

Understanding nursing-specific polysemous terms: An exploration with Hong Kong L2 nursing students

Introduction

- The acquisition of discipline-specific terminology serves as a key indicator of nursing students' understanding of their field's knowledge.
- Proficiency in this terminology enables nursing students to communicate accurately and appropriately with both healthcare professionals and patients, carrying out clinical responsibilities with precision, and ultimately contribute to ensuring patient safety (Alfarania & Su, 2016; Franklin, 2019).
- The Unified Medical Language System (UMLS), a resource for health and biomedical informatics, includes 1,208 multiply-categorized vocabularies and terminologies, illustrating various types of polysemy in healthcare contexts.
- Some of which are seemingly simple ordinary English words, such as the term 'line(s)', which may acquire specialized meanings and convey nursing-specific knowledge through metaphor and metonymy (Adam et al., 2025; Cruse, 2011; Taylor, 2003)
- For L2 English learners (students learning English as a second language), recognizing and understanding these general yet figurative polysemous nursing-specific terms can be challenging.

Objective

To explore the potential difficulties faced by L2 nursing students in Hong Kong when interpreting figurative nursing-specific polysemous terms.

Research Questions (RQs)

To achieve the above objective, in the first place, a figurative nursing-specific polysemous term, that is, the term 'line(s)' was selected as the focus of the study. Based on this term, the research questions to achieve the above objective are:

- What kinds of knowledge related to nursing, particularly oncology nursing, are encoded through the polysemous term 'line(s)' in oncology nursing research articles?
- What potential challenges L2 nursing students in Hong Kong face in understanding the meanings of this discipline-specific polysemous term, especially when these meanings are motivated figuratively, by metaphor or metonymy?

Methods: A two-phase study was conducted.

Phase 1

- A corpus named Oncology Corpus was compiled (containing research articles downloaded from the *European Journal of Oncology Nursing and Cancer Nursing Practice* between 2010 and 2016.)
- Content which contained the term 'line(s)' was displayed in key words in context format.
- Investigated the multiple meanings of 'line(s)' in these instances.

Phase 2

- A survey form containing eight 'line-related' phrases observed in Phase I was developed.
- The term 'line(s)' is utilised figuratively in seven out of these eight phrases while the remaining one is literal.
- Ninety Year Two nursing students from a Hong Kong university were invited to explain the meanings of the term 'line(s)' in these phrases.

Findings

Phase I

- Among the 284 instances of 'line(s)' in the Corpus, the multiple meanings of the term 'line(s)' can be categorized into three types.

Examples	Meanings of 'line(s)' (frequencies in brackets)	Literal /Figurative
I. As a specialized term within the nursing context (158)		
a. Related to professional role of nurses		
e.g.,1 "...effective psychological support can be partially provided by front line cancer nurses."	-nurses in direct patient/primary care role	Metaphor
e.g.,2 'who do not work consistent line '	-irregular work patterns/shifts /teams	Metaphor
b. Related to intravenous therapy		
e.g.,3 'receiving many lines of treatments...'	-methods/ types	Metaphor
e.g.,4 'Dacarbazine is the drug of choice for first-line treatment...'	-Priority/sequence of the treatments provided	Metaphor from metonymy
e.g.,5 '...symptoms arose for these three patients at cycle one, but the PICC line was not inserted until cycle three.'	-Referring to the medical devices(catheter) for intravenous therapy	Literal
e.g.,6 '...retrograde back up of stagnate blood clot into lines .'		
e.g.,7 'Two centers give locks with gentamicin in case of positive line cultures .'		
c. Related to workplace nursing spoken communication		
e.g.,8 'Keeping lines of communication open and being honest enhances trust between healer...'	-maintaining communication channels	Metaphor
e.g.,9 '...stay on the line '	-via telephone: non-face-to-face communication	Metaphor from metonymy
e.g.,10 'Because I had almost a terror to say: I came to the finishing line .'	-Idiom / Euphemism -'came to the endpoint of life'	Metaphor
e.g.,11 'when the line would be drawn...'	-Idiom / Euphemism -'When it is the time to establish a boundary or make a decision - stop treatment'	Metaphor
II. As a word/ phrase in academic writing (118)		
e.g.,12 'This is in line with previous research showing that fear of recurrence is common...'	-Consistent with what has been previously found	Metaphor
e.g.,13 'The data were then examined line-by-line , and statements and phrases were identified...'	-Referring to the careful manner when investigating the data	Metaphor
e.g.,14 'Note how Sarah uses the future progressive tense in line four in reference to herself ...'	-Referring concretely to each physical or textual line of a text / in a graph	Literal
e.g.,15 'This numerical rating scale comprises a 5-point horizontal line , ranging from 0 (no information needed) to 4 (very much)...'		
e.g.,16 'as a larger cohort study in which all the women had answered a base-line questionnaire...'	-A research method-initial measure/reference before intervention/treatment	Metaphor from metonymy
III. Other less frequent usage of the term 'line' (10)		
e.g.,17 'The peritoneum is a filmy membrane, which lines the abdomen...'	-Referring to something covering the abdomen	Literal
e.g.,18 '...their disadvantaged profile with 100% judged below the poverty line ...'	-Socioeconomic threshold for poverty	Metaphor

Phase II: The survey

- 90 university Year Two students were invited to interpret the meaning of 8 line-related phrases introduced in the above table.

Extract	Phrases containing the word 'line'	Figurative mapping	Meaning of the phrase
1	'came to the finishing line'	Race metaphor	The finish line in a running race is mapped onto the concept of the end of life.
2	'front line health professional'	Military/battle metaphor	The foremost position in a battle is mapped onto direct-contact healthcare roles
3	'open the lines of communication'	Conduit metaphor	Messages are metaphorically mapped as flowing through channels or pipes.
4	'when the line would be drawn'	Boundary metaphor	The act of drawing a physical boundary line to separate spaces is mapped onto the process of setting ethical boundaries in decision-making, i.e., determining the time to stop treatment.
5	'who do not work consistent lines'	Alignment and organization as a 'line' metaphor	Team alignment or structural arrangement is metaphorically mapped onto a physical line or row.
6	'receiving many lines of treatments'	Pathway metaphor	Multiple routes/ options of treatments are mapped onto different pathways.
7	'the retrograde back up of stagnate blood clot into lines'	Literally referring to catheter	Literally referring to the intravenous catheter line for treatment.
8	'stay on the line'	Metaphor from metonymy (part-for-whole)	Staying on a telephone line stands for the whole communication system, representing one of the usual methods nurses employ to provide support to patients and their families.

- The table below shows their accuracy rate

Extract 1	Extract 2	Extract 3	Extract 4	Extract 5	Extract 6	Extract 7	Extract 8
66%	43%	49%	20%	24%	75%	23%	12%

- Major challenges in their interpretation of these phrases:
 - Insufficient readiness in interpreting 'line' as a general yet nursing-specific term.
 - Under-interpretation of nuanced nursing knowledge in the figurative mappings of certain universal metaphors.
 - Cultural variations in interpreting figurative meanings.
 - Misinterpretation of general yet essential nursing-relevant figurative idiomatic expressions.
 - Potential ambiguity arising from L1 interpretation.

Pedagogical suggestions

- General figurative polysemous terms, such as the term 'line(s)', be explicitly addressed in nursing curricula.
- Instruction should focus on the detailed metaphorical mappings involved in universal metaphors and idiomatic expressions to support nuanced understanding of nursing knowledge.
- Teachers should also attend to cultural differences and first-language influences among L2 learners, which may shape their interpretation of these figurative extensions.