

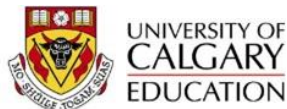
Communication errors and patient safety in English as a lingua franca health care settings

Languages Canada 2016 Conference

Fairmont Empress Hotel
Victoria, BC

Friday, March 4, 2016 [10:00-11:00]

Gregory M. Tweedie, PhD
IFP, Werklund School of Education
University of Calgary



Co-researcher:
Robert C. Johnson, PhD
Nursing Foundations Program
University of Calgary - Qatar



A story from the Arabian Gulf . . .

Q: Where is this?

The origin of this study: On a visit to an outpatient clinic in Qatar, I observed: a pharmacist from India deciphering the instructions of a Filipino doctor to a Qatari patient, mediated through a Sri Lankan nurse - all using English



State of Qatar population (2012): **1.8 million**

- Qatari citizens - **15%**
- India - **24%**
- Nepal - **16%**
- Philippines - **11%**
- non- Qatari Arabs - **13%**

(Paschyn, 2012)

Where we are today

1. International patterns of labour migration move health care workers across a global market (Packer, Labonte & Runnels, 2009).
2. English holds a (still growing) monopoly as the linguistic vehicle for medical use (Maher, 1987).
3. Different *varieties* of English meet in health care contexts.
4. In the Arabian Peninsula English as a lingua franca (ELF) interactions are a daily occurrence (Almutairi & McCarthy, 2012; El-Haddad, 2006).
5. ELF interactions in the Arabian Peninsula have led to concerns over patient medication errors (Bladd, 2008).



Turn to the person beside you. For **2 minutes**, discuss this question.

Q: OK, so you're a LANGUAGE TEACHER, NOT a medical researcher. HOW ARE YOU GOING TO DESIGN A STUDY THAT MEASURES **INTELLIGIBILITY** OF DIFFERENT VARIETIES OF ENGLISH IN HEALTH CARE SETTINGS?



Greg's observation: an Indian pharmacist deciphered the instructions of a Filipino doctor to a Qatari patient, mediated through a Sri Lankan nurse - all using English

The research study: Data collection

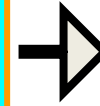
Senior **nursing instructor** designs a **health assessment scenario** (scenarios common in nursing education, see Carter & Dickieson, 2010; Zunzarren & Rodriguez-Sedano, 2011)



Two **practicing nurses discuss the scenario**

- Nurse A: self-identifies L1 as **Tamil**
- Nurse B: self-identifies L1 as **Arabic**

Discussion **recorded**



14 nursing **students listen** to the recording

- answer **comprehension questions** (constructed following Buck, 2001)
- results analyzed

3 nursing **instructors** listen to the recording

- semi-structured interviews ask whether patient safety affected
- interviews recorded, transcribed for analysis

Research questions:

- In a **lingua franca** context among different **varieties of English**, to what extent was a **health assessment scenario** by two nursing students **intelligible** to other nursing students?
- In the judgement of **nursing instructors**, to what extent could issues of **intelligibility** among users of different varieties of English affect the **quality** and **safety** of **patient care**?

Data analysis - background (scenario)

Scenario Role	Played by	Self-identified 'mother tongue'	Selected linguistic feature	Examples
Hospital nurse going off-shift	Nurse A (*post-diploma degree student; practicing hospital nurse)	Tamil (exhibited features of pan-Indian English: Silaja, 2009; 2012)	<ul style="list-style-type: none"> - /w/ and /v/ non-distinction - absence /eɪ/ diphthong - preference for progressive verb forms 	<ul style="list-style-type: none"> - He has /wɒm.ɪtɪd/ twice today - /hə.ləʊs/ around the lights - he's telling that way
Hospital nurse coming on-shift	Nurse B (*post-diploma degree student; practicing hospital nurse)	Arabic	<ul style="list-style-type: none"> - lack of do-support in question forms 	<ul style="list-style-type: none"> - You not take blood sugar? - No any interferon? - This refer the file?

Data analysis: background (listeners)

Listeners: Research participant profile

Gender	14 females; all completed institution's nursing health assessment course
self-identified 'strongest language'	Arabic (5); Tagalog (3); Farsi (2); Malayalam (2); Yoruba (1); Indonesian (1)
English proficiency level	Institutional requirements: Foundation entrance requires TOEFL iBT 40, IELTS 4.0; degree entrance requires TOEFL iBT 80, IELTS 6.0

USE YOUR INTUITIVE POWERS ...

Q: (Using your powers of intuition, answer this question with a partner.) **When the recorded health scenario is played to these students, what will the results be?**



Results: Listening comprehension

Question #	Information given in recorded discussion	Number of incorrect responses /14	Incorrect response (number)
Q1: How old is the patient?	'84 years old'	4/14	- unanswred (3) - '40 years old' (1)
Q4: The patient's pulse is 92. Is there any other information given about the pulse?	'irregular'	13/14	- 'regular' (13)
Q5: How is the patient's blood sugar?	'blood sugar, not take'	5/14	- 'normal' (3) - 'within normal' (1) - 'good' (1)

Variance in listener comprehension - selected examples

Results: Perception of comprehension

Question #	Responses (14 listeners)
Q7: How well did you understand the patient's condition and symptoms?	easily (7) understood, but with some difficulty (7)
Q8: How much of what the nurses said did you understand?	90% or more (6) 70-89% (7) 50-69% (1)

'In general was OK, not very difficult, but the way they pronounce and the accent is little bit made the word meaning to change, but because we had a lot of experience in working with Indian nurse so it became a habit to hear it and I feel it's OK and easy to understand.'
[Sic]
['strongest language' – Farsi]

Q: As a patient, which would you find more troubling:

- That they **didn't understand?**
- Or that they **didn't understand that they didn't understand?**

Results: What did nursing *instructors* say?

- Nursing instructors X and Y (pseudonyms) identified areas in the recorded scenario where language intelligibility could affect patient safety.
- X and Y indicated concern about intelligibility in the reports of administered medications (medication name, dosage amount, dosage frequency). [Z noted these also, but felt her cardiac ward background may have helped inference.]
- X, Y and Z all indicated concern that lack of precision in expression might negatively impact patient safety.

- Semi-structured interviews
- Recorded
- Transcribed
- Coded for analysis (NVivo)



Results: What did nursing *instructors* say?

Nursing Instructor Y: So then she talked about air entry, she talked about a moist cough. I would be concerned about this patient because of the KCL, and the high potassium . . . umm . . . And then so the other confusing part about this was that they said that this person is disoriented, but they're responding well. So I don't know what they're responding well to. If they're disoriented, and they're crazy, and they're acting funny, then to me, responding well is a bit of a misnomer.

Interviewer: Would would someone being a native speaker of English use responding well in an unclear kind of way?

Nursing Instructor Y: I don't - I would hope not.

Interviewer: So it might be language?

Nursing Instructor Y: It might be language. I think maybe they're responding well physically, but they've got a whole other psychodynamic going on here, that I'm concerned about. And if their potassium is creeping up, then they're not actually responding well, you need to attend to the potassium cos that could kill them.



Results: What did nursing *instructors* say?

Nursing Instructor Y: I didn't get the names of all the medications. I got Lasix 20, didn't get the frequency of it, didn't get I think there were 3 meds, I didn't get the next medication at all, and then I got potassium 20 millequivalents qd. I got that this patient vomited twice, pulse, I've got a question mark, I'm not sure if said they took the pulse, or they didn't get the pulse . . . umm . . . I'm not sure what acting funny looks like? Umm , and not quite sure how that connects to seeing halos around the light.

Interviewer: So uh so these the fact that you didn't get the medications -

Nursing Instructor Y: Huge issue!

Interviewer: In your opinion, were there areas of language, not nursing practice but language, that could affect patient safety, in this example?

Nursing Instructor X: Uh, yes, I think so, and I think it goes back to the the terms she used before: 'funny' and 'crazy' because those can be very umm, you know, funny what does that really mean, you know, is he unconscious umm, you know is he responding to verbal umm commands, to painful stimuli, like those all impact umm patient care.



Discussion

Talk to the person beside you for **3** minutes . . .

Q: WHAT are some **IMPLICATIONS** OF THESE FINDINGS FOR **ENGLISH INSTRUCTION** in **nursing education**?



- At the risk of stating the obvious . . . linguistic preparation of nursing students for whom English is an additional language will **look differently** in **ELF contexts** than in **ENL** ones.
- Listening instruction will aim **not** just for comprehension of a single ‘**standard**’ **accent**, but effective apprehension across a **wide variety** of **Englishes**.



Discussion

Talk to the person beside you for **3** minutes . . .

Q: YOU LOOK INTO a TYPICAL ESL CLASSROOM, and a LISTENING CLASS IS IN PROGRESS. WHAT DO YOU SEE?



Implications

Effective listening pedagogy would seek to enhance listening skills that are interactional in nature, expanding traditional listening task constructs to include active listening techniques like clarification, summarizing and the like – from ‘receptive orientation’ toward a ‘collaborative’ or ‘transformative’ one.

(Rost, 2002, pp. 2-3)

The ‘bottom up’ development of lexical lists for nursing, based on frequency use, is an expanding area of application from the field of corpus linguistics (e.g., Mohamad & Ng, 2013) that presents possibilities for content-specific instruction across the curriculum.



Authentic and genuine listening tasks

Discussion

Talk to the person beside you for **3** minutes . . .

Q: LISTENING HAS BEEN CONSIDERED AN UNDERVALUED AND UNDERTAUGHT AREA OF LANGUAGE TEACHING, THE 'CINDERELLA OF THE FOUR MACRO-SKILLS' (FLOWERDEW & MILLER, 2005, P. XI).

WHY?



Conclusion

In many cases ELT is seen only as a precursor to participation in nursing simulations; its usual relegation to 'foundation' programming results in a largely underutilized instructional opportunity for authentic, interactive and highly contextualized listening. As the findings of this study suggest, the neglect of communicative precision in ELF nursing instructional contexts is done at patient peril.

Questions and Comments?

Dr. M. Gregory (Greg) Tweedie

Werklund School of Education, University of Calgary

gregory.tweedie@ucalgary.ca



References

- Almutairi, A. F., & McCarthy, A. (2012). A multicultural nursing workforce and cultural perspectives in Saudi Arabia: An overview. *theHealth*, 3(3), 71-74.
- Bladd, J. (2008). Drug doses lost in translation. Retrieved June 6, 2013 from <http://www.arabianbusiness.com/drug-doses-lost-in-translation-51171.html>
- Buck, G. (2001). *Assessing listening*. Cambridge: Cambridge University Press.
- El-Haddad, M. (2006). Nursing in the United Arab Emirates: An historical background. *International Nursing Review*, 53(4), 284-289.
- Packer, C., Labonte, R., & Runnels, V. (2009). Globalization and the cross-border flow of health workers. In R. Labonte, T. Schrecker, C. Packer & V. Runnels (Eds.), *Globalization and health: Pathways, evidence and policy* (pp. 213-234). New York: Routledge.
- Paschyn, C. (2012). Qatar: Anatomy of a globalized state. *Think*, (August), 16-20.
- Maher, J. (1987). English as an international language of medicine. *Medical Education*, 21(4), 283-284. doi:10.1111/j.1365-2923.1987.tb00363.x
- Mohamad, A. F., & Ng, Y. J. (2013). Corpus-based studies on nursing textbooks. *Advances in Language and Literacy Studies*, 4(2), 21-28.
- Rost, M. (2002). *Teaching and researching listening*. Harlow, UK: Longman.
- Sailaja, P. (2009). *Indian English*. Edinburgh: Edinburgh University Press.
- Sailaja, P. (2012). Indian English: Features and sociolinguistic aspects. *Language and Linguistic Compass*, 6(6), 359-370. doi:10.1002/lnc3.342

Picture credits

Slide 2: Picture found online via Creative Commons Google Image search at.ezyqatar.com

Slide 3: Picture found online via Google Image search at yallatoursblog.com

Slide 4: Picture found online via labelled for non-commercial reuse Google Image search at Arab states of the Persian Gulf. (2016, February 28). In Wikipedia, The Free Encyclopedia. Retrieved 14:21, February 28, 2016, from https://en.wikipedia.org/w/index.php?title=Arab_states_of_the_Persian_Gulf&oldid=707341140; flickr.com

Slide 7: Picture found online via labelled for non-commercial reuse Google Image search at https://en.wikipedia.org/wiki/Milgram_experiment

Slide 10: Picture found online via labelled for non-commercial reuse Google Image search at https://c1.staticflickr.com/3/2258/2293697518_8109375317_b.jpg

Slide 11: Picture found online via labelled for non-commercial reuse Google Image search at https://farm6.staticflickr.com/5276/14046136518_a415489e73_o_d.jpg

Slide 12: Picture found online via labelled for non-commercial reuse Google Image search at [https://upload.wikimedia.org/wikipedia/commons/1/10/Mediciner_\(Small\).jpg](https://upload.wikimedia.org/wikipedia/commons/1/10/Mediciner_(Small).jpg)

Slide 14: Pictures found online via labelled for non-commercial reuse Google Image search at http://orig10.deviantart.net/169b/f/2008/004/e/2/captain_obvious_by_mobydisk.jpg;
http://img03.deviantart.net/48dc/i/2011/143/d/5/thank_you__captain_obvious___by_zekoalives-d3h2yyj.jpg

Slide 15: Picture found online via labelled for non-commercial reuse Google Image search at https://upload.wikimedia.org/wikipedia/commons/1/1c/Japanese_high_school_classroom.jpg

Slide 16: Picture found online via labelled for non-commercial reuse Google Image search at https://upload.wikimedia.org/wikipedia/commons/c/c3/ESL_1918.JPG

Slide 17: Picture found online via labelled for non-commercial reuse Google Image search at <https://i.ytimg.com/vi/nyV5ZCwBjM4/hqdefault.jpg>