Indonesian Postgraduate Students' Experiences of and Reflections on Learning

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Margaret Kiley Professor J.H.F. Meyer
Advisory Centre for University Education
School of Education and
The University of Adelaide
Director of the Student Learning Research Group
Australia 5005
University of Cape Town
mkiley@acue.adelaide.edu.au
Rondebosch, South Africa
ERIK@education.uct.ac.za

Abstract
Within the wider framework of a research project related to Indonesian postgraduate students, the present authors have conducted two pilot studies that specifically focus on aspects of Indonesian postgraduate students' manifestations of learning. The first study, conducted in December 1995, involved 105 students at the University of Indonesia who completed Meyer's 88 item Experiences of Learning Inventory. This Inventory partially reflects some of the constructs embedded in the original Approaches to Studying Inventory (ASI) as reported in Entwistle and Ramsden (1983). Analyses of data from this pilot study (see Kiley and Meyer, 1996) indicated that at least one main group of Indonesian students, as surveyed, demonstrated unexpected response patterns of learning behaviour at a construct level. These findings were further investigated in a second pilot study undertaken in November 1996. It was anticipated that the application of a new Inventory, the Reflections on Learning Inventory (RoLI), currently being developed by Meyer and Boulton-Lewis (1997), would provide further insights into, and explanations of, the results from the first pilot study. The very short time between administering the second pilot Inventory and preparing this paper for presentation at the Conference has not allowed for detailed analysis, but some initial impressions are reported.

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Context of the Study
Previous studies
While the literature reports some general aspects of Asian post-secondary students' approaches to learning (Watkins and Regmi 1990; Meyer 1995a; Biggs 1989; Ballard and Clanchy 1988), many studies in fact describe only one group of students, usually Chinese. For example, Renshaw and Volet (1995) in their paper, "South-east Asian Students at Australian Universities: A reappraisal of their tutorial participation and approaches to study" explain that although they were using the term 'South-east Asian', 93% of the sample came from Singapore and the majority of those students had English as their first language. The authors of the paper appended a note to their title which states "The term 'South-east Asian' has been used in the title of the paper because we seek to address the current usage of the term in the literature, and challenge existing stereotypes of students from South-east Asia" (p. 104).

Renshaw and Volet also state in their article that "If a more positive and differential perception of overseas students is to emerge among Australian academics, there needs to be sustained research on the needs of these students (academic, social, financial and cultural needs) and an examination of their approaches to study that is sensitive to differences within and between groups" (p. 87). There has, however, been some specific research related particularly to Indonesian students' learning. For example, work is being conducted by a research group at the Atma Jaya Catholic University in Jakarta (Sutanto-Pekerti 1994 and Ajisukmo 1994), and at the University of Gajah Mada (Emilia 1990). Sutanto-Pekerti's work examines the means by which students can be encouraged to make meaning from texts. The work of Ajisukmo examines the effects of teaching students to use meta-cognitive skills to enhance their learning ability. In addition, Cannon (1995a) conducted a pilot study on approaches to learning with medical students at the University of Indonesia. Daroesman and Daroesman (1992) conducted a tracer study of Indonesian graduates from Australia, and reported their experiences of learning within the general context of their time in Australia. In Australia, there have been a number of studies related to Indonesian students, for example, Phillips (1994). However, studies related to student learning have not been numerous.

The two pilot studies reported in this paper are one contribution to the further research suggested by Renshaw and Volet; a specific attempt is made to address group-level differences.

(Note: In this paper reference will be made to three different studies: the longitudinal study by Kiley at the University of Adelaide; the first pilot study of Experiences of Learning and the second pilot study of Reflections on Learning. In an effort to avoid confusion the terms 'longitudinal study', 'first pilot study' and 'second pilot study' will be used.

The Inventories used in the first and second pilot studies were
examined for cultural bias or misunderstanding by two Australian-born academics who had worked in Indonesia, as well as two Indonesian students; one student having only studied in Indonesia and one student who was studying in Australia. The items were translated by a qualified Indonesian translator who also commented on the wording and appropriateness of some items. The translated Inventories were then back-translated by an Indonesian student into English and they were also completed and commented upon by an Indonesian-based Indonesian student.

Indonesia: its education and its students

Throughout the Indonesian archipelago there are approximately 3000 ethnic groups and 250 languages and dialects. Despite Bahasa Indonesia being a national language, the majority of Indonesians have a language other than Indonesian as their 'first' language. An example of this use of language is reflected in the longitudinal study (see Fig 1). This study involves 33 Indonesian postgraduate students. Only one student has Bahasa Indonesia as a first language. Twelve (36%) have Javanese as their first language, five (15%) have Sundanese, three (9%) have Chinese and three also have Minangkabau as their first language. The other nine students (27%) report the use of Melayu Manado, Tetun, Makassan, Balinese, Madurese, Betawi and Kaili as a first language.

Fig. 1 Home language of Students in Longitudinal Study

The largest proportion of the Indonesian students studying in Australia come from Java where 59.9% of the total Indonesian population occupy 6.89% of the total land area. In the first pilot study referred to here 46% of the students were Javanese. The Javanese are traditionally known for their regard and deference to superiors—including teachers; their desire for harmony and concentration on the welfare of the group rather than the individual, and their 'indirect' form of communication (Cannon 1995b).

The respect for teachers has been reinforced through the historical development of Indonesian (rather than Dutch) Universities that commenced in 1946. Kelabora (1991) suggests that the Indonesian authorities did not establish a university and then advertise for suitable academics; rather Indonesian universities grew up around distinguished scholars. Teachers were the ultimate source of knowledge and students would come from around the country to study under them. "This notion is quite old and well established within the Indonesian society. Its roots go back deep into the old Hindu culture where students come and study under a Brahman, ...Thus, under Professor Roessenno a faculty of engineering was set up in Yogyakarta in 1946. In 1946 too, Dr. Sarjito established a faculty of medicine in Klaten and Surakarta" (p 21).

It is understandable, therefore, that there are particular issues related to Indonesian postgraduate students studying in Australia which influence their learning. In the longitudinal study Kiley has been
attempting to address some of these issues. However, the matter of students' experiences and conceptions of learning is a difficult one. Prior to coming to study in Australia many of the students undertake intensive English courses of anything from a 3-12 months, and often an aim of these courses is to address expected differences in learning and expectations of teaching. As a result, it was considered unreliable to attempt a survey of students regarding their learning once they had arrived in Australia. Students were surveyed in situ instead; that is, in Indonesia. The first pilot study was thus an initial attempt to develop a more comprehensive, in situ, picture of Indonesian postgraduate students and their learning.

Aim of the First Pilot Study
The first study explored Indonesian experiences of learning in a general sense in order to establish whether there were any particular sources of variation within the Indonesian sample that might be attributable to language and culture. Towards this end a general purpose model of student learning was used that has been widely applied in studies of student learning.

Method
Subjects
The first pilot study, undertaken during one week in December 1995, involved 105 postgraduate students studying at the University of Indonesia. The students came from six disciplines of the University's Graduate School. Students were asked to nominate their ethnic group (see Fig 2) with the majority describing themselves as Javanese (n=49), the other 56 students represented over 20 ethnic groups with the main groups being: Minangkabau (n=10), Batak (n=8) and Sundanese (n=6).

Fig 2. Students by Ethnic Origin, First Pilot Study

The age range for respondents was 23 to 60 years with 77% of students in the 25-39 age range.
The students were invited to respond to the Inventory at the end of a regular class. They were invited to clarify any items in the Inventory during its administration although this happened rarely.

Instrument
The Inventory used in this study is an extended and considerably modified version of the original Approaches to Studying Inventory (ASI). Inventory subscales are conceptually intended to reflect, in terms of empirical structure, a model of student learning in which there is variation in contrasting forms of intention, motivation, process, pathologies and other constructs.
For example, the Deep Approach construct is intended to capture variation in students' declared intention to 'understand' what they are doing. This construct, which is of particular interest in this study, is defined by 4 items, viz
5. I usually try to understand thoroughly the meaning of what I have to learn.
10. I often find myself questioning things that I hear in class or read in books.
24. I generally try to put a lot of effort into trying to understand things which at first seem difficult.
34. When starting on a new topic in this course I often ask myself questions that I hope will be answered.

Results
The Inventory response data for the Indonesian sample (divided into two subgroups: Javanese and non-Javanese) were subjected to a variety of exploratory item, item correlation and common factor analyses. At a construct level, Tables 1 and 2 suggest that there may be underlying patterns of response that are different between the two Indonesian subgroups.
The focus here is on the 'deep-level' intention, motivation and process constructs for the Javanese subgroup in particular, DA (Deep Approach), IM (Intrinsic Motivation), UE (Use of Evidence) and RI (Relating Ideas). These original ASI constructs are collectively intended to represent a source of variation in intention and process terms in a broader dimension of deep-level learning. Meyer (1995b) contains an explanation of these constructs as used here.

Deep Approach: An intention to 'understand' what is being learned that involves critical engagement and expenditure of effort.
Intrinsic Motivation: A positive motivational influence reflected in interest and even excitement in the subject being studied coupled with a desire to learn more about it.
Use of Evidence: A deep-level process of examining evidence used in support of a conclusion or argument.
Relating Ideas: An active, deep-level, process of attempting to relate new ideas to other contexts and experiences; 'mapping' them out to see how they fit together.

In some contexts OL (Operation Learning) may also be associated with this broader dimension of variation.
Operation Learning (OL): An engagement of problem solving that is reliant on factual detail and logical analysis.

Constructs of this form, especially those dealing with motivational and learning process factors, are considered by many writing in the field as essential components of 'deep-level' learning in a western higher education institution (Ballard and Clanchy 1988; Biggs 1989; Ramsden 1992; Meyer and Sass 1993).
For the sake of completion, alpha coefficients for the constructs embedded in the Inventory are represented in Table 1 for the Javanese and non-Javanese students respectively. Of particular interest in Table 1 are the low values of alpha associated with some of the key subscales for the Javanese subgroup. Although the 'deep' intention, intrinsic motivation and process constructs are of particular interest here, it should also be noted that there appears to be a large between-subgroup difference in the alpha value for the OL subscale.
Table 1 "Javanese" alpha scores compared with "non-Javanese"

<table>
<thead>
<tr>
<th>Scale</th>
<th>&quot;Javanese&quot; (n=49)</th>
<th>non-Javanese&quot; (n=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep Approach</td>
<td>.28</td>
<td>.60</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>.36</td>
<td>.76</td>
</tr>
<tr>
<td>Use of Evidence</td>
<td>.30</td>
<td>.65</td>
</tr>
<tr>
<td>Relating Ideas</td>
<td>.51</td>
<td>.68</td>
</tr>
<tr>
<td>Operation Learning</td>
<td>.18</td>
<td>.54</td>
</tr>
<tr>
<td>Comprehension Learning</td>
<td>.63</td>
<td>.37</td>
</tr>
<tr>
<td>Strategic Approach</td>
<td>.70</td>
<td>.40</td>
</tr>
<tr>
<td>Extrinsic Motivation</td>
<td>.68</td>
<td>.64</td>
</tr>
<tr>
<td>Achievement Motivation</td>
<td>.40</td>
<td>.62</td>
</tr>
<tr>
<td>Book Skills</td>
<td>.72</td>
<td>.67</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>.69</td>
<td>.59</td>
</tr>
<tr>
<td>Memorisation</td>
<td>.77</td>
<td>.79</td>
</tr>
<tr>
<td>Syllabus Boundness</td>
<td>.35</td>
<td>.56</td>
</tr>
<tr>
<td>Fear of Failure</td>
<td>.45</td>
<td>.40</td>
</tr>
<tr>
<td>Disorganised Study</td>
<td>.63</td>
<td>.64</td>
</tr>
<tr>
<td>Globetrotting</td>
<td>.69</td>
<td>.43</td>
</tr>
<tr>
<td>Improvidence</td>
<td>.54</td>
<td>.66</td>
</tr>
<tr>
<td>Work Load</td>
<td>.74</td>
<td>.82</td>
</tr>
<tr>
<td>Assessment Awareness</td>
<td>.50</td>
<td>.62</td>
</tr>
<tr>
<td>Divergent Problem Solving</td>
<td>.44</td>
<td>.55</td>
</tr>
</tbody>
</table>

Table 2 contains the means and standard deviations of the response scores of the 4 items in the deep approach subscale. At face value the means for the two individual subgroups do not appear to differ. However there are some differences of note in the standard deviations, notably, on item 24 which refers explicitly to expenditure of effort in 'seeking understanding'.

Table 2. Item statistics for the Indonesian subgroups

<table>
<thead>
<tr>
<th>Item</th>
<th>non-Javanese (n=56)</th>
<th>Mean</th>
<th>S.D</th>
<th>Javanese (n=49)</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4.7</td>
<td>.69</td>
<td></td>
<td>4.7</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>4.2</td>
<td>.96</td>
<td></td>
<td>4.2</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>4.4</td>
<td>.81</td>
<td></td>
<td>4.7</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>3.7</td>
<td>1.1</td>
<td></td>
<td>4.0</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

The contents of Table 3 are also of particular interest. The entries in the upper and lower triangles represent the corresponding correlation coefficients for the non-Javanese and Javanese subgroups respectively. The two corresponding correlation matrices are quite dissimilar which
implies a structural (correlation) difference in the responses of the two subgroups that needs to be explained.

Table 3. Inter-item correlation matrices

Discussion
From these data it appears that at least one important aspect of a 'western' model of student learning does not adequately fit the Javanese data at the most basic level of response. There is thus little point in attempting to impose one dimension of a model of student learning that is based on such a key construct; in this case the construct appears empirically to be unstable. The data presented here therefore raise some further important research questions for which explanations must be sought.

Two speculative explanations are that the results are simply a statistical artefact and/or that observed differences are attributable to an invalid comparisons between groups of differing ethnic homogeneity.

A third explanation is that the results are attributable to error variation arising out of students' responses to items that have no real referential meaning in terms of their learning experiences, or that items have captured variation in such experiences in a manner that is culturally distorted. However this explanation seems unlikely given that a number of other subscales exhibit what appear to be coherent response patterns. Whatever the explanation, questions remain about these students' conceptions of, and approaches, to learning. The first of these questions led to the second pilot study.

Aims of the Second Pilot Study
There were two aims of the second pilot study. One was to attempt to confirm the results of the first study with respect to observed differences between the Javanese and other students, and the second was to seek further interpretation of the results of the first pilot study with regard to how Indonesian postgraduate students perceive and reflect upon their learning.

Variation in students' conceptions of what 'learning' is has explanatory power because such conceptions are an important part of the prior knowledge that influences how students engage both the context, and the content, of learning. It has furthermore been demonstrated that conceptions of learning represent a potentially powerful source of explanatory variation in student learning that is sensitive to cultural differences (Meyer, 1995a). The second study sought, in part, to locate
this source of variation in a wider experiential context using the Reflections on Learning Inventory (RoLI) developed by Meyer and Boulton-Lewis (1997).

The RoLI was developed on the argument that conceptions of learning are not formed in isolation; they have, at the very least, an experiential, a developmental, and a confirmatory, component. The RoLI thus seeks additional sources of explanatory variation in students' conceptions of learning by appealing to their perceptions of what has influenced their learning, as well as their knowledge and experiences of learning.

Method

Subjects

The subjects for the second pilot study were again postgraduate students at the University of Indonesia studying in very similar disciplines to the students in the 1995 study. The translated RoLI was administered during two weeks in November 1996.

Instrument

The RoLI is in the process of being trialled on a number of culturally distinct student samples in Australia, South Africa and Indonesia. The Indonesian sample is of particular interest here as it represents a group of postgraduate students enrolled in one of the most prestigious universities in that country.

A number of subscales have been provisionally identified within RoLI response data that broadly distinguish between the 'knowing' aspects of learning, the 'experience' aspects, 'influential' aspects and 'conceptions' of learning.

Knowing

Experience

Influenced by

Conceptions

recall

enjoyment

parents

accumulative

relating
growth
every example
seeing differently

integrating
control
obligation
changing as a person

Intuitive
duty

'not' knowing

Results
The Indonesian sample (n=94) consisted of a number of distinct ethnic groupings, the three largest of which were Javanese (jav)=39, Minangkabau (min)=12, and Batak (bat)=8. For two initial exploratory comparative purposes the sample (n=94) was divided as follows:
First: (a) jav (n=39) (b) min+bat (n=20) (c) other (n=35)
Second: (a) jav (n=39) (b) other (n=55)

A general linear model (GLM) procedure was used to confirm that, overall, there is no significant differences in means on the variables
above which are attributable to any of the above partitioning options. However a separate analysis confirmed that in both cases there are significant differences in terms of covariance structure. Since there were no overall differences in subgroup means, the whole sample (n=94) was used as a basis for testing for an overall effect attributable to gender (again via the GLM procedure). In this case the p values of .07 were not significant at the 5% level. Intuitively, however, it was felt that since the p values were certainly approaching significance at the 5% level an inspection of gender-based means might be of some interest. This inspection suggested that there may well be gender-based differences on the 'not knowing' and 'seeing things differently' constructs.

Differences in covariance structure can be interpreted as a necessary condition to perform separate, that is, within-group common factor analyses. Two separate exploratory principal factor analyses under oblique rotation were carried out for the jav (n=39) and other (n=55) subgroups using squared multiple correlations as communality estimates. Because of sample size limitations it has not been possible to examine all available partitioning options. However, in attempting to distinguish between the two subgroups, dimensions of variation were compared that appear to have a common basis of conceptual interpretation. Comparisons across these dimensions were suggested in terms of (a) differences in magnitude of the loadings and (b) composition. These dimensions of variation are outlined in Table 5.

Table 5. Comparison of Dimensions of Variation

<table>
<thead>
<tr>
<th>Dimension 1</th>
<th>Dimension 2</th>
<th>Dimension 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jav</td>
<td>Other</td>
<td>Jav</td>
</tr>
<tr>
<td>F1</td>
<td>F3</td>
<td>F2</td>
</tr>
<tr>
<td>Integrating</td>
<td>92</td>
<td>70</td>
</tr>
<tr>
<td>Recall</td>
<td>78</td>
<td>37</td>
</tr>
<tr>
<td>Intuitive</td>
<td>77</td>
<td>36</td>
</tr>
<tr>
<td>Not knowing</td>
<td>49</td>
<td>43</td>
</tr>
<tr>
<td>Relating</td>
<td>42</td>
<td>68</td>
</tr>
<tr>
<td>See Differently</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>Duty</td>
<td>-23</td>
<td>.</td>
</tr>
<tr>
<td>Example</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Accumulative</td>
<td>24</td>
<td>43</td>
</tr>
<tr>
<td>Change as person</td>
<td>26</td>
<td>51</td>
</tr>
<tr>
<td>Control</td>
<td>41</td>
<td>.</td>
</tr>
<tr>
<td>Life</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Parents</td>
<td>.</td>
<td>-20</td>
</tr>
<tr>
<td>Growth</td>
<td>.</td>
<td>34</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

Dimension 1: Knowing when learning has occurred
The common basis in this factor is in terms of 'knowing' when learning has occurred in terms of 'not knowing', integrating information, intuition, relating, and seeing things differently. Of particular theoretical interest in this dimension is that these sources of variation are also associated with 'knowing' as recall and, to a lesser extent, an accumulative conception of learning.

The between-subgroup contrast in Dimension 1 appears to exist in terms of the relative emphasis of the respective subgroup factors rather than in terms of their composition. Compositional differences do occur, but these appear to be limited to the inclusion, for the Javanese subgroup, of experiencing learning in terms of control and changing as a person. In terms of relative loading differences, the Javanese subgroup factor differs from the corresponding non-Javanese factor in terms of higher loadings on integrating, recall, and intuition, and lower loadings on relating and accumulating.

Interim Discussion
Bruce Grant (1996) in his recently published third edition of 'Indonesia', comments that,
"As developed over centuries, the central aim of the upper class [of Javanese], known as priyayi (a Javanese word meaning official) was absolute self-control leading to spiritual enlightenment. Only when the two forms of self-control the ordering of one's inner nature and of one's relationship with others were perfected, could one achieve the mystic understanding which resolves earthly ambiguity" (p. 131).

While far from suggesting that all Javanese are priyayi, Grant does suggest that the influence of this strong cultural tradition is very widespread.

Dimension 2: Influence, experience and conception
The basic pattern of variation in Dimension 2 that is common to both subgroups reflects an emphasis, in terms of the higher loadings on learning being influenced by a sense of duty and the examples of others in an association with an accumulative conception of learning, 'knowing' in terms of recall, and an experience of control in the absence of integration.

For the Javanese subgroup the loading on moral duty is more than double that for the non-Javanese subgroup. The Javanese subgroup also further qualifies this dimension with the experience of change, growth and enjoyment. Intuition as a basis for 'knowing' when learning has occurred is a qualification of the non-Javanese subgroup, as is learning from the example of parents. In addition, the loading on recall as a basis for 'knowing' when learning has occurred is more than twice as high for the non-Javanese subgroup.

Dimension 3: Personal growth
In Dimension 3 there appears to be a larger range of differences between the two subgroups. The common basis is reflected in terms of the influence of life experiences, the experience of personal growth and the conception of seeing things differently.

The Javanese subgroup add to this dimension the influence of parents,
the experience of enjoyment, and a relational basis for 'knowing' when learning has occurred.
In contrast, the non-Javanese subgroup build on the common basis by addition the experience of changing as a person, the influence of moral duty, the influence of learning from the example of others, as well as 'not knowing' when learning has occurred.

Interim Discussion
For those who have had some experience of Indonesia generally, and the Javanese culture particularly, it will come as no surprise that moral duty and influence of parents are factors of significant influence on, and therefore variation in Indonesian students' learning. As Ajisuksmo states (1996)
"In some cases parents or other family members influence them [students entering university] in choosing the field of their specialization. This is not only because of lack of information on the part of the students, but because of the authoritarian or paternalistic attitudes of their parents" (p. 100).
Ajisuksmo gives the example of a student in her group who really wanted to study Psychology but who was studying Economics because he was expected by his parents to manage the family business when he graduated. Moral duty, respect for parents and authority are strong cultural traditions in Indonesia.

Conclusion

The second pilot study suggests that there is a structural (correlation) basis for the manifestation of differences in the manner in which Javanese and non-Javanese Indonesian postgraduate students relate perceived influences on their learning to their knowledge, experience and conceptions of learning.
The study also provides some insights into the way two particular samples of students, at one Indonesian university, might vary their conceptions of learning and therefore their learning behaviour.
It is clearly recognised that the study has only surveyed students studying in the capital city and at one of the country's main universities. Replication of this study in other Indonesian provinces will help to provide a more comprehensive picture of Indonesian postgraduate student learning. However, it needs to be kept in mind that a very small percentage of Indonesian universities are approved to offer full postgraduate awards and all but one of these universities is in western Indonesia.
The question of whether there are any differences attributable to gender within these subgroups remains open. However, the possibility that such differences exist should be considered. Additional data from a range of universities will enable further exploration of possible gender differences.

Bahasa Indonesia translations of the instruments are available to other researchers who may wish to use them in collaboration with the authors.
Acknowledgment
Sincere thanks are expressed to the following staff at the University of Indonesia: dr Siti Oetarini Widodo and Associate Professor Bob Cannon, both of the Centre for Development and Research into Higher Education and Dr Wahjuning Ramelan of the Graduate Program. Without their assistance, the survey could not have been conducted.
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References


