

Academic English Reading Skills to Support Finnish Nursing Science Students

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Summary. University study of nursing science requires sufficient knowledge of academic English to process various materials published in English. Many Finnish students enter university nursing science studies from heterogeneous backgrounds and require assistance on their academic English reading skills. The aim of the study is to explore how Finnish nursing science students perceived their academic English reading before and after a course tailored for their study needs.

Design. In this qualitative study applying a phenomenographic approach, text data were collected from reflective analyses written by Finnish first-year nursing science students ($n = 112$) before and after they attended course on academic English reading skills in 2019–2021.

Methods. Qualitative text data from the students' reflective writings were analysed using content analysis to determine which reading skills were pre-course familiar or used and how post-course students' perceptions of academic English developed in connection to their nursing science studies.

Results. Pre-course reflection texts indicated that some reading skills and strategies were already applied but many students felt nervous about academic English. Post-course progress analyses displayed a more positive approach to studying nursing science through academic English.

Principal conclusions. The students in this study viewed the course on academic English reading skills as a positive experience, which was beneficial to their processing of university study materials and thus advancing their studies in nursing science.

Introduction

Nursing education in Finland changed into higher education in the 1990s and since then nursing science as an academic discipline in Finnish universities has developed rapidly and enjoys international recognition (1, 2). This move from vocational education to universities, colleges and universities of applied sciences introduced the foundation of scientific and practical knowledge to the field. The development, in turn, also increased the use of academic English particularly for university students completing their bachelor's, master's and doctoral degrees in nursing science. Nursing science departments in Finland utilize English-language materials in their course books, lecture notes and assignments, and university courses with English as the medium of instruction have tripled throughout Finnish and European higher education since the 1990s (3, 4). This rise of English as a language for teaching and studying nursing science has led to an increased need for support systems for university students (5).

For Finnish university students entering studies directly from upper secondary schools, the use of English is rarely an issue as English enjoys a prominent second language status in Finland (6). However, many adult students entering bachelor's or master's

programmes in nursing science have extensive work histories and a decade or several may have passed since any formal English language training. To assist these students with their studies in English, courses on academic English reading and communication skills are a part of university bachelor's degrees (7). These courses aim at developing students' skills in academic and field-specific reading, writing, and communicative proficiency, and the learning outcomes typically include academic text comprehension, vocabulary practice, listening comprehension, oral fluency and presentation skills (8).

Reading Process in an Academic Discipline

The basics of academic reading skills and strategies while approaching academic content in a second language have been mostly agreed upon since the 1980s (9, 10). These skills include:

- selecting relevant texts for the purpose,
- skimming the text for content and meaning,
- scanning the text for specific information,
- identifying organisational patterns in texts,
- understanding relations in and between sentences,
- predicting, inferring and guessing from the vocabulary and context, and
- processing and evaluating the information during reading.

Being literate in an academic discipline refers to understanding both disciplinary content and the

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conventions of the discipline, i.e., ways of reading, writing, viewing, speaking, thinking, reasoning and critiquing in the field of study (11, 12). Therefore, it is essential that nursing science students actively read papers, articles and books written for and about nursing science topics in their studies and in their English courses. Fluency even in more advanced reading can be seen to develop as students have opportunities to read texts on relatable topics.

For second-language readers, academic English texts are challenging by the language, sentence length and complexity, conceptual difficulty and idea density (13, 14). Students are expected to gain new subject knowledge from texts which include unfamiliar terminology and style, and the process is also affected by each student's proficiency, age, motivation and cognitive processing (15, 16). Scholars (17) have also indicated that lexical, grammatical and mother tongue relations have an impact on the process. For instance, when reading academic English, students with mother tongues related to English, such as German, Dutch and French, will benefit from the language transfer influence whereas, e.g., Finnish students will have little assistance from their Finnish as it is non-related to English.

Course on Academic English Reading for Nursing Science Students

In a mid-sized Finnish science university with a prominent nursing science department, all first-year nursing science students are provided a course on academic English reading skills. Since 2018, the course has been organised as an online course, utilizing the Moodle online learning environment provided by the university. During the six-week course, students learn and practice reading skills and strategies, critical reading, essential academic English vocabulary and field-specific nursing science vocabulary. Academic style is also covered, as are current research papers from relevant nursing science journals, text-related exercises for practicing reading skills, and vocabulary quizzes. Students also work more extensively on one research paper they select from their studies by creating in English a summary, a reflection of the results and lists of essential vocabulary. The course contents are 90% in English, with some Finnish used in vocabulary tasks.

In the course, methods commonly applied in the teaching of nursing science such as problem-based learning (PBL) (18) are also mirrored in the teaching of reading skills. In a similar way to PBL, in tasks connected to academic readings skills, students can mostly choose on which texts and issues to focus, identify their own learning needs, find resources to utilize and self-evaluate their learning. This type of approach can be seen to encourage open-minded,

active, critical and reflective learning. This approach to texts and reading comprehension is also at times referred to as 'visible pedagogy' (19), as the teaching and learning tasks explicitly cover how and why academic texts in nursing science are created and structured in the manner, style and language as they are.

For students trying to decipher academic texts in a second language, it is essential that the support course covers so-called fragments of academic texts such as word recognition but also activation of background knowledge and identifying intrinsic motivation for reading (20, 21). This can help second-language students to cope with the volume of reading difficult materials and to apply critical reading skills. After all, to be proficient academic readers, students should be able to make connections to prior knowledge, generate questions and make inferences (22, 23).

Research Purpose

The purpose of the study is to clarify how Finnish first-year nursing science students in a mid-sized science university in 2019–2021 ($n = 112$) perceived their academic English reading skills before and after a course on academic English. At the beginning of the course, all students wrote a reflective analysis of their reading skills, and at the end of the six-week course, they reflected again in writing on their progress and development. Using the texts as qualitative data and applying content analysis, the study aims to answer the following research questions:

- RQ1: What strengths and concerns do Finnish first-year nursing science students see pre-course in their academic English reading skills?
- RQ2: How is the course on academic English, tailored to nursing science study needs, perceived by the students?
- RQ3: Do the students' reading processes in academic English, in their own view, develop during the course?

Methods

Approach and Setting. The approach in this study relies on phenomenography as the focus is on students' perceptions of their reading skills and their development through qualitative text data collection and analysis. Phenomenography focuses on how individuals perceive and understand the world or existing phenomena around them, particularly in relation to learning (24). The data were collected in years 2019, 2020 and 2021 from first-year nursing science students who consented to their course tasks to be used as anonymous research data.

In the first week of each course, nursing science students were provided a video lecture on academic

reading skills, strategies and critical reading. Reading skills can be considered to be a relatively automatic process of linguistic processing ability whereas strategies are a more controlled process of abilities (25). Skills and strategies covered include the SQ3R method of skim/survey, question, read, recall, review (26). Critical reading skills, on the other hand, can be seen to incorporate comprehension of the written materials through preview, annotation, outlining, summary, analysis and evaluation of the content (27, 28).

Data Collection and Procedure. Following the video lecture, students reflected and analyzed in writing their own reading skills and reading process in English in approximately 200 words. In this pre-course reflection, students were provided the following open-ended questions: 1) How do you approach a new text in English? When you start reading in English, what happens; what do you do?; 2) Did you recognize any of the reading skills or strategies mentioned in the lecture? Do you already use some of them?; and 3) How critical are you as a reader? You can also think about different texts and different topics with your critical skills.

At the end of the course, all students reflected on their progress during the course and any development they had seen in their reading, again in approximately 200 words. The following questions were provided in the post-course learning assignment to aid the reflection: 1) How do you describe your progress with the course content, materials and your reading skills?; and 2) What development (if any) have you seen in your reading skills during this course?

In 2019–2021, 112 students participated in the course on academic English reading skills for nursing science students, completed the two aforementioned tasks and provided their consent for their text submissions to be used as anonymous data in this study. 104 of the students were women and 8 men, with ages ranging from 24 to 59 years old. The pre-course and post-course reflective writing tasks were used to allow the students to analyze their perceptions and personal responses related to academic reading in English based on the principles of phenomenographic study (29). It has been claimed that writing can have a particular reference to reflection as the process forces students to organize and create visible thoughts to support self-understanding (30).

Data Analysis. The pre-course and post-course reflective tasks provided the qualitative data in this study on nursing science students' perceptions of their reading skills. The text data in the pre-course task ranged from 200 words to 707 words. In the post-course progress reflection, texts ranged from 120 words to 376 words. The text data were analyzed using a thematic framework to identify recur-

ring patterns and develop meaningful themes. By carefully reviewing the text data, an initial set of codes was identified, such as 'skimming applied', 'critical reading difficult in English', and 'reading skills developed'.

The data analysis was conducted in phases and the unit of analysis was conceptual themes that would consist of one to several sentences. The codes and data were analyzed, compared and contrasted to integrate different themes to illustrate the student use of reading skills. The initial set of codes was further compared, contrasted and discourse patterns related to mentions of, e.g., 'reading', 'skimming', 'scanning', 'strategies', 'translate', 'abstract' and 'critical' were merged, drawing on existing literature on academic reading skills. To promote the validity and reliability of the study and results, an outside coder was invited to perform analysis on the data, and after comparisons and discussions, a consensus was reached. The main themes from the data analysis are discussed next in the results. Identifiers S1–112 (for students 1–112) are used in any illustrative direct quotations from the text data. No changes have been made to the quotations as they were produced in English by the students.

Results

Pre-course Reading Skills, Strategies, and Critical Reading

In the pre-course reflective learning task, all participants ($n = 112$) were asked to consider their English academic reading skills. To support their reflection, the participants were provided a 22-minute video lecture on academic reading skills, strategies, critical reading, and common difficulties in reading academic English as a second language.

In the text data, the most frequently mentioned reading skills were skimming ($n = 108$) and scanning ($n = 84$). Translating academic texts from English into Finnish, either with a dictionary or using electronic translation services such as Google Translator, were also frequently mentioned as an expressed reading skill ($n = 71$). All the reading skills identified through coding from the pre-course data are as follows:

- Skimming the text before reading $n = 108$
- Scanning the text for the main points $n = 84$
- Translating the text or difficult words $n = 71$
- Having fluency in reading $n = 24$

Translating foreign-language materials is today naturally facilitated by electronic translation websites and software. However, although many students mentioned using translation from English to Finnish, many also highlighted it was done sporadically, i.e., *only those words that are essential or repeatedly in the text* (S4), *sometimes* (S98), or *not the whole*

text (S54). Further, some students were apologetic in their texts about using translation, such as *I often translate the text too precisely* (S109), *too often* (S43), *I'm the one who always translates every single sentence* (S15), and *I have a bad habit of trying to translate every word I don't understand* (S78).

Secondly, reading strategies had more varied mentions in the pre-course data as strategies by nature are a more personal process connected to each student's preference, proficiency, and command of English (23, 27). While some students admitted not applying any reading strategies in their academic reading process, most listed more than one strategy (n = 102). In connection with research papers, the most mentioned selective reading strategies were reading the article title (n = 65), abstract (n = 98), introduction (n = 54), and discussion and/or conclusions (n = 41), as they were deemed the most valuable and informative in research papers.

Many Finnish nursing science students in this study also highlighted their own learning process as one of a visual learner (n = 51) in relation to reading strategies, which referred to frequently applying highlighting, underlining and other annotation methods during a reading process. This was also often connected to preferring to read materials on paper rather than on a computer screen (*It is hard to deal with [e-books] because a physical book is better*, S67). Other reading strategies mentioned included summarizing (n = 37), note-taking (n = 30), and predicting or inferring from the context (n = 24). However, several students lamented that despite applying strategies, they were slow readers because of the challenges created by academic content written in academic English, as illustrated by the data extracts:

- *I'm not a fast reader.* (S34)
- *It takes time [...] because I have to read it many times before I understand the main point.* (S89)
- *I have often translated many words and it makes my reading very slow.* (S111)
- *Unfamiliar vocabulary makes reading slow and hard. This is why I have been avoiding some way English academic materials.* (S22)

The third element, critical reading, was mentioned in all 112 pre-course texts and 76% of the mentions were positive towards critical reading in the academic context while 24% of the students indicated they were not yet comfortable with critical reading as most energy was directed towards understanding the English-language text. The division of mentions of criticality are listed as follows:

- Critical reading depends on familiarity with the subject n = 31
- Critical reading depends on the source (e.g., social media vs. research) n = 24

- Quite a critical reader n = 19
- Always a (very) critical reader, in English and Finnish n = 11
- Difficult to be critical because of the language (easier in Finnish) n = 15
- Difficult because of the advanced content n = 12

These Finnish nursing science students who were already critical readers were also mostly fluent and confident users of English and viewed it crucial to be a critical reader when studying health sciences and studying in academia. Critical reading skills were also connected to and supported by the students' work experience and being familiar with the read subjects through work or previous studies. Also, for the students expressed being unable to read critically in their first year of university nursing science studies, there were clear expressions that they wanted to be critical as soon as they were more comfortable with academic English and as their knowledge of nursing science topics developed, e.g.: *I should be more critical when I read texts. I know it is an important skill to evaluate texts from a critical perspective* (S56).

Post-course Progress Analysis

In the post-course reflective learning task, all Finnish nursing science students (n = 112) in this study considered their academic reading skills at the end of the course and the progress they had made. Naturally progress during a six-week course can be limited and development of the students' reading skills and understanding of academic English would continue after the course and throughout their studies. The students' texts on their progress, although instructed for approximately 200 words, were at times much shorter and ranged from 120 words to 376 words.

Progress in various elements of academic English mentioned in the post-course text data included reading skills (n = 99), writing skills (n = 80) and vocabulary knowledge (n = 56). As the course contents and aims were directed at reading skills, explicit mentions of developing writing skills in English were somewhat unexpected but possibly a result of the various tasks on Moodle completed in writing, and the larger research paper assignment which included writing a summary and a reflection on a nursing science research paper. In the post-course texts, progress was also seen in understanding academic style and why academic texts have certain structures, tone, and approach. This was connected by many students to typical nursing science research and writing practices in English. Progress in reading skills was also connected by many students to

understanding fragments of academic English language use such as linking words, affixes, abbreviations, and sentence structures, as their understanding facilitated the overall reading process. Activating reading strategies was also highlighted by many students as an aid to reading more quickly and efficiently (*I learned new strategies to read academic text and I think it will help me with my studies, S32*).

The larger research paper assignment was considered by most students ($n = 78$) to be the most useful and valuable task on the course. Being able to choose a nursing science research paper based on each student's individual interests was regarded positively as the students were able to utilize the text for their studies and professional development. Also writing a summary and a reflection of the article in English was considered very helpful in developing academic writing skills which, although practiced more extensively in another academic English course, were also needed in the students' nursing science subject courses. The research paper assignment was also considered difficult and time-consuming but ultimately the most rewarding part of the course.

The post-course progress texts also included mentions of having been nervous about the course because of inexperience with academic English, e.g.: *When this course started I was excited and terrified (S12), I was a little scared to complete this course because my English is not one of my strengths (S91), and English has been quite difficult for me since high school, so I was little bit nervous about the course (S39)*. However, for most students based on the text data, progress had been achieved and many fears had been alleviated through the practical work on the language, texts, style, vocabulary and reading skills.

Discussion

The purpose of academic English courses as part of Finnish nursing science degrees is to prepare students for the concrete application of field-specific, professional and academic language skills in studies and future work opportunities (2). Nursing science academic study and research are international, and communication transpires most easily in one commonly used language, English (31). However, for many new students, reading academic content in a foreign language is a challenge and trying to learn academic content while processing the language, information, details, references and prior knowledge will inevitably lead to a slower reading process than with native speakers of English (21).

Scholars have expressed concern over many universities' lack of adequate support for the development of students' academic literacy, particularly at the early stages of their studies (14, 16, 23). This

shortcoming is particularly detrimental to students who have disadvantages because of their linguistic or educational backgrounds. Also, regardless of their educational background or prior exposure to academic English, all university students, both native speakers and second-language users, can be said to be relative novices in their chosen disciplines and therefore require instruction on the stylistic, linguistic and contextual components of the language used in their field (17, 20, 26).

In this study, many Finnish first-year nursing science students pre-course recognized already applying some reading skills, strategies and critical reading with academic English. This is common particularly in disciplines where most students have extensive work histories and have developed field-specific expertise at work. Finnish nursing science students in universities often have a previous nursing school degree or a polytechnic applied degree in nursing, and many have also completed nursing science studies at Open University prior to enrolling in their degree program (2, 31). Therefore, many recognize the value and importance of active reading as part of learning, and critical reading as part of building academic expertise. Critical reading in particular was considered an essential part of academic study in nursing science.

Many of the classic elements of academic reading (9, 10) were mentioned by the nursing science students in their pre- and post-course reflections, such as skimming, scanning, highlighting, underlining, note-taking, summarizing and inferring. The results in this study are similar to previously published results that have indicated that reading strategies such as highlighting unfamiliar words, drawing conclusions from the text and using background knowledge were most helpful to university students in the academic reading process (32). In addition, using reflection in the pre-course and post-course tasks was a deliberate choice to aid students in their learning process. Reflection is significant tool in engaging students in online learning and in enhancing their behavioural, emotional and cognitive processes (33). This is particularly poignant when developing academic and field-specific language skills in an online environment, as on this course.

Conclusions

The first-year Finnish nursing science students in this study viewed the course on academic English reading skills as a positive experience and beneficial to their processing of academic reading materials for their study. As any learning, language learning is a lifelong and life-wide task that develops through personal experience, formal study, social interaction, and reflection and thus enhances intercultural competences and skills for international collabora-

tion. Academic identity and academic literacy develop in the first year of studies but will remain fluid and evolving throughout education, as inevitably with the nursing science students in this study. When students of nursing science around the world are able to follow the latest research in the field in English and other languages, and develop as aca-

demic experts, they will actively advance their academic study, professional proficiency and the entire field of nursing science.

Statement of Conflict of Interest

The authors state no conflict of interest.

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