group in comparison to Australian students, basing this generalisation on the Individualism-Collectivism construct that seems to offer an important dimension of cultural differences in social behaviour, across diverse cultures of the world (Triandis, 1990).³ Broadly, all of the cultures represented by the overseas students may be described as collectivistic and the Australian sample as individualistic so any observed differences would be valid for making broad between-culture comparisons. Furthermore, a unifying factor is that they are all bilingual and receiving instruction in a second language.

Taking the results at face value one might argue that overseas students tend to be generally more highly motivated than Australian students, have a much more generalised concept of motivation, and use diverse strategies for learning. To be certain that the responses of the overseas students were not the result of a desire to *seem* highly motivated (a kind of response set), the response frequencies to individual items of the scale were examined. The pattern of responses was similar to that of the Australian students, and responses were spread reasonably well across the different options.⁴ This does not however rule out the possibility of cultural variations in response style. If, indeed, overseas students are more highly motivated in all areas of motivation, including achievement motivation, as the results of this study seem to suggest, this might seem a serious challenge to the presupposition, inspired by McClelland's (1961) thesis that high N_{Ach} is a necessary ingredient for inducing higher levels of academic motivation. Academic motivation may be the product of some other force, such as a Confucian work dynamism (identified by The Chinese Culture Connection, 1987) and not of the dimension of

³Hofstede's (1980) work located cultures on a four-factor map and this had enabled cross-cultural psychologists to select cultures for comparison on an a priori basis (e.g., Bond & Forgas, 1984).

⁴On items measuring self-perception of academic performance (not reported in this paper), the overseas students scored consistently and considerably lower than Australian students, thus suggesting that an acquiescence set was not in operation throughout.

mastery or a quest for excellence suggested by McClelland (1971) and others. In this study we found that for overseas students, parental expectation was inextricably bound with a personal valuing of the need to excel, not only academically, but in life.

As Maehr and Nicholls (1980) and other researchers have argued motivation is multidimensional in the cultural context. The results of this study have demonstrated this. It would be a risky endeavour to try to accommodate evidence from non-Western cultures into categories defined previously in Western cultures alone. It is also disconcerting to find that the literature reviewed seemed to indicate that different studies used different instruments to measure motivation, but then tried to compare the results obtained. At times, research was carried out in a non-Western culture using an instrument designed for a Western culture and the results then compared with existing evidence from a Western culture (e.g., Church & Katigbak, 1992). There is no easy solution to the emic-etic dilemma, but imposed etic research provides us with questionable answers.

Although on the average overseas students did score high on the achieving motive, the results of the factor analysis seem to suggest that for Australians an achieving motive in terms of competitiveness and getting to the top (a quest for excellence) seem to be a very important motivating factor. For the overseas students, on the other hand, the achieving motive was a lower order factor, in the first analysis, and was not identified as a separate factor in the second analysis. Even though when the social approval motivation was introduced in factor analyses and it came out as an important dimension for Australian students, too, the achieving motive was still very strong. The results of this study therefore raise important questions about the nature of motivation in a cross-cultural context. It is possible that the motivation that McClelland described (a strong need for achievement) is important for individuals from Western cultures, who find a strong push to compete and win, but does not seem to be the primary impetus for achievement in other non-Western cultures. It is possible, therefore, that in non-Western cultures other types of motivation, such as social-approval motivation, could be by far the most potent force in generating the push towards higher levels of achievement. It would be worthwhile investigating how strong some of the dimensions of the Confucian work dynamism, such as persistence, a sense of shame, protecting "face," respect for tradition, etc. all collectivist values are as motivating factors compared to an individualistic drive for mastery. It seems that lower levels of an achieving motive do not necessarily mean lower overall motivation or even lower achievement. But further research is necessary to find supporting evidence for such an argument. So far, research has amply documented a relationship between motivation and achievement, but such research has also, for the most part, treated motivation as a unitary construct.

The argument that people from the developing world would be more extrinsically motivated was not supported. Even extra pressure to succeed did not seem to make overseas students more extrinsically motivated. In studying, too, there was no indication that overseas students used surface strategies exclusively. The strategies they used were similar to those used by Australian students. As hypothesised, social-approval (family) motivation was stronger for overseas students. This difference seems to reflect to some extent the difference in the two samples. Many Australian students are supported by scholarships and are therefore not supported by parents. There is also a high proportion of self-supporting part-time mature-age students among Australians at this university. But the difference in social approval motivation could also be explained in terms of cultural differences in family relationships between developed and developing countries. The Asian cultures represented in the sample may be broadly classified as collectivistic, (in terms of the Individualism-Collectivism construct). Triandis (1990) summarises the differences in values between individualistic and collectivistic cultures. He writes that in collectivistic cultures, the cardinal values seem to be reciprocity, obligation, duty, security, tradition, dependence, harmony, obedience to authority, equilibrium, and proper action and in individualistic cultures the cardinal values seem to be creativity, bravery, self-reliance, solitude, etc. The eight extolled virtues of China were social and included shame and filial piety. Given this differentiation it is not surprising that the overseas students are far more family-oriented than Australian students, and this seems to constitute an important factor in motivation.

This study has raised some important questions that need investigating. First, we need to differentiate clearly between different types of motivation in different cultures and examine the relationship between them and academic achievement. More confirmatory evidence that Western cultures have higher levels of N_{Ach} in terms of mastery, which is differentiated from other types of motivation that other cultures may possess, is needed. We need, then, to examine the relationship between different types of motivation and achievement. We need also to examine cultural differences in the value place on academic advancement. We would hypothesise that valuing would be an important dimension of motivation. If we are able to find answers to these and other related question, we will make great progress in furthering our understanding of cultural differences in motivation and learning.

REFERENCES

- AUSUBEL, D. P. (1968). *Educational Psychology: A Cognitive View*. New York: Holt.

- BALLARD, B. & CLANCHY, J. (1984). *Study Abroad: A Manual for Asian Students*. Kuala Lumpur: Longmans.
- BIGGS, J. B. (1976). Dimensions of study behaviour: Another look at ATI. *British Journal of Educational Psychology*, **46**, 68–80.
- BIGGS, J. B. (1979). Individual differences in study processes and the quality of learning outcomes. *Higher Education*, **8**, 381–394.
- BIGGS, J. B. (1984). *Learning Strategies, Student Motivation Patterns and Subjectively Perceived Success in Cognitive Strategies and Educational Performance*, J. R. Kirby, (Ed.) New York: Academic Press, Inc.
- BIGGS, J. B. (1987). *Study Process Questionnaire Manual*. Melbourne: ACER.
- BIGGS, J. B. (1990, July). *Asian students' approaches to learning: Implications for teaching overseas students*, Eighth Australian Learning and Language Conference, Queensland University of Technology.
- BOND, M. H. & FORGAS, J. P. (1984). Linking person perception to behavioural intention across cultures: The role of cultural collectivism. *Journal of Cross-Cultural Psychology*, **15**, 337–352.
- BRADLEY, D. & BRADLEY, M. (1984). *Problems of Asian Students in Australia: Language, Culture and Education*. Canberra: AGPS.
- BULATAO, J. C. (1964). Hiya. *Philippines Studies*, **12**, 424–438.
- THE CHINESE CULTURAL CONNECTION (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, **18**(2), 143–164.
- CHURCH, A. T. & KATIGBAK, M. S. (1992). The cultural context of academic motives. *Journal of Cross-Cultural Psychology*, **23**(1), 40–58.
- CONSTANTINO, J. D. (1966). The Filipino mental make-up and science. *Philippine Sociological Review*, **14**, 18–28.
- DEVOS, G. (1973). *Socialisation for Achievement*. Berkeley and Los Angeles: University of California Press.
- DOI, K. (1982). A two-dimensional theory of achievement motivation. *Japanese Journal of Psychology*, **52**, 344–350.
- DUD, J. L. (1980). Achievement motivation among Navajo students: A conceptual analysis with preliminary data. *Ethos*, **8**, 316–331.
- DUDA, J. L. (1981). A cross-cultural analysis of achievement motivation in sports and the classroom. Unpublished doctoral thesis, University of Illinois, Urbana-Champaign.
- DUDA, J. L. (1986). A cross-cultural analysis of achievement motivation in sports and in the classroom. In L. VanderVelden & J. Humphery (Eds.), *Current selected research in psychology and sociology of sport* (pp. 115–132). New York: AMS Press.
- GOW, L., BALLA, J., KEMBER, D., STOKES, M. et al. (1989, Jan.–July 22–23). *Bulletin of the Hong Kong Psychological Society*, **Jan.–Jul.**: 22–23, 57–77.
- GOW, L. & KEMBER, D. (1990). Does higher education promote independent learning? *Higher Education*, **19**, 307–322.
- KEMBER, D. & GOW, L. (1991). A challenge to the anecdotal stereotype of the Asian student. *Studies in Higher Education*, **16**(2), 117–128.
- LEVINE, (1966). *Dreams and deeds*. Chicago: University of Chicago Press.
- LYNCH, F. (1973). Social acceptance reconsidered. In F. Lynch and A. de

- Guzman II (Eds.), *Four Readings on Philippine Values* (4th ed., IPC Papers No. 2, 1-68). Quezon City, Philippines: Ateneo de Manila University Press.
- MAEHR, M. L. & NICHOLLS, J. G. (1980). Culture and achievement motivation: A second look, in N. Warren (Ed.), *Studies in Cross-Cultural Psychology*, Vol. 2. London: Academic Press.
- MARTON, F. & SALJO, R. (1976). On qualitative differences in learning: 1—Outcome and process. *British Journal of Educational Psychology*, **46**, 4-11.
- MCCLELLAND, D. C. (1961). *The Achieving Society*. New York: The Free Press.
- MCCLELLAND, D. C. (1971). *Motivational Trends in Society*. New York: General Learning Press.
- PASK, G. (1976). Styles and strategies of learning. *British Journal of Educational Psychology*, **46**, 128-148.
- SAMUELOWICZ, K. (1987). Learning problems of overseas students: Two sides of a story, *Higher Education Research and Development*, **6**, 121-134.
- SHILS, E. (1961). The intellectual between tradition and modernity: The Indian situation, *Comparative Studies in Society and History*, (Supplement 1), The Hague: Mouton.
- SLOG (1987). Why do students learn? A six country study of student motivation. IDS Research Reports Rr17. Institute of Development Studies, Brighton, England.
- TRIANDIS, H. C. (1990). Cross cultural studies of individualism and collectivism. In *Nebraska Symposium on Motivation, 1989*. Lincoln, NE: University of Nebraska Press.
- WATKINS, D., BIGGS, J. B., & REGHMI, M. (1991). Does confidence in language of instruction influence a student's approach to learning? *Instructional Science*, **20**(4), 331-339.
- WATKINS, D., REGMI, M., & ESTELA, A. (1991). The Asian-learner-as-rote-learner stereotype: Myth or reality? *Educational Psychology*, **2**(1), 21-34.
- WEBER, M. (1904). Die Protestantische Ethik und der Geist des Kapitalismus. *Archiv fur Sozial Wissenschaft und Sozial Politik*, **20**:1-54; (1905) **21**:1-1-110. (Translated by T. Parsons and published as *The Protestant Ethic and the Spirit of Capitalism*, Scribner, New York, 1930).

APPENDIX

ITEMS MEASURING LEARNING MOTIVATION AND STRATEGY (Adapted from Biggs's SPQ).

1. I chose my present course largely with a view to the job situation when I graduate. (SM)
2. I find that studying gives me a feeling of deep personal satisfaction. (DM)
3. I want to get top grades in most or all of my courses so that I will be able to select from among the best positions available when I graduate. (AM)
4. I am working hard because I know that is what my family expects of me. (FM)

5. I think that reading a lot of books is a waste of time, so I only read seriously the references given out in class. (SS)
6. While I am studying I often try to relate the material I am learning to real life situations. (DS)
7. I usually supplement my notes with summaries of material from suggested readings. (AS)
8. Whether I like it or not, I can see that further education is a good way for me to get a well paid or secure job. (SM)
9. I feel that virtually any topic can be interesting once I get into it. (DM)
10. I would see myself basically as an ambitious person and want to get to the top in whatever I do. (AM)
11. If I do not do well in my studies my family is likely to be disappointed. (FM)
12. I prefer subjects with a lot of factual content rather than highly theoretical material because the former is easier to understand. (SS)
13. I try to think through a topic and decide what I am supposed to learn from it rather than just read it over when studying. (DS)
14. I try to do my assignments as soon as possible after they are given out. (AS)
15. Lecturers should not expect students to spend a lot of time studying material everyone knows won't be examined. (SM)
16. The more I study the more absorbed I become in my work. (DM)
17. One of the most important considerations in choosing a course is whether or not I will be able to get top grades in it. (AM)
18. I learn best from lecturers who work from carefully prepared notes and outline major points on the blackboard. (SS)
19. I find some topics interesting and often spend extra time trying to obtain more information about them. (DS)
20. I test myself on important topics until I understand them completely. (AS)
21. I am not particularly thrilled about having to spend so many years after secondary school in studying but I feel that the end result will make it worthwhile. (SM)
22. I enjoy studying a subject that is interesting and challenging. (DM)
23. My parents/spouse will be disappointed if I do not do well in my studies. (FM)
24. I see getting high grades as a kind of competitive game and I play to win. (AM)
25. I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes. (DS)
26. I generally find it best to accept the statements and ideas of my lecturers. (SS)
27. I make a point of looking at most of the suggested readings. (AS)

28. I am at the university mainly because I feel that I will be able to obtain a better job if I have a tertiary qualification. (SM)
29. I believe my studies will help to make me better equipped to deal with various problems in my future life. (AM)
30. I believe society is based on competition and schools and universities should reflect this. (AM)
31. If I fail my studies my family will be disgraced. (FM)
32. I learn somethings by rote, going over and over them until I know them by heart. (SS)
33. In reading new material, try to relate it to material I already know and try to see the latter in a new light. (DS)
34. After a lecture I read my notes to make sure I understand them. (AS)