Supervising international undergraduate medical students

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Abstract: Research supervision of undergraduate students has been the focus of few studies in the higher education literature. Asian second language students bring linguistic and cultural practices to the supervision process, which have been negatively cast within a discourse of cultural deficit. This interview-based study employing active interview methods and principles of grounded theory for data analysis examines supervisor perceptions of the challenges facing Indonesian students undertaking an Bachelor of Medicine, Bachelor of Surgery (MBBS) intercalated BMedSci science degree in the Faculty of Medicine, Dentistry and Health Science at Melbourne University. This paper reports qualitative analysis of responses by twenty seven academic supervisors of the benefits and issues facing Indonesian exchange abroad students in this context.

Keywords: supervision, undergraduate, international students

Introduction

Intercalated degrees within medical curricula are widely available in the UK and other countries, including Australia, Canada, and South Africa (Eaton & Thong, 1985; Gerrard, Fish, Tate, & Fish, 1988; Jones, Lloyd, & Meakin, 2001; Kirklin, 2003; S. Knight, 1999; MacDonald, 2001; Mason & Scully, 1987; Murdoch-Eaton & Jolly, 2000; Nade, 1978; Price & Smuts, 2002; Wyllie & Currie, 1986). As many as one third of all medical students in the United Kingdom take the degree while numbers in other countries including Australia have not been reported. Enrolment in such degrees is typically optional although some institutions, including Nottingham, Cambridge, and Melbourne University, include them as a compulsory additional year to a five year Bachelor of Medicine, Bachelor of Surgery degree or equivalent.

The Bachelor of Medical Science (BMedSci) at the University of Melbourne – the year is called Advanced Medical Science (AMS) - enrolls the whole undergraduate cohort (above two hundred students) in the third year of their study. It follows five semesters of study involving principles of biomedical science, health practice, and other subjects taught through lecture, tutorial, and PBL modes. One of the aims of the AMS year is to consolidate and complement this learning prior to more substantial exposure to clinical environments in following years. A previous evaluation of the program (Farish, 2002) noted benefits for students such as development of critical appraisal skills, appreciation of the diversity in medical research, and enhancing oral and communication skills. Two challenges were reported that are germane to this study: different perceptions (students vs supervisors) of what is involved / expected with supervision, and considerable variability in quality of supervision.

Two significant cohorts of Indonesian exchange abroad students have now been enrolled in the program. These students who complete the AMS program as a discrete research year are awarded a Bachelor of Medical Science (BMedSci). They undertake studies in three broad disciplinary paradigms at a range
of affiliated research locations such as hospitals: lab-based, clinical, and qualitative health. Overseas students are selected based on adequate English entry levels (IELTS), research interests, and prior academic performance. Language and academic skills support is provided to second language students by the author under the auspices of a faculty based support program (Hawthorne, Minas, & Singh, 2004). This involves substantial interaction with supervisors and students and this previous experience and interaction was critical in negotiating interviewee access and agreement.

Few studies have addressed the issues of undergraduate supervision in particular. Cook (1980) was one of the first to address the role of the supervisor in undergraduate science research highlighting the mentoring and guiding role of academics. Armstrong and Shankar (1983) evaluated student perceptions of undergraduate supervision and note some differences in expectations regarding the intervention of faculty in guiding students. Stefani and Tariq (1997) also uncovered some mismatch between students and supervisors of undergraduate research project work. More recently, Hammick and Acker (1998) identified gender as a factor impacting on the supervision process. None of these prior studies particularly address cross-cultural supervision nor has supervision in the context of intercalated degrees been examined in general.

It has been argued that international students have difficulty accessing peer and academic cultures and can remain outsiders in academia (Deem & Brehony, 2000) and that overseas students have distinct goals to their domestic counterparts (Volet & Renshaw, 1995). In addition to linguistic difficulties, Ballard and Clanchy (1984) suggest that Asian students in general are fundamentally hampered by conservative learning approaches. They identify four particular problems for overseas research students relevant to this study: relations with their supervisor, selection of a research topic, participation in discussions, and writing the thesis in English. Guides for faculty supervising overseas students reiterate these cultural and linguistic obstacles (Kinnell, 1990; Sillitoe, Crosling, Webb, & Vance, 2002; Whiteley, 2004; Wisker, 1999) and for international student research supervision, in particular, a similar approach to reinforcing the expectation that students will have obstacles to overcome is taken (Frost, 1999; N. Knight, 1999; Okorocha, 1997).

Closer to home, Harman (2003) notes concerns of international students in Australia about the quality and effectiveness of supervision. In the Australian context, Ninnes et al (1999), Chalmers and Volet (1997), and Biggs and Watkins (2001), have questioned this discourse of cultural deficit with respect to international students. They collectively question, as others have (Denicolo & Pope, 1999) the assumed originality and creativity in Western academic discourses; the conflation of ESL students into homogenous Asian or International stereotypes; and the lack of attention to the contextual features of setting and individuality which determine learning outcomes.

Although a few studies have appeared evaluating the particular linguistic and academic competencies of Indonesian students in particular (Dardjowidjojo, 2000; Erlenawati, 2002; Lewis 1996; Nurweni & Read, 1999) none address specific disciplinary settings of students or exchange abroad cohorts. In a previous study, I have noted that ESL students themselves identify with some of the characteristics attributed to them in the literature while challenging the veracity of others (Melles, 2004). Respondents in this study take up with the discourse of cultural deficit in explaining challenges to supervision of overseas (Indonesian) students. Supervisors appear to see some although not all of the issues conventionally associated with Asian students as relevant.

Participants and methods

Twenty seven faculty agreed to participate in semi-structured interviews of between twenty minutes to an hour which were recorded by the author and transcribed. Participants responded to four prompts
asking them to describe their research work; to reflect on the challenges undergraduate medical students undertaking the AMS year faced; to reflect specifically on the challenges facing international students (the focus of this paper); to suggest mechanisms for supporting such students in this context. The open nature of the questions allowed interviewees to identify themes they saw as relevant to the question. This helped generated a set of codes and categories analysed according to principles of grounded theory (GT) construction into levels of abstraction (Dey 1999). Qualitative data analysis was managed using NVivo 2.0™.

Currently data is organised into over 400 themes, which themselves are organised into broader categories, such as educational background (see figure 1 below), under three main headings: AMS students in general, international students, and recommendations. The example theme of **unstructured learning** (2 1 2) below indicates that this theme collects data where supervisors reflect on how the educational background of international students impinges on their capacity to manage unstructured learning in the research process. Potential interrelationships among themes are currently being explored at this level of abstraction, such as the interaction between student concepts of research, their practices of rote learning, and their ability to cope with unstructured learning. Analysis of themes from the data focusing on international students is currently organised into nineteen major categories, each of which then branches into separate themes. In the generation of theory, grounded theory approaches attempt to assemble interactions between codes and categories into core categories. This paper reports some potential thematic intersections that suggest such categories and relate to discourses of cultural deficit.

Respondents pursued other issues they interpreted as related to these questions. This potential for respondents and interviewer to explore related issues is one of the rationales for and benefits of semi-structure interviewing (Kvale 1996) and generated unexpected themes, such as institutional politics and funding, and equity of student workload across institutional sites. Following the conventions of active interviewing (Gubrium & Holstein 1995), I collaborated in actively constructing interview responses by mobilising my background knowledge of the setting and participants, and pursuing questions and issues that other interviewees had raised as potentially relevant. Addressing first the needs of all students established a frame of reference for focusing on any issues distinctive to overseas students and also areas where supervisors saw overlaps.
For the purposes of this paper I am focusing on the themes relating specifically to international students and have attempted to collect themes into five broad categories—called axial codes in grounded theory—that may support or conflict with cultural deficit as a discourse and claims made above. A broad transcription is used in examples below and excludes fillers, repetitions, hesitations and other potentially relevant discourse elements. Quotations are intended to illustrate specific examples of broader categories of responses.

Managing academic discourse in writing

The linguistic adequacies of overseas students are clearly tested in the writing process, and this is an area where supervisors could be expected to highlight additional workload. Interviewees acknowledge that the year was an opportunity to learn to write about academic discourse. Some lamented the lack of prior training in scientific writing for all students although simultaneously acknowledging that discipline and field specific writing requirements made it impossible to thoroughly prepare students for writing needs. For overseas students the same writing development process was important although it could lead to added supervision time:

*Because it's not the sort of thing they can learn and do just off. They can't - you can't expect them to be perfect in that regard when they arrive and when they start writing up. I'm sure they'll learn a lot during that but it took a huge amount of our time.*

One supervisor prefaced the difficulty in writing academically with a comparison with local students, labelling cross-cultural writing an ‘added challenge’ to the potentially poor initial competency of her own students:

*But the issue of actually writing in a language which isn't your own I think is a very difficult one. I've been surprised with the postgrad students of mine who are English language speakers born and bred in an English speaking country, whose written English is appalling. And so there's that added challenge for people who are writing in a language, which isn't their first language.*

This added challenge and its linguistic representation in writing was not always perceived by supervisors as a significant issue. Although ‘impressed and surprised’ the supervisor in the extract below separates grammar errors from rhetorical coherence and prioritizes the latter.

*Yeah and she had a very clear and concise writing style as well and that. I was very impressed and surprised at how well I mean there were clear grammatical errors that you would expect from someone approaching it from a second language but nevertheless the prose was clear with short sentences*

In addition to the language support provided for students, a few supervisors, who took into account the limited experience of students, employed strategies such as encouraging writing early, as this supervisor of a project in pharmacology notes:

*We actually started writing early with her. So we encouraged - so there already was a requirement for her to do the introduction and we reworked the introduction quite a bit in the first six months so the introduction was probably the strongest part of her thesis.*

This particular extract also illustrates how the contribution of expert co-writing in team-based projects (‘we reworked’) is an additional factor that must be considered in any broader analysis of student writing development. Thus, there is a recognition that linguistic competency can affect student writing although some supervisors perceive rhetorical cohesiveness where grammar issues are not overly intrusive. A
number of supervisors see continuities between domestic and overseas student challenges and also may prospectively employ writing strategies to avoid longer term problems.

**Spoken fluency may disguise communication problems**

Many students came highly competent in spoken interaction and this was reflected in band level scores for speaking in their IELTS entry levels. According to a number of respondents, this fluency, however, disguised miscommunication and misunderstanding which would eventually be made transparent in student behaviours. Several senior academics highlighted this and in some cases attempted to attribute it to specific causes, eg. initiative:

> Well that’s actually hard ‘cause although their conversational English is fine it’s when you try to talk about abstract concepts that you’d get this blank look in talking about now what do you think this all means?

> We certainly understood what she was saying. But then when she’d go away it would become clear that perhaps she hadn’t understood the subtleties of what we were saying especially in the first six months.

> I saw it in the outcomes I saw it in terms of either communicating to do something and it wouldn’t be done. And I suspect some of it was lack of initiative but some of it was probably language.

A general evaluation by supervisors of student verbal competency also limited the extent to which students were given clinical exposure to patients either as a component of their study or as a complementary experience. In the example below, a supervisor in the area of adolescent cancer noted that although clinical exposure was a desirable complement this was compromised by this limited ability to communicate clearly and the ethical consequences it represented:

> We had planned some clinical exposure but the problems with her English and the patient group we would have interacted with we decided not to. She was a bit upset about that but that was a decision we’d made that we thought she may miscommunicate her meaning to parents and in the particular project some of these parents can get very anxious.

As with managing writing above, some academics made specific suggestions about strategies such as paraphrasing and repeating that they employed or would employ in the future to ensure student understanding, as this senior researcher noted:

> So I think asking you know I guess perhaps something we don’t do quite enough is getting people to repeat back you know [summarise] yeah [paraphrase yeah] which I think is always helpful in a discussion. As I notice you’ve been doing (laughter) [laughter]. Yeah.

Another strategy suggested was to complement verbal with written instructions, as this supervisor said:

> I think it can. You’ve got to think along the lines of the information that you give them. You have to give it to them in two different ways I think. You can’t just rely on talking to them. And telling them verbally, they’ve got to have something written down as well.

However, those who reported employing confirmation strategies did not necessarily find success. Thus, the perception that students were limited in their ability to manage social interactions in academic and clinical contexts was a common theme. In some cases it was directly attributed to cultural or personal factors, and in most cases supervisors could document inadequate student behaviours as outcomes of poor
communication. In some cases, individuals employed - or would employ in the future - confirmation strategies but there was no guarantee that these would be successful.

**Difficulty in questioning authorities**

It has been noted by others, including Ballard and Clanchy, that critical appraisal of existing authorities or experts is difficult for Asian students; not all interviews noted this as a challenge for students. This difficulty in critiquing experts may extend to supervisors, and interact with the category of spoken fluency above. It also may extend to published research and motivate an inability to critically evaluate the limitations of prior work, thereby interacting with the category of academic writing discussed above. One senior academic, involved in the coordination of several AMS students, pointed out how she attempted to verbalise to students that questioning authority was both possible and necessary:

> And just and also if they thought something was being said that wasn't correct that that it was okay for them to say I don't think that's correct. I've read something that was different to that but that [so questioning authority] questioning authority was something that they just don't do [chuckle].

As the following respondent notes, the extension of expert or authority status to the supervisor by students had consequences for social interaction, and illustrates the potential interaction of this thematic category with spoken competency discussed above:

> And so we need to be careful because often not often but one thing that may happen is that you're talking to them and they'll agree with everything they won't engage with you in having a debate if you like. We can't have a debate and its [simply acceptance of what you've said] yeah. And we need to be aware of that, that that might happen.

The decision to question authority may develop over time with exposure to Australian convention, as this supervisor points out in referring to other experiences with the same cultural group (Indonesians):

> They are often quite deferential and I think that I guess the other thing is previously we've had PhD students in the lab from you know Indonesia. And its, they're not used to saying that people are wrong when they're people in positions of relative authority to them. And I know that that was a big issue when my boss had a student from Indonesia when she finally felt prepared to actually contradict him.

Supervisors demonstrate a general awareness of the potential for students to respect authorities, including themselves, in ways that affect the quality of research output. In recognition of this, some employ strategies to disaff ect students of this belief and some also see students develop their ability to develop this skill over time.

**Clarifying the interface between concepts and language**

In most though not all cases, supervisors view linguistic expression and (cognitive) content as separable although interacting in complex ways. Such as view has consequences for determining the source of miscommunication in writing as either conceptual or linguistic or the interaction of both. As two supervisors noted

> It's trying to work out what she's trying to say and whether she's got it right in her head. And then okay yes if she's got it right in her head how do we say that correctly on the paper. Or you know you could go and correct it on the paper and then but in actual fact it could be showing that she doesn't have it right in her head.
Yeah I think one of the things with if English isn't their first language is when they've written something that's not clear it's hard at first to work out is it because it's the way they've used the language or is it that they don't understand what they're saying so I think that just makes it harder.

Again, some interviewees, as in the following excerpt, generalised this issue to all overseas students in relation to their local peers, attributing conceptual limitations to prior cultural and educational background:

So, and the conceptual, the thinking through issues from a conceptual point of view for some of the international students, is it more than the local ones? I think probably a little it is. But it's not like unique to them that they struggle with these sort of discussions about conceptual issues to do with whatever they're researching. But they aren't they aren't used to it.

Thus, there is some consensus across supervisors about the limited ability of overseas students to conceptualise and linguistically represent key research issues. This limitation is attributed in many cases to cultural and educational background, and has clear consequences for the thematic category of writing discussed above. It is, nonetheless, recognised also that local peers face challenges in dealing with abstract research concepts although this is not as compromised by language competency.

**Ambiguity of personality or culture as explanatory**

The final theme explored here is the rejection of some academics that culture has value in explaining student behaviour. In essence, there was some confusion in supervisors’ minds as to whether culture or personality was relevant, as indicated by the following two supervisors:

One thing was that well I guess one thing it might have been just her personality but she was very reluctant to say up front what she felt about certain things. I mean I wasn't sure whether that was just because it was a cultural thing or she was just shy about saying well no I don't agree with this or she didn't want to offer her opinions on things initially.

To what degree it's a cultural thing and to what degree it's a personal thing I'm not sure but she tended to stick to herself. Didn't really have the ability to just go up to someone and say tell me about your work get involved stand behind someone's shoulder and watch on even though I told her to do that and I did ask my other staff [to be aware] to be aware of it and let her do it. And you know help her out. She basically just stuck to herself.

So he must have integrated so much he must have had a good time [made some friends] yeah. Yes but that would vary form student to student and some would be painfully shy and some not. I mean I don't know that -those cultural things might come into it but I think it depends a lot on the individuals well yeah [and the environment and everything else]. Yeah

In a few cases supervisors highlight their impression of the particular personality of the students, as a high achiever, as more influential than any generalisable cultural explanation, as in the following case of a supervisor of a high achieving student in a lab-based project:

You know it's hard to know because I don't have I don't have a really strong understanding of what the cultural issues are. I think it was strongly a personality issue. I think one thing that was driving her is that she had a very good academic record. And for her failure in a research project would have been getting something like a B or something you know or a 2A equivalent to a failure for her.
These responses and this category questions the enterprise of stereotyping students according to homogenous groupings such as ‘Asian’ or ‘International’ and predicking performance on such abstractions. In some cases, supervisors felt uncomfortable in being required by the interview questions to differentiate overseas students from domestic students and interpreted reference to challenges as a deliberately negative evaluation of their contribution to research departments and settings.

**Discussion**

This study contributes to our knowledge of the supervision process in intercalated research degrees in medicine. No previous studies have examined this particular dimension of the degrees and no studies have addressed cross-cultural supervision in particular. A qualitative interview-based approach employing principles of grounded theory for data analysis and theory generation is being employed in this study. This approach is seen as the most appropriate to the research question and practical aim of exploring the adequacy of the discourse of cultural deficit.

A major set of high level thematic categories appear to have emerged in relation to supervision of international students in this study. Although still a work in progress, at this point it seems that supervisors question the value of overarching cultural differences as the only rationale for challenges to supervision of overseas students. In addition to themes discussed, they identify a range of issues including institutional politics, funding, and social networking as key determining factors for these students. While acknowledging linguistic and cultural differences contribute to the student experience and supervisor workload, supervisors see continuities between local and domestic students and may prefer to evaluate student abilities and development in terms of local interactions in their specific setting.

**References**


Gerrard, J. M., Fish, I., Tate, R., & Fish, D. G. (1988). Evaluation of the careers of graduates of the University of Manitoba’s BSc (Medicine) program. *Cmaj*, 139(11), 1063-1068.


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