Identifying the needs of students with English-as-an-additional-language for pharmacist-patient counselling: an interdisciplinary research approach

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Registration boards for most health practitioners require graduates to demonstrate high levels of professional communication. University curricula have responded to include preparation of graduates to meet this requirement. In most cases, the preparation results in successful registration, however some students, particularly those who have English as an additional language (EAL), find the challenges difficult and often seek additional support of extra-curricular practice classes with Language and Learning Advisers. For professional language development classes to be effective, however, requires authentic experiences and resources which are not readily available. This paper details interdisciplinary research undertaken to identify the nature and features of authentic pharmacy workplace discourse for developing effective extra-curricular materials to enhance professional communication for EAL students’ pharmacist-patient counselling. The comprehensive needs analysis focused on target language use in pharmacist-patient interactions. The project was framed by an interactional sociolinguistic approach developed by Roberts & Sarangi (2005) which enables a top-down examination of the communicative contexts and texts of professional settings. The findings of the investigation identified a number of specific areas of language usage peculiar to pharmacist-patient counselling as well as key areas of language development to be included in extra-curricular classes for EAL pharmacy students. The outcomes of the project indicate possible wider application of the interdisciplinary approach for identifying language development needs of EAL students preparing for other health professions.

Key Words: language needs analysis; English-as-additional-language (EAL); interdisciplinary research; professional communication for pharmacy

1. Introduction
The development of professional communication is integral to university programs for students preparing to be health practitioners to ensure that graduates meet registration requirements. For pharmacy students, this requirement is clearly articulated in the “National Competency Standards Framework for Pharmacists in Australia” (2010) which states that to “communicate
effectively with consumers and colleagues, and build and maintain cooperative working relationships within the healthcare team …” are essential characteristics of pharmacists. Further evidence of the importance of high levels of professional communication lies in the Australian Pharmacy Council Accreditation Standards (2009) which set out explicitly that a pharmacy program must “have content and be delivered in a manner which fosters graduates with … the ability to communicate information, arguments and analyses effectively”. This emphasis on effective communication in the workplace is driven largely by the need for high quality health outcomes for patients.

Varying pedagogical approaches are adopted by pharmacy educators to increase proficiency levels in professional communication. A widely used approach is experiential learning through simulated pharmacist-patient interactions (SPPIs) between students and tutors/actors (Mesquita et al., 2010). The SPPIs not only provide formative opportunities for students to improve their abilities to counsel patients about appropriate medication use, they are also used for summative assessment. This form of assessment is perceived by students to be “authentic” and aligns the teaching and assessment with their future professional contexts (Mueller, 2008). Students further value SPPIs as a form of assessment at university because they are keenly aware that they are also used in the professional board registration examinations in Australia.

Although students have opportunities to become effective communicators at university, many find the required levels challenging, particularly those students for whom English is an additional language (EAL) (Stupans, Rao, March, & Elliot, 2008). Mainstreaming the support needed by these students as part of all students’ experience is widely advocated as effective practice (Australia, 2007), but in mainstream classroom settings EAL students can find participation in tutorial discussion disquieting, preferring group settings with students with similar levels of language ability (Stupans et al., 2008).

An alternative to mainstreamed classroom communication activities is the provision of extra-curricular activities. However, despite their recognised benefits (Baik & Greig, 2009; McKauge et al., 2007), extra-curricular activities require students to find additional time in their already busy schedules. Consequently, for the activities to attract and retain students, they need to be well designed, explicit, directly relevant to specific and immediate needs, and tied to the discourse of the discipline of study (Kift, 2008). Where the additional workload of language development is integral to assessment practices in students’ courses of study and draw on mainstream course resources, students are much more likely to participate regularly (San Miguel, Rogan, Kilstoff, & Brown, 2006; Baik & Greig, 2009; McKauge et al., 2009).

In light of the above, the question of prime importance, therefore, was what would constitute the focus of the extra-curricular activities for a group of international students, enrolled in the third year of a pharmacy program at a large metropolitan Australian university, who were seeking support for their SPPIs. The particular group of international students had entered the Australian program in their third year, having studied the first two years of the program at an overseas “twinned” college (Stupans et al., 2008) and were still in a relatively early phase of adjusting to the Australian education context. Experience in previous years had shown that a small proportion of students in similar cohorts had not been successful in the course because of poor communication skills. Clearly, their needs were specific to pharmacy counselling and were not likely to be adequately met by invented or oversimplified resources (Roberts & Cooke, 2009). What was needed was not only a thorough understanding of authentic professional language for patient counselling for achieving safe, appropriate use of medicines and therapeutic devices to optimise therapeutic outcomes, but also insights into the challenges that the language presented to EAL students.

The Course Coordinator (CC) and a Language and Learning Adviser (LLA) collaborated to investigate effective ways of designing and implementing the extra-curricular support. The interdisciplinary collaboration that brought together pharmacy expertise and language expertise to support the development of academic and professional English among EAL students is widely regarded as highly effective in its targeted approach (James, Skillen, & Percy, 2003; Skillen, Percy, Trivett, & James 2001; Stevenson & Kokkinn, 2007).
This paper focuses on the processes used to explore the professional language needs of the group of EAL students mentioned above which were undertaken to develop effective resources for extracurricular classes. We will argue that there is a need to go beyond a simple review of published resources and relevant literature and to undertake interdisciplinary research to uncover the linguistic features of the target communicative tasks within the professional discourses that pharmacy students aspire to. We discuss the importance of a comprehensive needs analysis and discuss the use of an interactional sociolinguistic approach for analysing oral pharmacy counselling texts. We discuss the target language findings of the investigation and their usefulness for developing effective extracurricular classes for EAL students.

2. Professional communication needs

Long (2005, p. 1) states that “no language course should be considered without a thorough needs analysis”. One of the reasons is that “… the language and skills required to function successfully, and the texts encountered, vary greatly …” among different groups and contexts. Long further states that the variations reflect “ … underlying differences in the roles … beliefs, practices, ways of speaking, and cultures” (2005, p. 2) of the communities the learners wish to join. In order to undertake an effective needs analysis, Long (2005, p. 32) recommends using multiple measures and sources as a way of increasing the quality of information obtained. Apart from commonly used surveys of learners, other useful ways of gathering information include literature reviews, consultations with stakeholders, and a close analysis of relevant texts. Long also emphasises the importance of tying the curriculum closely to the needs and outcomes for the particular group of learners to limit the difficulties often associated with sustaining extra-curricular courses.

From the start of the project, the specific language that needed to be identified was professional workplace communication for pharmacists, and in particular, what constituted pharmacy counselling discourse. As well, areas of professional language that challenged the EAL students needed to be clearly identified. The discourse of workplace communication is complex, embedded in specific professional and organisational contexts and determined within a variety of relationships and different roles that participants play (Koester, 2004, p. 1). Drew and Heritage (1992) drew on conversational analysis (CA) to examine workplace and professional talk. This approach addresses the “contextual sensitivity of language use … recognise[s] the nature of language as action and … handle[s] the dynamic features of social action and interaction” (Drew & Heritage, 1992, p. 6). They proposed that work and professional interactions are oriented to achieving specific tasks and goals; that there are usually limits on the kinds of contributions to conversations that each participant can make; and that the talk may be linked to interactional inferences peculiar to the context (Drew & Heritage, 1992, pp. 21-25).

In line with Long’s (2005, p. 32) recommendation to use several measures and sources, a review of the literature was one measure undertaken. The needs of EAL students in relation to professional communication in the health sciences area, particularly medicine, are commonly identified in the existing literature as new terminology, Australian colloquialisms, and pronunciation (McKauge et al., 2009; San Miguel et al., 2006). In terms of oral professional communication in pharmacy, an example of an extra-curricular initiative based on terminology, slang and pronunciation was found in McKauge et al. (2009). In addition, one specific textbook for pharmacy students was a content-based textbook (Diaz-Gilbert 2009) designed around the major body systems and including exercises to develop and practise written and oral skills to communicate effectively in pharmacy practice settings. It makes use of authentic oral texts relevant to pharmacy students and did appear to be a potential source of resources for the classes, however, much of the specific context was the USA and materials would need to be adapted for use in the Australian context.

Given the limited sources found, it was decided that an analysis of the workplace language of pharmacy counselling available in the educational experiences should be undertaken to find not only what Long suggests are the structures or other linguistic forms, but more specifically the communicative tasks undertaken by pharmacists. Of particular interest were the areas that Drew
and Heritage (1992) had named: the specific tasks and goals; the contributions and limits of each participant; and the interactional inferences peculiar to the context.

In order to identify the specific language needs of the targeted group, an interactional sociolinguistic approach, first developed for examining language use in oral examinations of the Royal College of General Practitioners (Wakeford, Sarangi, Southgate, Wass, & Roberts, 2000), was adopted. The approach enables a top-down analysis of the “communicative ecology” of professional settings providing insights into the context of the professional interactions in it. For example, it identifies the participants, their roles, the flow of topics and ways of speaking, and decision making processes as background for the textual analysis and interpretation of spoken data. It also involves analysis of transcriptions of recorded data to identify the outcomes of the whole interaction between the participants. What results through this inter-disciplinary process is a thematic map (Roberts & Sarangi, 2005) of the interaction between participants in the specific context, in this case, the SPPIs. Some of the interactive activities examined in the professional interactions are ways that the speakers frame their contributions – “framing”; how they position their contributions – “footing”; the inferences and contextualisation cues that they use; the politeness strategies they use to avoid threats to “face” of other participants; the way social identity is developed in and by the language as well as some of the rhetorical devices used (Roberts & Sarangi, 2005).

2.1. Observation and discussions with stakeholders

In terms of gaining insights into the context and purpose of the SPPIs as professional interactions, the LLA observed 15 classes, each with two to three simulations with feedback from the tutor. These observations provided insights into the participants, their roles, the flow of topics and ways of speaking, and decision making processes. The LLA also observed students taking part in state and national level SPPIs to choose the “Australian Pharmacy Student of the Year”, further enabling her to gain useful insights into the use of pharmacy professional language that is valued by the profession. Discussions with the CC and tutors about what they regarded as high quality SPPIs also took place immediately after the observations and in subsequent meetings. Informal discussions were also held with students before and after the classes to gain insights into their experiences of the complex context and what challenges they faced.

These observations and discussions of and with stakeholders provided useful information about the educational context as well as learning needs. The communicative context of the SPPIs was found to be a complex mixed framing of both “Pharmacy” and “Education”. In terms of pharmacy and professional practice, the focus is entirely on pharmacy and the expert pharmacist interacts with a patient. In the context of pharmacy education and the simulated pharmacist-patient counselling, however, students took on the role of “novice pharmacist” advising an “expert patient” (a tutor) – a situation of mixed power relationships increasing even further the complexity of the professional communication. As well, although the professional conversation between pharmacist and patient was co-constructed by both student and tutor, the tutor was also assessing the student’s performance, further adding to the mixed power relationships.

In terms of identifying students’ needs, the discussions with staff were focused on the importance of the student managing the tasks and goals of the professional communication in a timely and clear way – to get to the essence of the case by using appropriate questions and then to offer the patient a choice of treatments for quality outcomes. At the same time, the student needed to maintain an effective therapeutic relationship with the patient – they needed to conduct a conversation by gauging accurately the patient’s background knowledge, providing sufficient information, and maintaining empathy. Where students performed poorly, staff repeatedly talked about students not asking the right questions, being too indirect in their advice giving, and also using poor pronunciation.

Further insights into issues facing students in SPPIs were also gained through conversations with pharmacy students. They reported their concerns about being able to ask good questions and to be able to use different ways to express questions and advice. In addition, the most
reported factor affecting their performances was nervousness about the public performance with staff which they saw as the main reason for forgetting to ask important questions related to the case. Other factors reported less frequently were concerns about their pronunciation and worries about not being able to understand Australian idioms used by staff in the SPPIs.

2.2. Data: Audio-recordings of SPPIs

The data for the textual analysis of language were audio recordings and transcriptions of 34 SPPIs previously examined in terms of the roles adopted by the participants in the SPPIs (Kokkinn & Hotham, 2006). Of these recordings, 15 were of English speaking students undertaking the role of pharmacist and 19 were of EAL students. In terms of close analyses of relevant texts, it was important for the analysis of language to focus less on what Long (2005) refers to as “the structures or other linguistic forms” and more on the “tasks relevant for the communicative needs of particular groups of learners” (p. 4). The data were re-examined by the LLA in consultation with the CC focusing on the moments of tension in the interactions for a further analysis of language use.

2.3. Linguistic features of pharmacy counselling

Patient-pharmacist counselling is essentially a service encounter (Gumperz, 2007) involving information exchange through questioning and advice giving. The features of workplace talk as identified by Drew and Heritage (1992) were found to be evident in the discourse of pharmacist-patient counselling where pharmacists engage in information gathering about the patient and advice giving about presenting conditions. In terms of the communicative task and goal of gathering relevant patient information, the interactions follow predictable phases: establishing the signs and symptoms of the presenting condition; checking for on-going medical conditions, prescriptions and use of complementary/herbal medicines, identifying allergies; and identifying the presenting condition. These stages are followed by advice giving involving treatment options and directions on the safe use of chosen medicines as well as advice on lifestyle options and changes. The kinds of contributions (Drew & Heritage, 1992) made by the participant depended largely on the stage of the whole encounter, which moves from the patient providing information about personal health status based on the selection of questions by the pharmacist, to the pharmacist providing information and advice and responding to further questions. In terms of interactional inferences (Drew & Heritage, 1992), these too are specific to the context, often including interpretations of tone, body language and other contextualisation cues. The limits of workplace communication contributions are evident in the turn-taking sequences of questioning/answering and advice-giving leading to an agreed therapy; as well, they can be seen in effective handling of sensitive topics. There is also the special character of inference where, for example, expressions of disapproval could be regarded as threatening the inter-relational aspect of the interaction.

Typical opening sequences in SPPIs include a greeting, an offer of assistance, and a checking of the identity of the patient for whom advice is being sought. An example of an opening sequence of greeting and identifying the patient from the data is:

<table>
<thead>
<tr>
<th>Line 1: Pharmacist</th>
<th>Good morning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 2: Patient</td>
<td>Hello</td>
</tr>
<tr>
<td>Line 3: Pharmacist</td>
<td>I’m the pharmacist on duty today, how are you?</td>
</tr>
<tr>
<td>Line 4: Patient</td>
<td>I’m just wondering if you’ve got any of those paracetamol and metoclopramide tablets please.</td>
</tr>
<tr>
<td>Line 5: Pharmacist</td>
<td>Is it for yourself?</td>
</tr>
</tbody>
</table>

Typical information gathering sequences about symptoms are exemplified in the following data:

<table>
<thead>
<tr>
<th>Line 7: Pharmacist</th>
<th>OK. How long have you been feeling like that for?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 8: Patient</td>
<td>Just this morning, just this morning ...</td>
</tr>
<tr>
<td>Line 13: Pharmacist</td>
<td>Did anything happen around that same time last time that you had the nausea ...?</td>
</tr>
</tbody>
</table>
There are also typical information gathering sequences about on-going health conditions, medicine usage and allergies like:

Line 19: Pharmacist  Do you mind if I ask you a few questions about your medication?

Line 20: Patient  Sure

Line 21: Pharmacist  That’s excellent. What are you on at the moment, I’ve forgotten?

Line 22: Patient  Enalapril and lithium. ...

Line 26: Pharmacist  Are you allergic to anything?

The professional interaction is also oriented to the task and goal of providing advice about treating or relieving symptoms of the presenting condition, directions on medicine use and/or lifestyle improvements or changes. An example related to migraines as a typical advice giving sequence is:

Line 33: Pharmacist  From what you’ve told me it sounds like a migraine.

Line 34: Patient  OK!

Line 35: Pharmacist  Have you had this before?

Line 36: Patient  No I don’t think so ...

Line 37 I can give you some tablets to ease the pain for now but I’d encourage you to see your GP to make sure it’s nothing more serious ...

... 

Line 55: Pharmacist  Well, there are some lifestyle things you could try which have been found to improve pain with osteoarthritis.

Line 56: Patient  Oh yeah, what sort of things?

Line 57: Pharmacist  Well, high impact exercise isn’t good for your joints. Things like swimming and cycling are really good ...

An important feature of effective language use in SPPIs is well chosen discourse markers to signal the staging like “Okay …”, “So …” and “Now …”). For example, the switch from gathering information about presenting conditions to ongoing health concerns is typically signalled with:

Line 14: Pharmacist  Okay ... so ... (how is your on-going health?)

Closure is often signalled by giving the patient the opportunity to ask further questions as in:

Line 27: Pharmacist  Um and do you have any other questions?

Closure is also often indicated by summarising the advice given as in:

Line 35: Pharmacist  Okay, so basically I’d just like you to try the Nurofen, see how you go with that. It should help with the pain as well, but yeah if the headache keeps going or lasts for longer than three days and doesn’t improve, it might be a good idea to see your doctor.

2.4. Needs identified

Discussions with staff had identified that students needed to achieve the tasks and goals of the pharmacy counselling while at the same time maintaining an effective therapeutic relationship with the patient by gauging accurately the patient’s background knowledge, providing sufficient information, and maintaining empathy. Staff also identified the need for students to be
intelligible and to get to the point reasonably quickly with both questions and advice giving rather than to waste time during the professional conversation. Students who performed poorly in achieving these criteria were regarded as poor communicators (Dr L. Hotham, personal communication, July, 2008).

Discussions with students had identified concerns about not being able to ask good questions and not being able to use different ways to express questions and advice. They also reported that they were inhibited by nervousness about the “public” performance and challenged by some difficult terminology and Australian idiom.

The findings of the repeated analysis of the audio-recorded data confirmed that a significant area of student need was in the control of higher level language functions used to achieve the target tasks, specifically, controlling the organisation of the information-exchange (Schegloff, 1990) in the SPPIs (Kokkinn & Hotham, 2005). What this meant was that lecturers judged interactions as effective when they were characterised by:

- logical organisation of the predictable stages of questioning and advice-giving in SPPIs
- explicit connecting words and phrases (discourse markers) to signal the shifts in direction in the interactions with patients
- the student-pharmacist’s ability to facilitate the collaborative nature of conversations (Gumperz, 2007) and to take effective turns in the conversations with patients
- the ability to deal with sensitive topics that arise during questioning and advice-giving.

In terms of the logical ordering and staging of questioning, when the students used a logical order with their questions in the SPPIs, the outcome was that more accurate information was elicited from patients leading to better treatment options and better health outcomes. For example, when identifying a patient’s needs, questions need to start with the presenting symptoms and condition of the patient before questions about on-going health conditions are asked (Pilnick, 2003). Where the questioning and advice-giving is not logically staged, there is the risk of confusing the patient or missing information which could lead to poor health outcomes for the patient.

In relation to explicit signalling during the stages of the interaction, when participants signalled shifts in questioning and advice-giving clearly with connecting or signalling words, the patient was better able to follow the questions and advice. For example, phrases like, “Now can I just check your general health …”, make explicit the shifts in a stage in the conversation and patients who have a sense of the anticipated direction of the conversation from previous visits is not surprised or made to feel uncomfortable. Other phrases are used to signal the need for additional information like, “Apart from these medicines you could also …”. Without these kinds of signals of changes, patients can often become frustrated by the number of questions asked and overwhelmed by the amount of information given (Kokkinn & Hotham, 2005). In the data set used for the project, there were several cases where students relied almost always on showing addition of ideas rather than a stage of the interaction. There was no clear indication of the particular stage they were moving out of or into as in the following examples taken from one recorded SPPI where the student needed to discuss several health conditions and treatments but limited the signals:

Line 39: Pharmacist  The next thing is your...
Line 63: Pharmacist  Another thing is ... have you heard of ...?
Line 75: Pharmacist  The next thing is about your cholesterol ...
Line 87: Pharmacist  Another thing with your diabetes is ...

In relation to the ability to facilitate the collaborative nature of conversations (Gumperz, 2007), it was found that some students asked lists of prepared questions that resulted in a long series of question-answer exchanges rather than a collaboratively developed professional conversation. Where the patients were interrogated in this way, the patient was found to provide minimal details in their response, thus reducing the opportunity for more informal gathering of what
could be significant information about lifestyles or concerns. At other times, responses to patients’ comments were inappropriate or lacked empathy. For example, a student said “OK” in response to a patient’s description of problems related to the number of medicines they had to take. Some students were also found to have difficulties initiating or needing to interrupt conversations when necessary.

Finally, dealing with sensitive health topics like alcohol, smoking, diarrhoea or contraception, was also found to test students’ professional communication. These kinds of sensitive topics often present additional challenges for international students. What participants in the simulations often did was to find ways to avoid offence and save face. Brown and Levinson’s (1987) notions of face provide a useful framework for exploring the ways individuals attempt to mitigate face-threatening situations which usually include use of indirectness, hedging and apology. For example, the politeness strategy of indirectness can enable a pharmacist to provide essential information about contraceptive precautions and maintain a good relationship with the patient by saying, for example, “If you are on the pill, you will need to use additional contraceptive measures just in case …”.

4. Conclusion

The required competency levels of professional communication for registration with Pharmacy Boards across Australia can be challenging, especially for students who have English as an additional language. Despite the focus in the curricula of university programs on developing their skills, some students struggle to reach the expected levels of communication and often require extra-curricular support which can be time consuming for students already facing the challenges of settling into the Australian educational context. In order to attract and maintain the interest of students already under pressure, extracurricular activities must be designed to be explicitly relevant and embedded in the discourse of study.

When faced with the task of developing a curriculum for extracurricular classes under these circumstances, as revealed by the results of sections 2.3 and 2.4, it is essential to look beyond a simple review of relevant literature and to undertake a careful needs analysis drawing on “tasks relevant for the communicative needs of particular groups of learners” (Long, 2005, p. 4). As demonstrated by this study, a useful approach for analysing the oral language needs of students in health sciences is an interactional sociolinguistic approach (Roberts & Sarangi, 2005). The approach proved to be effective in identifying key features of language development needed for EAL students in the context of pharmacist-patient counselling. These key features included, but were not limited to, anticipated needs around terminology, Australian language, and pronunciation as previously identified in the literature. In addition to these anticipated needs though, other higher level language functions were also identified as having significant impacts on the success of students in the SPPIs. These higher levels included the organisation and staging of information, making connections explicit, facilitating the collaborative nature of conversations, and using politeness strategies to maintain good relationships with patients.

Thus, going beyond a simple but relevant literature review did, indeed, reveal significant areas of need among EAL students undertaking pharmacy counselling and enabled the development of a broader curriculum for the targeted group of students to prepare for pharmacy counselling (more details about this curriculum and the implementation of the extra-curricular classes are reported in Kokkinn & Stupans, 2011). In fact, the collaboration across disciplines that was involved in the researching the language needs specific to the context was highly effective in identifying and addressing key aspects of language development for EAL students in pharmacy. Given the expectations around professional communication of graduates in other health professions, the approach taken appears to have wider application for educators seeking to identify more accurately and meet more closely the needs of EAL students in extra-curricular classes.
References


