

Improving oral communication in pharmacy education through interdisciplinary research

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Abstract: *A major criterion for the registration of pharmacists in Australia is a demonstrated ability to communicate effectively in diverse professional interactions. Development of professional communication skills is, therefore, an integral part of the undergraduate program in the Bachelor of Pharmacy degree at the University of South Australia. Recent evaluations of the pharmacy program have indicated that a significant number of students have difficulty in reaching the required communication standards, particularly students with English as a second language. When Language and Academic Skills (LAS) advisers work with students to develop their oral communication skills, they need insights into the disciplinary expectations. Collaboration between lecturers and LAS advisers not only satisfies this need, but also offers opportunities for reciprocal exchange of discipline specific expertise. An interdisciplinary research project was undertaken using a framework developed by Roberts and Sarangi (1999). This collaboration resulted in beneficial staff development, resource development and enhanced outcomes for students.*

Key words: *oral communication skills, pharmacy education, research*

Introduction

In Australian universities, much of the focus of the work among Language and Academic Skills (LAS) advisers is on the process of acculturation to tertiary study, its expectations, conventions and behaviours. LAS practice, however, varies widely and is framed by a number of different paradigms (Percy & Stirling, 2004), informing different approaches

ranging from remediation to transformation (Webb, 2002). Included in the debates around LAS practice are the advantages and disadvantages of working with individual students versus a group, parallel provision versus embedded approaches, as well as the significance of the discipline of study in the development of LAS. Enhancing students' use of English in the academic context raises particular challenges for LAS advisers who rely on insights into and knowledge of the language of the subject areas. One way to gain entry to the discourses is to work collaboratively with academic lecturers to find ways to meet the challenges.

In 2004-05, a collaborative research project was conducted between a LAS adviser and the course coordinator of a final year course in the Bachelor of Pharmacy at the University of South Australia (UniSA). The focus of the study was on effective communication skills for professional practice which is an essential criterion for the registration of pharmacists in Australia. After completing their degree, students undertake a traineeship. This includes a registration examination which assesses their knowledge of professional practice as well as their ability to communicate effectively with peers, general practitioners, patients and the public. As elsewhere in Australia, pharmacy educators at UniSA have responded to the expectations of the professional bodies by integrating the development of professional communication skills into the undergraduate program.

In recent years, Home Medicines Reviews (HMR) have been used as the vehicle for teaching and assessing communication skills in professional settings and students' ability to apply pharmacology in the treatment and care of patients – referred to as pharmacotherapeutics. HMRs are part of current professional practice aimed at quality use of medicines and best health outcomes for patients. The assessment process involves three activities:

- a case presentation that draws on rudimentary information provided by lecturers and is augmented through research by the student group;
- a simulated interaction between a pharmacist (role played by student) and general practitioner (GP) (role played by tutor) in which the drug regime of the patient is discussed and changes are decided; and
- a simulated interaction between a pharmacist (role played by student) and patient (role played by tutor) to discuss the findings of the medicines review and to negotiate any changes.

Although many students are able to meet the expectations of the assessment criteria, a significant number of students, many of whom come from non-English-speaking-backgrounds (NESB), have difficulty in attaining the required communication standards. Since more than half the students enrolled in the degree are NESB, lecturers and tutors have found it difficult to provide the level of learning support needed for many of these students. With increasing numbers of international students, some of whom articulate into third year through twinning arrangements with offshore universities, there are increasing numbers of students requiring support to improve their skills in communication.

Over the last eight years, LAS advisers have worked closely with pharmacy lecturers to provide assistance with 'language development' for students at risk in all years of the program. With final year students, in particular, the efforts were limited because LAS advisers were not familiar with the discourses around HMRs. What was needed was an opportunity for a LAS adviser to spend time with students and tutors to develop an

understanding of the relevant discourses and practices. As a response to this, the research project was undertaken to investigate communication practices in the three HMR activities in order to identify those valued by pharmacy professionals. This paper reports on the study and its findings and focuses on the importance of a collaborative approach in relation to the debate among LAS advisers regarding generic versus embedded approaches to LAS development.

Theoretical framework

Simulated interactions with peers and clients commonly form part of assessment practice in educating healthcare professionals at UniSA. The interactions are challenging for students and usually involve one or two tutors who participate, observe and assess student performance in class or examination settings. These kinds of activities or encounters are often seen as 'a transparent channel through which facts, values, and opinions pass' (Roberts, Sarangi, Southgate, Wakeford, & Wass, 2000, p. 370) and are assessed as such. Where the encounters involve NESB students, the challenges in the interaction are even greater because of cross-cultural communication issues and the power and status differential implicit in the positions of teacher and student (Levinson, 1978 in Gumperz, 1982). These students, who bring their own values, beliefs and ideologies into the interactions, often lack knowledge of details like the particular setting, the participants and the usual topics of conversation so that there is little understanding of 'the local circumstances and wider discourses that circulate in the organisation' (Roberts & Sarangi, 2005, p. 634).

Various approaches to discourse analysis were investigated to locate a way to analyse the text and talk in the HMR activities that involved discourses that were widely accessible rather than being restricted to a linguistics community. A framework developed by Roberts and Sarangi (Roberts et al., 2000) was selected because it was designed to examine talk and text in professional and institutional settings in collaboration with non-linguistic researchers. Roberts and Sarangi have used the interactional sociolinguistic approach to investigate interactions in a number of medical settings (Roberts et al., 2000). Their ethnographic approach identifies the 'communicative ecology' of the setting and provides a sound understanding of the context of the professional interactions. It is a top-down approach that focuses 'on the context and culturally specific situated inferences that members rely on to convey communicative intent . . . [and] . . . whether or not interpretive procedures are shared' (Gumperz, 1999, p. 458).

The interactional sociolinguistic (IS) approach developed by Roberts and Sarangi centres on the activity type, the basic significant unit of interaction in terms of which meaning is assessed (Levinson, 1978 in Gumperz, 1982, p. 130). The term 'activity' emphasizes the dynamic process which develops and changes as the participants interact. The activity type limits interpretations of utterances by foregrounding certain aspects of knowledge and underplaying others. Roberts and Sarangi begin their analyses by mapping the whole activity or 'event' (Gumperz, 1999, p. 458).

The mapping draws on analytic themes to investigate 'how meaning is negotiated and judgements are made in interaction' (Roberts & Sarangi, 2005, p.632). The analytic themes include the interactive frames and footing, contextualisation cues and inferences, face

and facework, social identity and rhetorical devices which filter values and behaviours to suit particular interactions (Roberts & Sarangi, 2005). Interactive frames refer to the filtering of values and principles in the particular encounter; footing is the way that roles and relationships are affected during an interaction through, for example, participants aligning themselves to others through their talk; contextualisation cues and inferences are signals that give an utterance meaning in the particular context; face and facework refer to the way interactants 'save face' and maintain social relations through using politeness strategies and indirectness. Social identity, as an analytic theme, relates to the participants' identities that are brought into the interaction and are also brought about through the interaction; and rhetorical devices are patterns of argumentation like repetitions often used in institutional encounters.

Another important element in the mapping process (Roberts & Sarangi, 2005) is the distinction identified by sociolinguists between three types of discourse as existing in medical encounters: institutional, professional and personal discourse (Roberts et al., 2000, p. 371):

- Institutional discourse – talk that is about professional practice giving it a kind of concrete existence.
- Professional discourse – talk that is used by pharmacists in practice, signalling membership of the professional community.
- Personal experience discourse – talk that is often personal accounts of experience or feelings.

The mapping process may involve the modes of talk and examining their impact on the success of the interaction, or it may involve uncomfortable moments between interactants. These kinds of maps provide tools for examining complex interactions.

Method

Agreement was reached for a LAS adviser to conduct the research in the School of Pharmacy and Medical Sciences at the University of South Australia. The LAS adviser drew on course information, observation of classes, tutor meetings, modelling of effective simulated encounters, and post-class discussions with tutors to identify the 'communicative ecology' of the setting (Roberts & Sarangi, 2005).

Participants were sought in one final year undergraduate course and permission obtained from tutors and students to audiotape simulated interactions. The three activity types of the HMRs, the case presentations and simulated interactions with GPs and with patients, were audiotaped and these texts form the bulk of the data. In all, 46 students and 8 tutors agreed to be participants. The student group consisted of English speaking background (ESB) students and non-English-speaking-background (NESB) students. The body of transcribed data included: 12 case presentations (7 ESB & 5 NESB), 14 simulated GP interviews (4 ESB & 10 NESB) and 20 simulated patient feedback sessions (12 ESB & 8 NESB). Where possible, the tutors' feedback was also audiotaped. The audiocassettes were coded to ensure confidentiality and transcriptions were completed by an independently employed transcriber. For the purposes of this study, transcription conventions were limited to hesitations, pauses and overlapping. To draw on examples of students' more

experienced interactions, transcriptions from the final 4 weeks of semester were selected for analysis. The initial mapping involved turn-taking, uncomfortable moments between interactants and matching tutor feedback to the interactions.

Findings and discussion

Initial findings indicate three factors that identify successful students: organisation and signalled staging of the activity type, length and types of turns, and use of institutional, professional and personal discourses. Another finding relates to variation in tutor interaction and feedback.

Activity types

As an activity type or event (Gumperz, 1999), case presentations in the HMR are information-giving narratives reporting on a patient's health status. There are a number of obligatory stages (Eggins & Slade, 1997) such as demographic details, medical conditions, related drug treatments and anticipatory elements such as gaps in information requiring clarification and discussion in the other HMR activities. The focus of activity in the pharmacist - GP and pharmacist – patient simulations was on treatment options, problem-solving and decision-making. As with the case presentations the organisation of information, through appropriate packaging, staging, prioritising and signalling, was significant for effective communication and highly valued by tutors. In addition, there were a number of obligatory stages such as new drug treatments. Initial comparisons of ESB and NESB texts indicated marked differences in managing the topic and signalling shifts in topic. For example in the following interaction, an ESB student signals a change of topic to the GP by referring to its order:

- 26 Pharmacist: OK ... Secondly, I notice that she has been on Amiloride and Frusemide since 1999 ...

On the other hand, most of the NESB students consistently used 'and' to signal all topic changes, as in the following interaction with an NESB student in a pharmacist -GP interaction:

- 32 Pharmacist: And also regarding her hypothyroidism ...
39 Pharmacist: And ... and ... also her BP ...
47 Pharmacist: And another thing ... also is ...

Length and type of turns

Apart from topic control, the effectiveness of the encounter depended largely on successful turntaking. Like any interaction, the HMR interactions between pharmacists, GPs and patients were jointly constructed through turn-taking (Roberts et al., 2000). As Gumperz (1999, p. 454) states:

Speaking, when seen in practice perspective, is not just a matter of individuals encoding and decoding of messages. To interact, as conversational analysts have shown, is to engage in an ongoing process of negotiation, both to infer what others intend to convey and to monitor how one's own contributions are received.

Where the encounter involved a collaborative development of the exchange, it was assessed to be effective by tutors. Although most students started the interactions with a set of prepared notes, the progress and quality of the interaction, like any interaction, depended on how well each question or response contributed to the information exchange. The quality of the interaction among NESB students was influenced by a lack of confidence in general conversational English as well as a dependence on 'prepared scripts' or protocols that they read from during the interactions. Close following of the prepared scripts usually led to mismatches in the schemata or frames within the encounter (Gumperz, 1999, p. 456) and resulted in inappropriate responses in the turn taking. In some cases, the students' turns consisted of long stretches of information-giving identified in the transcript as regular patterns of more than 10 lines followed by occasional brief back-channelling like 'um-hm' or 'yes' which kept the conversation flowing (Eggins & Slade, 1997). Of particular note is the number of unnecessary information-giving turns taken by many students to present details that the GP or patient already knew. These kinds of turns usually only required back-channelling for agreement and did not add to the collaborative development of the encounter. For example, in an ESB student interaction, the patient knew that the purpose of the pharmacist's visit was to explain a drug regime, yet the student (pharmacist) repeated what the patient had said:

- 03 Patient: Oh ... I've been expecting you from the pharmacy ... to explain all my medicines to me ...
- 04 Pharmacist: Now, last time you mentioned ... last time you mentioned that you had some difficulty understanding the medications, especially ... have you got that list?
- 05 Patient: yes, somewhere...
- 06 Pharmacist: ...especially the new ones that you started in hospital. What I'll do today is go through the new medications that you have been put on and then we'll talk about some of the changes that we suggest, myself and Dr G, suggest to your drugs, and we'll see what you think about those...
- 07 Patient: Um-hmm

Analysis of turn taking (Schlegoff, 1990) also revealed variation in relation to the types of turns that tutors took. Although the tutors were typecast in their roles as GP and patient, they interpreted their role in relation to their own knowledge as pharmacists and their experiences with HMRs. For example, some tutors playing the role of GP interpreted the role as requiring them to feign ignorance of new drug treatments to set up an information-giving turn for the student, while others provided clues for students about the new drug during the encounter. The varied ways in which tutors interpreted their responsibilities in the simulations as helper and assessor led to variation in turns and in the levels of joint construction of the encounter. From an interactional sociolinguistic perspective, tutors contributed directly to the construction of the talk and strongly influenced its success (Roberts et al., 2000, p. 371).

Variation was also found in the levels of success between ESB and NESB students, particularly in cases where students interacted with two tutors playing patient and resident nurse in a residential aged care facility. Side sequences aimed at providing insights into real life experience were especially challenging for NESB students. For example, in the

following interaction about the importance of relaxation techniques, the student pharmacist has difficulty maintaining control of the topic:

- 113 Pharmacist: Yep ... and here's a self care card ... for relaxation techniques ... which can help you improve your sleep. It's to relieve the symptoms of your ... stress ... either mentally or physically.
- 114 Patient: I think it would take more than a piece of a paper to get me stressed ... unstressed
- 115 Pharmacist: OK (smiles embarrassed)
- 116 Registered nurse: This young man is giving you some stuff that might help you. You should really ...

Even when this student gets a turn, he does not maximise the opportunity because he uses institutional discourse:

- 98 Registered nurse: OK, well we can discuss it later anyway...
- 99 Pharmacist: And it is important for you to maintain a good sleep hygiene. Research have ...um yes... um found that people with a good sleep hygiene feel ...um sleep ...um ...alert... when ...um ...when they wake up...
- 100 Patient: Sorry...?

These interactional difficulties appear to result from the unexpected shift in frame and discourse type (Roberts et al., 2000). A closer linguistic analysis of these kinds of awkward moments also revealed that ESB students were better able to deal with the distractions by using closed questions or intonation to gain control of the turns and manage the topic. For example, during the interaction below, the patient initiated a distracting side-sequence about improving all the food in the residential care facility (line 89) but the ESB student took a turn starting with "So..." (descending intonation) and regained topic control.

- 86 Patient: I think it's the diet here actually ... (said softly, confidentially to the pharmacist while looking at the registered nurse, L.)
- 87 Pharmacist: Well, actually talking to you, L., maybe just increasing fluids and increasing fibres can help ... constipation also ...
- 88 Registered nurse: Yep, I can do that!
- 89 Patient: (looking at the nurse) And having better food all round really, I'd say ...
- 90 Pharmacist: So... if you get all those things and you know you can get the constipation sorted out, and maybe the sleep will help as well...

Use of institutional, professional and personal discourse

The language used in case presentations assumed relatively high levels of background knowledge among the audience of peers and made use of common medical conditions, treatments and potential drug interactions. The discourse was a blend of professional and personal discourses (Roberts et al., 2000). The use of discourse markers, for example 'first' or 'therefore', also signalled the level of topic control. Many transcriptions of case presentations, particularly those of NESB students, indicated poor use of discourse markers.

In terms of the interactions with GPs, the language use assumed high levels of background knowledge of medical conditions, treatments and commonly prescribed drugs, and professional discourse dominated the interaction (Roberts & Sarangi, 1999). The language used with patients, on the other hand, assumed a relatively low level of background knowledge and the language was a blend of professional and personal modes of discourse.

The use of institutional language is evident where students are required to provide evidence or where they meet resistance to their suggestions. When GPs, for example, asked for further details about new drugs or rationales for changes to drug regimes, students often drew on the institutional mode. In situations where students met resistance from patients in the feedback session, many drew on institutional language to persuade the patient to make the changes. For example, in an interaction between a pharmacist and a patient in the company of the registered nurse in a residential care facility, the pharmacist tried to persuade an elderly patient to stop taking sleeping tablets and to try non-drug therapies. When the patient resisted, the student drew on the institutional discourse of 'excessive doses' and 'precipitate ... your nightmares' to try to persuade her:

- 13 Pharmacist: O.K. ... well ... um ...having a chat to your doctor, it's not really good that you use benzodiazepines on a, when? Like, like, continuous basis.
- 14 Patient: Well it's a good many years now. I don't know about not very good. I've been doing it for a long time ...
- 15 Pharmacist: Well you could just build up dependence, and that's probably why you're needing to ... needing more and more. Plus also, excessive doses can, they could precipitate ...um...your nightmares you're having.
- 16 Patient: What d'you mean?

The student's use of the institutional or "textbook" language was not understood by the patient who, in this case, asked for clarification with 'What d'you mean?'. The student playing the role of pharmacist could, instead, have explained that the long usage of the drug meant that it had lost its effectiveness.

Tutor feedback

Tutor feedback focused on 'inappropriate' language use and poor inter-relational factors like maintenance of good relations linked to status and power differentials (Levinson, 1978 in Gumperz, 1982). In relation to this, an important factor was once again the careful management of the shifts in topic through signalling. This is closely linked to inter-personal aspects of the interaction which require the pharmacist to interact with the GP and patient in ways that foster affiliation. Given the status and power differential, the pharmacist needs to avoid imposing on the GP and to generate goodwill.

Although there was a set of marking criteria for the assessment and the required standards were clearly articulated, students perceived the assessment to be based on largely unexpressed criteria resulting in inconsistent grading. What seems to exist around the assessment of HMRs is either a conscious or unconscious desire by the tutor for the student to become 'someone like us' or 'someone we would get on with' – a phenomenon that assumes a level of sharedness and solidarity which overrides

apparently objective procedures (Jenkins, 1986 in Roberts & Sarangi, 1999). One student expressed dissatisfaction as summed up in the following evaluation:

It is not fair for the teacher to say 'Yes that was good' and then give a Credit. If I get less than a HD then I want to be told specific areas which I need to improve, otherwise there is not much point in the exercise.

Although the main impetus for the study was to support NESB students, what became clear in the analysis was that ESB students also grapple with the different modes of talk and assessment expectations. Hence, the knowledge generated from the study has broader application for pharmacy educators and LAS advisers working with pharmacy students.

Conclusion

The expectations of pharmacy staff in relation to high levels of communication skills place pressure on the students to work towards achieving them. Among the large number of students who are NESB, are some who struggle to pass and others who compete to achieve high grades. These problems appear to be linked to practice and talk in practice:

The different ways in which clinical practice is talked about in different institutional and professional domains and by different groups produces a range of discourses that call up particular types of vocabulary, metaphor, and grammatical constructions and certain lines of argument and representation. (Gumperz, 1982 cited in Roberts et al., 2000, p. 371)

Several findings from the study will have immediate and expected outcomes for students and staff. An online resource has been developed to enhance communication for pharmacy practice and changes to the marking criteria in the workshop have been made. In addition, an elective course has been proposed for developing communication skills. An unexpected outcome of the collaboration and extensive dialogue was the opportunity it afforded for more intense reflection on the assessment practices. The analysis of the data involved extensive dialogue between the course coordinator and the LAS adviser. During these conversations, the LAS adviser gained important insights into the expertise of the pharmacy educator and the pharmacy lecturer learned about interactional sociolinguistic analysis and gained insights into normalised pharmacy behaviours. In this way the success of the collaborative project went beyond the initial goals and into professional development through reciprocal exchange of expertise and skills and resource development. This collaboration provides a model for LAS work in the area of oral communication for professional practice, especially for health science students.

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