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**The English Language Needs Analysis of Samara University Health Science Students: The Implication for Designing Specific English Language Course****Tessema Gilo<sup>1\*</sup> and Nuru Mohammed<sup>2</sup>****Citation:** Tessema Gilo and Nuru Mohammed. (2024). The English language needs analysis of Samara University health science students: The implication for designing specific English language course. *Ethiop.j.soc.lang.stud. Vol. 11 .No.1*, pp.11-31.eISSN: 2408-9532; pISSN: 2412-5180. Web link: <http://journals.ju.edu.et/index.php/ejssls>**Publication history:** Received in revised form 14 May 2024; Published online: 15 May 2024**Subscription(electronics):** Submission fee: Free of payment ; Accessing fee: Free of payment**Copyright:** © 2024 Jimma University. A first publication right is granted to the journal. Jimma University makes the publications to be made available freely (open access).**License:** Published by Jimma University. This is an open access article under the CCBY-NC-ND license (<http://creativecommons.org/licenses/BY-NC-ND/4.0/>).

## Abstract

The purpose of this study was to investigate the English language needs of health science college students at Samara University to design a specific English language course material that fits their needs. The study is crucial because it helps to develop appropriate English course that fits the needs of the students for the target use. As a result, 15 students from the fourth year of Health Science College in the academic year 2021/2022 were chosen using a purposive sampling technique. The study included six subject-area instructors from Samara University and six health workers from Dubt Hospital (through purposeful sampling). The data was gathered using a qualitative research approach. This study's data was gathered through observations, document analysis, and interviews. The data analysis was made based on procedures to descriptive and themes. The findings revealed that highly technical medical English terms were used in academic fields of study and professional settings. The findings also showed that throughout their internship program, health science students require translation skills, reporting skills, grammatical skills, and the ability to describe the patient, condition, location, and pathology of internal organs, which will aid them in their future professional careers. The study also discovered that students' failure to report their internship outcomes during their internship program was caused in part by a lack of English language abilities. As a result, for health science students in Samara University, Ethiopia, ESP should be designed throughout the undergraduate program taking into accounts both students' academic field of study and future profession.

Keywords: Course design, ESP, Health science students, Learning needs, Needs analysis, Target needs

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## 1. Introduction

### 1.1 Back Ground of the Study

The growing requirement for extensive assessments of learner needs as a precondition to successful course design is one of the several criteria for efficient course design in foreign and second language education (Long, 2005). Hyland (2006) defines need analysis as the techniques for gathering and assessing information pertinent to course design, and it is the method for determining the how and what of the course. To compete at the international level, students must have at least three language skills: Basic English, work-related language skills, and academic-related language abilities (Yansyah, Rafidiya & Nadia, 2019). Long (2005) points out that, just as no medical treatment would be given before a careful diagnosis of the patient, no language teaching program should be designed without a careful needs analysis.

If learners' current knowledge and gaps, available resources such as time, teachers' expertise, the curriculum designer's strengths and limitations, and teaching and learning principles are not taken into account, the course may be inappropriate for the context and learners for whom it is intended, as well as ineffective and inefficient as a means of stimulating learning (Nation & Macalister, 2010). According to Basturkmen (2010), language is learned not for its own sake or to obtain a broad education, but to ease the way to admission or improve linguistic effectiveness in certain situations.

According to McCorry and Mason (2011), the importance of good communication skills for any allied health professional cannot be overstated, and a healthcare worker with excellent communication skills will always be more effective in treating patients. The English language skills included in the current ESP book for medical students, as well as the time allotted for this course, are incompatible with the English language learning demands and desires of students at Islamic Azad University, Iran (Li, 2015; Karimnia & Khodashenas, 2018). This might imply that the majority of the nations have already provided ESP courses for medical students and are looking to expand them to meet students' English language needs. Li (2015) recommends that during the five-year undergraduate degree, medical English be taught at increasingly rising levels of difficulty. Mulu (2021) also suggests English communication skill classes to be extended until graduation, with students conversing in English in and out of class. Teaching and learning of English as a foreign Language (EFL) at the tertiary level should be provided as specific situations or purposes for which the language may be needed (Basturkmen, 2010; Fortanet-Gomez & Raisanen, 2008).

In conclusion, all of the above researchers argue that English language course material should be designed to meet students' academic and professional needs. However, in all Ethiopian universities, two English language skills courses, locally called "Communicative English Language Skills I" and "Communicative English Language Skills II" are given in the first year as common courses. Actually, in most part of the world, even where English is used as a second or first language, English language courses are delivered in universities to address students' English language needs in the target- situation use. The researchers of the current study believe that though it is difficult to deliver ESP courses in each college or department of Ethiopian higher education institutions, the demands of the English language in the health science field of study and in the health profession need careful need analysis that help design courses accordingly.

### 1.2 Statements of the Problem

The researcher began observing this problem while giving communicative English skills courses to College of Health Science students (public health officer, midwifery and nursing department) at Samara

University. The health science students had better performance in English than others, but they did not attend the English class unless the instructor took the attendance. As an instructor, the researcher tried to ask some students informally why they did not attend the English class though they could perform well in English. They replied that the contents of the course material were what they had mastered in their high school lesson, and they could obtain nothing new. The researcher realized that this situation could happen due to a lack of investigating students' English language needs because what students already knew and what they did not know were not identified. This was the first instance that inspired the researcher to conduct a study on investigating students' English language needs. The second point that made the researcher decide to study on health science college students was the English demands in the health profession. From the researchers' experiences, healthcare professionals widely use English as a means of communication more than any other profession. For example, they take case history from the patients in their mother tongue but write the cases in English language. They also write prescriptions and medical reports in English. Hence, these things can indicate that Ethiopian health science students need a high level of proficiency in English to be successful in their future job.

However, communicative English language skills are given as common courses for all first-year university students in Ethiopia. Hence, from the researcher's teaching experiences, English language courses in use cannot meet the needs of health science students as they do not enable the learners to function in their professional settings or even in their academic fields of study. The study focused on the three departments (public health officer, midwifery, and nursing department) because they were the only departments of the College of Health Science when the study began; there were no medical or other health departments. The researchers confirmed that no English language courses have been designed to address medical or health science students' English language target-situation use in higher education institutions of Ethiopia in general and Samara University in particular. So, how do health science students deal with highly technical English medical terms in academic and professional settings without learning them in their education courses? The researchers attempted to find international and local studies on the subject. Some Ph.D. studies were undertaken overseas, whereas just a few MA studies were conducted locally.

Abdullah (2005) conducted a case study to investigate the needs of ESP learners for practical English communication with reference to the learners of medical discipline considering the need of first-year students at the faculty of medicine at the University of Aden in Yemen. His study focused on sociolinguistic needs rather than target needs. Alfahaid (2011) conducted a study to propose the development of the present English for Specific Purposes (ESP) course at health sciences students' colleges in Saudi Arabia on the basis of a needs analysis and a course evaluation. The study more focused on the importance of the skills, but the current study focused on English language necessities, lacks and wants to design course accordingly. Farhat (2012) also conducted a study on teaching and learning English for Medical Purpose (EMP) in a Syria University (Tishreen University). The study investigated the inherent contradictions in the position of EMP in an Arab-medium university by drawing on socio-political and economic factors shaping English language education policy in Syria. The study focused on the role of English as a foreign language in constructing doctor's identity in the process of becoming a doctor. Thus, the study was beyond medical students' English language needs

Abuklaish (2014) studied the Language needs of undergraduate science students in Libya, and his study indicated that the English language is generally needed in the science setting. This study is general for science students. Chatsungnoen (2015) studied the English language needs of students and relevant stakeholders for an English for Specific Purposes (ESP) program for food science and technology students at Agriculture University in Thailand. Yet, this study is not about health science students' English language needs.

However, the researchers haven't come across a local study conducted in the Ethiopian context at Ph.D. level except for recent Ph.D. theses conducted by Silesh and Tamene (2022), who studied needs analysis for English for academic purposes in Ethiopian higher education institutions. This study focused on needs analysis

of English for Academic purposes for higher education institutions in general, but the present study focused on the English language academic and professional needs of health science students to help design course accordingly. A few MA theses were conducted on the area of the problem. Abiy (1990) conducted a study to identify the communicative needs of the high schools in Addis Ababa with respect to the language skills and the language activities and found that the language skills and the language activities are the common communicative needs of the high schools. He recommended that his study was only a partial work to develop a course.

Tufaro (2009) investigated the English language needs of third-year students in the context of Shashamane Health Science College. His main objective was to identify more important language skills for third-year health science students of Shashamane Health Science College. This study is different from the current study in that it focuses on identifying more important language skills whereas the current study focuses on English language needs in light of designing course materials. Minasie (2009) also conducted a study on identifying students' language needs in private medical colleges in Bahir Dar. His main objective was to find medical students' language needs in Bahir Dar town in relation to principles of ESP, the existing textbook, the view of the teacher, the executive bodies of the Bureau of Education, and the Medical College. However, the study did not directly consider academic needs and professional needs

In general, most of the above studies conducted abroad focused on conducting needs analysis on the effectiveness of ESP already established for University students, whereas the local researchers' needs analysis studies focused on the priority of English language skills for health science students. However, the present study aimed to investigate English language needs for health science students in academic and professional settings so as to help design English language courses accordingly. Thus, none of these investigations has a similarity with the current study methodologically, empirically, and analytically. On the other hand, the current study investigates health science students' English language needs in academic and future professional activities to build course content properly. Therefore, the purpose of this study was to answer four essential research questions:

1. What are the health science students' needs in learning and using the English language skills in light of their academic career?
2. What are the health science students' needs in learning and using the English language skills in light of their future profession?
3. What are the major difficulties of health science students while using English to accomplish their academic activities?
4. What are the main language contents which are relevant to health science students' academic and professional life?

## 2. Review of Related Literature

### 2.1 Language in Use in the Health Science Field / Medical Field

English for Medical Purposes is a sort of ESP that teaches English to healthcare employees such as physicians and nurses (Maher, 1986). The language of Medicine is a specific vocabulary used by healthcare practitioners (Gyls & Wedding, 2009). According to Maher (1986), EMP courses are designed to meet the specific needs of medical learners, so the course should deal with themes and topics related to the medical field that expose learners to the required skills in the medical field, such as writing medical papers or preparing talks for Medical meetings. All medical terminology contains at least one word root, and the majority of word roots are derived from Greek or Latin (Gyls & Wedding, 2009). According to Allwright and Allwright' study (as cited in Paltridge and Starfield, 2013), the category of skills, genres, and medical situations( e.g. English for doctor-patient consultations, English for medical congresses, English for report/ journal article writing, etc.) are some of the more useful needs analysis checklists of English target situations which are a potential difficulty for non-English speaking doctors. Paltridge and Starfield (2013) argue that it is definitely possible to build an EMP course around a sequence of relevant language items (e.g. medical terminology). For the present study it needs to see how language is used in academic as well as in health profession so as to identify language needed in a target- situation use and the way the language is used which in turn helps to design course material according to the results.

### 2.2 Theoretical and Conceptual Framework

The conceptual framework of this study depends on the rationale of language descriptions and theories of learning. It discusses the language descriptions and theories of learning that explain the process of course design that the course designers or instructors are expected to follow while considering the learners' English language needs. Lastly, a basic framework for the present study is outlined mainly depending on Hutchinson and Waters (1987) needs analysis framework. According to Hutchinson and Waters (1987), every ESP course employs explicit or implicit concepts about the nature of language. These concepts are derived from many language descriptions established by various schools of thought in linguistics. The language description is utilized to comprehend the features of the development stages and to add course design concepts. The method of learning must also be highlighted while designing a course. Hutchinson and Waters (1987) also argue that understanding how people learn should come first in any language teaching, and that studying language and learning theories independently is necessary to see the benefits of each language instruction. According to Hutchinson and Waters (1987), five major stages of the development of learning theories have been recognized since the twentieth century. Behaviorism, mentalism, cognitive code, emotional element, and learning and acquisition are some of them. However, two learning theories (the cognitive/affective interplay) underpin this study. In general, the context of examining students' English language needs in light of course design is described below, based on the previous brief summaries of theoretical notions.

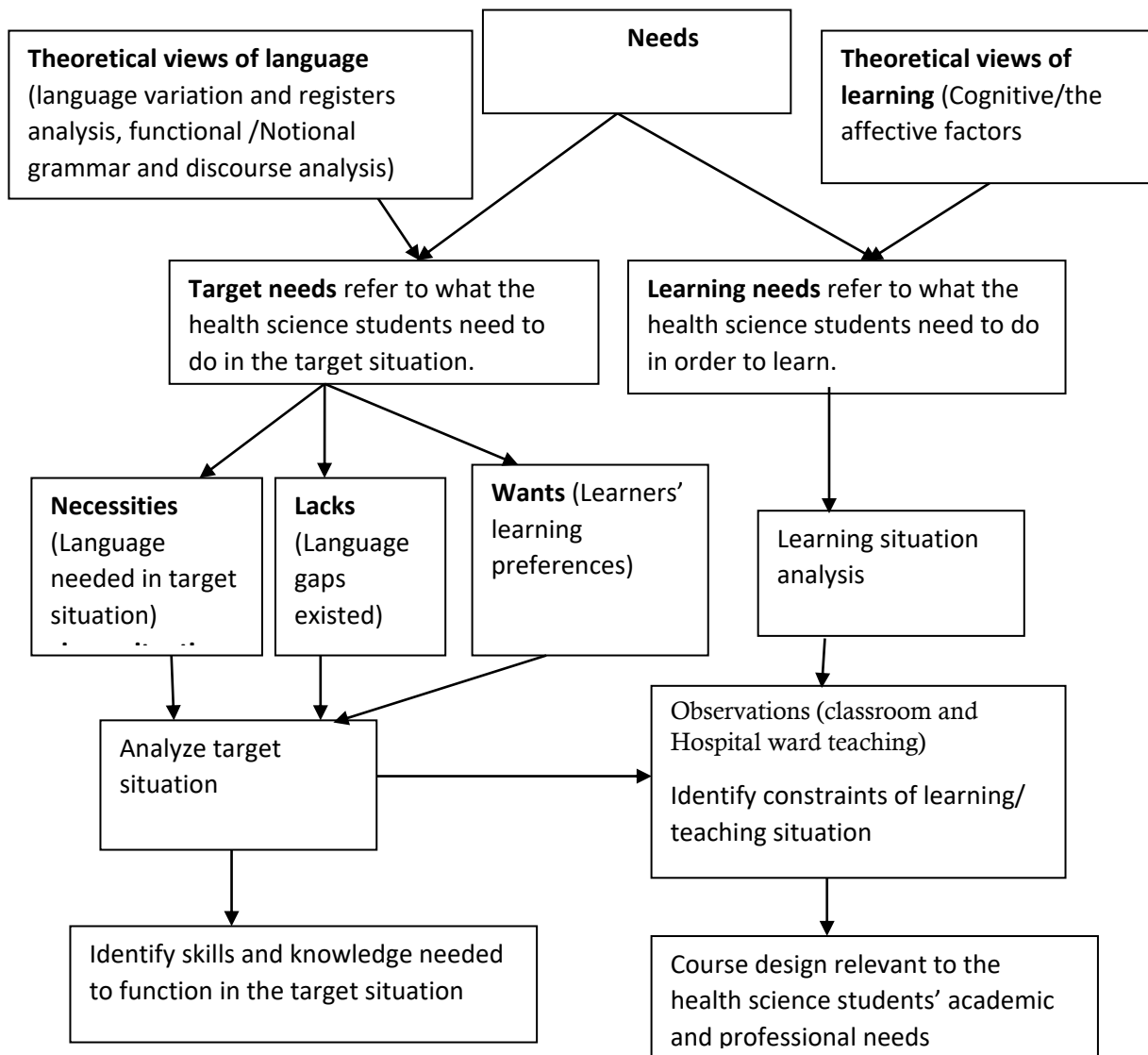


Figure 1: Conceptual framework of the study (Adapted from Hutchinson and Waters, 1987)

In the figure, the framework shows the variables that help course design which are relevant to the health science students' academic and professional needs through learners' English language needs analysis. Depending on the theoretical view of language, target needs (what language the learners need to function in their academic and future professions) are identified. These identifications of the target needs are done through identifying necessities (language needed in the target-situation use), identifying lacks (students' language difficulties), and identifying wants (students' language learning preferences). Analyzing the language in target situations helps identify the language skills and knowledge needed in the target situation. On the other hand, based on a theoretical view of cognitive and affective learning, learning needs (what learners need to do in order to learn) are identified through learning situation analysis. Then, attitudes, potential of learners and constraints

of the learning or teaching situation are identified. By mediating these variables of theoretical views of language and theoretical views of learning, the course relevant to students' academic fields of study and future professions will be designed. In general, the conceptual framework in the figure above shows the English language needs analysis of health science students that help design English language course accordingly in the context of Samara University.

### 3. Research Methods

#### 3.1 Design and the Setting of the Study

This article is a qualitative part of a Ph.D. thesis that employed mixed methods design. This article, on the other hand, concentrates on the methodological processes employed in the qualitative case study design. A case study design was selected to obtain an in-depth understanding of the nature of the language used in the target situation. The case study research design gives an in-depth description and analysis of a bounded system or multiple bounded systems (Plano Clark & Creswell, 2015). They explain that a system can be a program, event, or activity involving individuals, whereas bounded means the researcher separates out the case in terms of time, place, or some physical boundaries for the purpose of the research study. Yin (2003) also points out that the case study approach makes the investigation maintain the holistic and meaningful characteristics of the real-life context and helps to understand complex phenomena. The study was conducted at Samara University, located in Afar National Regional State, Ethiopia, 590 Km from the capital Addis Ababa.

#### 3.2 Participants and Sampling

The study was conducted at Samara University with a focus on College of Health Science students. As indicated in the statement of the problem of this study, the college was purposively selected based on the researcher's teaching experiences. He observed that the student's performance, their interest in attending the class, and the English language demands in target situation use were incompatible. When this study was started, there were three departments (public health officer, nursing and midwifery). Each has one section from the first year to the fourth year. Fourth-year students were purposively selected because they had taken most of the academic courses, and they were in clinical practices. Thus, these could help the researchers obtain better information regarding the English language needs for academic study and professional careers.

There were 21 public health officer students, 25 nursing students, and 20 midwifery students in the academic year of 2021/2022G.C. Dornyei (2007) points out that an initial sample size of 6-10 can be suitable for qualitative research. Hence, in this study, 18 fourth year students (6 from each department) in the College of Health Sciences were selected by simple random sampling technique from a target population of 66 fourth-year students in the college for the interview. However, the researchers collected the interview data from 15 students (5 from each department) because of the information saturation. Plano Clark and Creswell (2015) define "saturation" as the point in the study when the researchers feel that they are no longer obtaining new information from the new informants rather than repeating what the previous informants have already revealed. The basic goal of sampling in qualitative research is to select individuals who can provide enough insight into the topic under study in order to maximize what may be learned (Dornyei, 2007). Purposive sampling procedures were used to pick six (2 from each department) college instructors and six health workers (2 from each) from Dubt Hospital for the interview.

The instructors who delivered the major subject area courses during the study were intentionally chosen. Three course instructors and three health professionals were also observed. The observation was conducted in

two areas: the classroom lecture on the major health related courses and the hospital medical wards, where teaching and treatment were conducted; totally 12 classroom observations were done in three departments. For each, four observations were taken. Ten authentic patient profiles written by doctors at hospitals during the investigation were purposefully included in this section to identify the English language skills which are relevant to health science students' professional life and mainly to answer the 2<sup>nd</sup> research question of this article.

### 3.3 Data Collection Instruments

**Observations.** The first qualitative data gathering tool employed in this study was observation. It was utilized to directly observe the English language target-situation use. When case study researchers study bounded systems like classrooms, clinics, or programs, observation is a common type of data collection (Plano Clark, and Creswell, 2015).

**Document analysis.** In this study, document analysis was also used to improve, elaborate, and validate the data gathered through interviews and observations. According to Richards (2001), having more documentation available helps make a decision about the course easier. According to Hyland (2006), acquiring and understanding real documents is a significant source of knowledge regarding target needs while gathering data. As a result, hospital records were studied in order to assess the English language needs of future health science students.

**Health care and hospital document analysis.** Gathering actual data, according to Dudley-Evan and St. John (1998), is crucial for learning about real and theoretical issues and may serve as a basis for classroom material. These authentic patient records were selected from the health staff department of the medical and gynecological wards of the selected hospital and analyzed to see what and how health professionals used the English language in their daily routines, which in turn indicated the English language needs of health science students in their future professional careers. For example, from the profile or chart of a patient in the Gynecology (GYN) ward, necessary data were obtained from investigation sheet, vital sign sheet, order sheet, progress note, anesthesia evaluation note, safe surgery checklists, nursing/midwifery progress note, admission history, triage evaluation note, referral paper, and medication note, consequently. All of them were written in English by a doctor or health officer or nursing or midwifery, according to their professional duties.

**Interviews.** Another qualitative data collection tool used in this study for validating the data gathered through observation and document analysis was the interview. The interview was conducted in a semi-structured format. Semi-structured interviews were done with three groups of subjects to get detailed information about the English language deficiencies and requirements of health science students: students, subject area course instructors and health Practitioners. The interview was conducted face-to-face in English using an audio recorder. It was lastly conducted to add probing questions depending on the data obtained from other instruments. During the interview, the researchers followed the natural flow of the conversation and added probing questions as needed. On average, the length of the individual interviews ranged from 25 minutes to 48 minutes.

### 3.4 Procedures

This study's data was collected utilizing qualitative instruments (observation, document analysis, and interviews) in accordance with the procedures stated below.



First, the researcher met with concerned university officials and university employees to get their consent. Accordingly, the academic president of the institution stated his willingness. Then, he wrote letters of support to the necessary deans of the faculty to assist the ph.D. candidate-researcher with data collection from the college. The researcher delivered the letter to the appropriate person and then addressed the situation with them. Following that, the university community and hospital health staff provided the researcher with total support throughout the study. The researcher obtained the following information with permission after he got ethical clearance, and after the participants provided informed verbal consent.

Observations, document analysis, and interviews were carried out respectively. The observations were conducted before the document analysis and interview for two key reasons. First, the researcher reasoned that if the interviews were conducted first, the teachers would be able to alter their practices depending on the information obtained from the interviews. The second reason was that the researcher wanted to add probing questions on unusual behavior discovered through observations and document analysis to the semi-structured interview.

### 3.5 Data Analysis

Each observed lesson and the interviews were audio recorded from beginning to end. Then, the audio recordings were transcribed to convert audio data to textual data. For unrecorded behaviors, field notes were employed. The researcher collected the data and prepared the transcriptions. The transcription was verbatim as the researcher wrote all spoken words as they were and unspoken events like pause showing with three periods (...) to include any needed data in the analysis. The researcher also scanned documents. The researcher read the data, marked them manually and divided them into part manually. In projects with relatively small database which is less than 500 pages of the text, a manual analysis is most appropriate (Plano Clark & Creswell, 2015). The researcher, then, read through the data to obtain the general sense of the data. The researchers coded the data and described a segment of the text or the scanned documents in relation to answering the basic research questions of this article. The data obtained from the three instruments were triangulated to support or validate each other. The sample quotes were also selected and presented in the result and discussion section.

In general, to preserve anonymity, the findings were analysed without stating any names of the participants. Their names were changed to codes; for example, instructor one (Inst 1), instructor two (Inst 2), student one (S1), student two (S2) etc., and for clinical practitioners who taught internship students in hospital wards, doctor one (Dr.1), doctor two (Dr. 2) etc., and for health professionals in the hospital: Hp1, Hp2, Hp3 and etc. In this study, the researcher made great effort to carefully set out the research questions and to review the literature methodically in line with the purpose of the study to ensure the dependability of the data. Likewise, to ensure the possible transferability of the study, the researcher tried to provide information about the participants of the study and the research setting.

## 4. Results

This section presents the findings of the study as follows:

### 4.1 Health Science Students' Needs of Learning and Using English Language Skills in Light of their Academic study

#### Extract 1: A sample of classroom observed (Public Health Officer Department students' class)

##### Observation 1

*'Lelaw' fourth visit at 36 'new'. 'Iziga' wanegna' screening for hypertension, antepartum hemorrhage 'ina' multiple gestation 'new'. Multiple gestation focused 'new' based 'new'? Focused 'new ayidele'? The other is..., so these are the fourth visit at 36 weeks ... hypertensive, any antepartum hemorrhage...eee. Bleeding 'kalat' you have to check multiple gestations, presentation. 'Lemindinew presentation lay focus yeminaregew sibali' cephalic presentation kalihone, breach 'minamin kehone adegna' new to treat 'huletegna' decision nachin lemawek. 'Giltis new ayidele?'Breach presentation 'kehone iske mecheresha mindi new? Ces 'new ayidele'....*

In this extract, the teacher was teaching health officer students about antenatal care. Though the instructor was using Amharic in explaining the lesson, the medical words he was using were highly technical which are different from normal English words such as hypertension, antepartum hemorrhage, multiple gestation antenatal care, cephalic presentation, breach presentation, cesarean section (Ces), term and post-term. It was observed that most of the words were highly technical medical words and the instructor used code-mixing in presenting the lesson.

#### Extract 2: A sample of classroom observed (Nursing Department students class)

##### The daily lesson was acute sinusitis

##### Observation 2:

*Okay, we will see clinical diagnosis. To begin with symptoms, they have major symptoms and minor symptoms. Major symptoms are facial pain or pressure that is facial pain because of the miniature. The other is facial fullness or congestion. Pain ina congestion yileyayal ayidel? Pain sibal ...forward siyaregu pain yisemachewal. Facial congestion yembalew degimo mulu fitachew weyim afachew ina afinchachew akebab yemola yimesilachewal yikebdegnal yiluwachewal. The other they will say upper nasal obstruction weyim afinchaye yemola yimesilegnl yiluwachewal. The other condition is purulent yehone nasal discharge yinorachewal teblo yitasebal. Other type hyposomia or anosmia ... Hyposomia decreased sense of smelling ina anosmia absence of sense of smelling eee... somia mean sense of smell. You have to able to characterize these condition. Chief complaint stitsifu characterize mareg alebachu hyposmia or anosmia bilachu describe bitaregu yeteshale yihanal mallet new...*

The observed teacher in the nursing department began by speaking English to remind the students of what they had learned in the previous session and to introduce the lesson of the day, except that not a single complete English sentence was heard throughout the whole observed classroom.

The technical medical English used from the above extract were diagnosis, symptoms, nasal obstruction, hyposmia, anosmia and chief complaint. As the researcher understood from the observed classroom, the words diagnosis and investigation, and sign and symptoms are different in health science or medical terms but seem synonyms in normal English. Diagnosis is the result which the health professionals obtained by history taking and physical examination, whereas investigation is the result obtained from laboratory. Again, symptoms is the result obtained by asking the patient while sign is what the health professionals understands by looking the patient from the manifestation of the disease characteristics on the patient.

### **Extract 3: Sample of the observation 3 (Midwifery department Students Classroom)**

Obsevation 3:

*Cellulitis indet new bebizat yeminagegnew ipidimologically kalachiwu ... most of them ... bacteria or HIV or precontact mindinew izihga minamin min honachewal wede case new mehed yalebachiw. History of the present illness most of the time then tayutalachu. Distinctively you will see the color. Colourun tayutalachew. Cellulitis izi ga bihon zuriyawu evacuated yihonal, yikelal. Keleloch bota min yihonal? Area yaawuun yikelal, so they would be redness. Don't expect*

As observed from extract 3, this instructor also used Amharic to explain and discuss the lesson. In all observed classroom, highly technical medical English language was used; however, all instructors used code-mixing while delivering the courses. The student respondents expressed that they need English for their target-situation use. They need to be good listener and good speaker, but they indicated that they didn't get the way they want to be given. For example, S1 and S2 said:

*Okay expectation regarding the thing you have mentioned, my expectation was, I was thinking that I would have become a good listener as well as a good speaker, and the best writer but in my opinion I didn't get with anything... (S1)*

*As health science student, English course doesn't help us because the normal English word and the medical English word they are literally different...eeee...r I need to learn English which help me in health courses... (S2)*

From these responses one can understand that the students were not happy with the English they had learned because it was not related to their field. S2 stated that normal English Words and medical English words were different.

## 4.2 Health Science Students' Needs of Learning and Using English Language Skills in Light of their Future Profession

The researcher believe that observing patient profiles written by health professionals helps the study obtain the practical language needed in light of future professions. This data also helps to address language gaps that existed due to a lack of necessary English language background. Accordingly, the researcher scanned an active profile text of the patient which was written by the observed doctor with his mobile phone's scanner camera. The researcher took the texts as they were written by the doctor without any edition rather than changing the PDF to Microsoft word 2013 to preserve the authenticity of the written texts, and analysed it as follows:

### Extract 4: Sample Document One:

*This is a 70 years old known CKD Patient for the past 1years known HTN for the past 14 years on enalapril 5 mg po per day currently presented with cough of 1 week the cough is intermittent a and productive with whitish sputum. Associated to this she have bilateral leg swelling of the 15 days duration. She also complains of SOB of 4 days duration at rest she also have orthopnea of 2 pillow, PNO and easily fatigability she also complains of urine color change dark yellow in type of the same duration and urine straining of the same duration Dc no hx of FEVER no hx of medication of Dc no hx of palpitation no hx of yellowish discoloration of the eye no hx of vomiting she came with investigation of wbc 14 THOUSAND WITH...*

From this document, firstly, it can be observed that describing patients, describing the types of pain, describing the medication that the patient had taken, and ruling out the differential diagnosis are the genres frequently used. All of these statements were made in order to diagnose the disease by interviewing the patient and interpreting their clinical knowledge, but there are many grammar tenses and punctuation errors that can lead to misunderstanding. For example, language gaps existed from the text above were grammar, verb, tenses, and writing. Firstly, there are errors in subject verb agreement. For instance, "she have," was repeatedly written in the text. This could indicate that it was not slip of pen, but not giving attention to the grammar or language gaps. Then, the tense was explained in past or present without considering the time of events chronologically. However, in the above text, the events before she was sick, and before coming to the hospital should be expressed in the past tense, the progress of the problem from the beginning to the time of diagnosis should be presented in present perfect tense, and the general facts of the case can be present simple. It can also be observed that no punctuations like commas or periods.

*The second sample diagnosis.* Again, the researcher scanned a sample of the diagnosis made during the observation by his mobile phone's scanner camera and presented it as follows:

### Extract 5: Sample Document Two

*Chief complaint: RTA  
History of Present illness (HPI)*

*This is a 34 years old male patient presented with road traffic accident of one day duration he sustained the accident while he was travelling at afar regional state to reestablish the damaged health sectors during the war the accident happens when the driver is unable to control the*

*speed of the car because the bottled water **interferes** below the break there was a total of six travelers and the car **rolls** back once and there **is** no death. He sustained the accident around his neck and head and his left shoulder otherwise no hx of loss of consciousness, no hx vomiting, and no hx of bleeding. X-ray was done and shows mid clavicular fracture.*

The above statement was directly taken except for highlighting some words for emphasis. The bolded words were high lightened by the researcher to show the tense verb grammar errors. All of the actions happened in the past, but they were written in the present tense. The above chief complaint was abbreviated RTA to mean road traffic accident. Language gaps that existed from the case history above were grammar, verb, tenses, and punctuation. Regarding writing skills, it can be observed that no punctuation like commas or periods. Specifically, the samples provided above can indicate that there were tenses and writing problems in the English language by health practitioners. This indicates the kinds of tenses, vocabularies, and writings necessary to include in English course material design for students' future profession.

### **4.3 The Major Difficulties of Health Science Students while using English to accomplish their Academic Activities**

**Students' Interview.** The interviews were conducted with students to get detailed information about the difficulties encountered in learning major subject area courses due to a lack of required English language skills and knowledge. Respondents addressed English language issues in general. They mentioned that it was difficult to complete or deliver assignments and interact with instructors. S2 said:

*There is a difficult to present or do assignment and to communicate with teachers because medical English words literally different from normal English words. Uuu...m so it has a difficulty. There are so many problems that expose me to speak English in academic wise. There is pronunciation problems which make me stressful. When you are stressful, you get problems to learn academic wise.*

The following is information obtained from S3.

*Before I join to the college, there was no problems in speaking English, but after I join the college, I faced problems of English because you can't use English with others or with your friends why because it is specified. The lectures are cannot teach in English why because they are exposed or intervene in speaking in Amharic this may affect you to speak English.*

These sample students' responses indicate that their English skills are deteriorating because their academic instructor often uses Amharic more than English while delivering the course. The student respondents think instructors' use of Amharic language negatively influences the learners' English language use. He revealed that he had no English issues before enrolling in college but that he did have challenges after enrolling. He reasoned that their instructors did not teach in English, but instead they used Amharic. The researcher also shared some of his views as in all observed classes the teacher was using Amharic while explaining the lesson (see extracts 1, 2, 3 above).

**Subject area course instructors' interview.** The interview was to obtain information regarding students' English language gaps while doing activities in their field of study, which are often observed in major

subject area courses. They replied that their students had speaking, writing, translation, and grammar problems. For instance, one of the sampled instructors (Inst 2) responded as:

*They have both grammar as well as speaking as well as most of the students can feel, can listen and can understand English, but they have problems when they speak, translate and write, so the grammar, speaking and writing part have deficit. These are the problems as well.*

They were also asked to describe the kinds of difficulties they saw. They then responded that their students had problems in all areas. Inst 2 responded as follows:

*As I...explain in previous part, eee... as well...eee ...we all instructors we have some problems of English and are **speaking Amharic in the way of speaking English** as well as is fluency as well we are coming to this system. We are in the system of what students are learning or the way students are learning English. We also come in the way of students are learning English now. We are also part of these. Education part, so the instructors as well as the students have deficit in that of speaking as well as writing English as well as listening that of English, so I think it is mandatory since our even if it is instruction is English most of the students cannot easily capture medical terms as well as that of the English easily. So, the instructors should support students by interpreting in Amharic for easily understanding. That is all (Inst 2).*

In the preceding extract, the respondent instructor replied that they had entered the system of what students were studying in English at the time. He intended to indicate that they were learning general English in high school and supplementary common courses at university. In their educational system, there has been no other way of learning English related to health or medical language.

#### **4.4 The Main Language Contents which are Relevant to Health Science Students' Academic and Professional Life**

To investigate the English language that health science students are expected to know in their academic life and future professional careers, the researcher observed internship students in hospital wards.

The students first clerked for the patient. Clerking entails: taking a case history, performing a physical examination, and speculating on possible differential diagnoses and treatments. As the researcher noticed from the observation, in presenting bedside, one of the internship students' team clerked the patient and presented every step of the problem. He presented starting from taking a demographic history of the patient up to finding the problem and obtaining a management of the problem or the disease and then, presented to the supervising doctor. In a round presentation, every member of the group had a bed in the ward on which they could present their clerkships to the supervisor. Different from bedside, in a round presentation, a student conducted diagnosis individually and presented pertinent findings. In presenting a seminar, the topics were given by the supervising doctor, and the group presented by preparing the power point. Thus, the researcher observed and recorded all the activities. However, the researcher used bedside lessons for the analysis of this study because they were inclusive.

**Extract 6: Sample Gynecology medical ward teaching observation**

S2 presented the bedside session. He presented the demographic history, chief complaint and HPI.

S2: .....chief complaint is preeclampsia

.....

**Dr.2: First of all what do you mean by chief complaint?**

S2: ee....e.....m....

**Dr.2: this is your patient. ‘Ahun akerebik ayidel?’, so what is chief complaint?**

S2: Eee...eee ... .. Preeclampsia.

**Dr.2: Hahahahaha... ‘Atasikegn’. ‘him!’... chief complaint means the reason why the patient sick care or came to the hospital.**

Okay, why did you say pre-eclampsia for this lady?

S2: eee ‘malet’ .....

Dr.2: Okay what is your diagnosis?

S2: Preeclampsia

Dr.2: when did you diagnosis: how do you diagnosis preeclampsia?

S2: Blood pressure.

Dr.2: Okay raise BP? ...

A study aimed to discover the English language skills required for health science students to succeed in their future professions. The English language skills needed in health science students’ future profession were interviewing the patient and writing the history, chief complaint, history of present illness, vital signs, physical examination, pathophysiology, differential diagnosis, investigations, and management of the cases.

Health professionals’ interviews provided the necessary information regarding the English language required for health science students’ future professional careers from the day-to-day professional activities they encountered. The respondents were interviewed to determine the English language skills needed while giving health care services. They<sup>2</sup> replied as:

*It depends. If you are perfect in **speaking or taking order or writing** or eee... listening or whatever it is on speaking staffs, if you are perfect, I believe that you can **take any idea that your superior is telling you**. I believe that reading skills has some effect, but I don’t think it can indicate some one’s knowledge or I don’t believe ..., Or I don’t think that talking this language would be the total indication of total perfection of health(HP1).*

*Yes, the more you know English the more you are benefited, eee...but you have to know that fluent English without health knowledge do nothing. Good knowledge of health profession without good English has danger for the previous reasons I mentioned ...eee. Writing is very important for all aspects...(HP2)*

Both health professionals’ responses had a similar viewpoint. They responded by comparing and contrasting the knowledge of the English language with the knowledge of the health profession. They indicated that English language skills are important in the health profession, but not guaranteed without health knowledge.

<sup>2</sup>Abbreviations: HP1 = health professional 1; HP2 = health professional 2

## 5. Discussion

In addressing the first research question, the findings show what the health science students need in learning and using English language skills in light of academic field of study. According to the findings, highly technical English medical terms are used in health science academic field of study. In classroom observation 1, for instance, diagnosis, symptoms, facial congestion, upper nasal obstruction, purulent nasal discharge, hyposomia, anosmia, and chief complaints were some of the English medical terms observed in a classroom lesson. As the results of the interview indicated, the health science students want to learn these technical medical words in English courses. They also responded that they wanted to be a good writer, speaker, and listener of the English language, but they did not get the chance to learn as they intended. They also claimed that except for the common course in the first year, no English courses were offered to them. This possibly indicates that the learners wished if the English courses were intended to be pursued in specific situations. Nursing and pharmacy students like the contents of their book since it is ESP that is used to teach medical students (Le, Phan & Le, 2021). Recent studies by Silesh and Tamene (2022) also found that learners in Ethiopian higher education institutions need to learn English to improve their current proficiency level for their target situations, but no English courses were designed accordingly.

According to research question two, the data also revealed what the Health science students need in learning and using English language skills in light of their future profession. From the result of the scanned document (Extract 4), which was a case history taken from the patient's profile in the medical ward, new medical terms such as intermittent, productive, whitish sputum, bilateral swelling, orthopnea, palpitation, and so on are observed. There are also many abbreviations used, such as CKD, HTN, MG, PO, SOB, PNO, DC, hx, and wbc. These findings can indicate that highly technical medical English terms and many abbreviations were used in health science students' future professions. English is undeniably important for medical students, both in their studies and in their future jobs (Wahyuni, 2021). These findings indicate that highly technical medical English terms and many abbreviations are also used in learners' future professions. Regarding these findings, Gyls and Wedding (2009) indicated that language of medicine is a specialized vocabulary used by healthcare practitioners. The findings also reveal that writing skills are very important in students' future health professionals. In the written case history (extract 4 and extract 5), there are many subject-verb agreement and grammar errors. As the findings in extract 4 indicate, "she have" was written several times in the case history text, which might imply that it is not a slip of the pen, but rather a lack of attention to syntax or linguistic gaps. The practitioner also wrote all cases in the present tense though occurrences were in the past. Harmer (2001) states that communication can suffer if grammatical rules are carelessly violated. The next sample document also reveals similar findings. As indicated in extract 5, which was taken directly from the patient's written case history, the text is full of grammar errors. All of the actions happened in the past, but all the history of the present illness (HP1) was written in the present tense. Generally, the sample scanned documents clearly indicate that there were grammar errors and writing problems in the English language use of health practitioners which indicate the kinds of tenses, vocabularies, and writing activities necessary for target situations.

The third research question aimed to identify the major difficulties of health science students while using English to accomplish their academic activities. The students' interviews indicate that it is difficult to present or do assignments and to communicate in English. They also had pronunciation problems which is stressful for them. As the results of the interview indicated, the students' English language base in the college was fragile. They indicated that their major subject course instructors were also using Amharic rather than English while delivering the course, and this negatively influenced their English language use. In the instructors' interview, Inst 1 stated, "In every aspect, there are many words they do not write properly; they don't utilize them



grammatically." This response may imply that students had significant English language gaps when performing tasks and activities in their major subject area courses.

The researcher also posed probing questions based on the findings of the observations, such as why subject area instructors generally lecture in Amharic, even appending Amharic suffixes to English nouns. They mostly stated two reasons. The first was the students' inability to grasp English medical terminology. Therefore, they used Amharic to better understand the subject. They clearly demonstrated that students lacked the necessary English language skills to understand medical terminology. They also disclosed that instructors themselves also had difficulty articulating the situation completely in English. They stated that, through experience, they had come to the combination of English and Amharic, even at the word level, in order to make the topic clear for students. They also stated that every health science or medical instructor employs such an approach ("Using Amharic in the way of speaking English") as part of their educational advancement. They also had come in a similar way with the current system the students are learning. These findings from the instructors' interviews indicate that they were using the Amharic language during delivering the course to ease the lesson for students since they had English language gaps, and the instructors themselves had difficulty explaining highly technical medical English terms fully in English language. Gaffas (2019) also revealed that students' biggest problem was identifying the meanings of unfamiliar words, which resulted in low performance in all four English skills.

As mentioned earlier in this article, to determine the main language contents that are relevant to health science students' academic and professional life, the students in the medical ward were observed and interviews were conducted with health practitioners. From the hospital ward teaching observation, the researcher noticed that most of the similar words are different in a medical English context and in an everyday English context. For example, the phrases diagnosis and investigation, as well as signs and symptoms, are distinct in health science or medical terminology but appear to be synonyms in everyday English. A diagnosis is the outcome of a health professional's history-taking and physical examination, whereas an investigation is the result of a laboratory test. Again, symptoms are the result obtained by asking the patient, but signs are what health professionals could understand by looking at the patient and observing how illness features developed in the patient. Signs are observable, objective markers, but symptoms are subjective and experienced only by the patient (Gyls & Wedding, 2009).

As shown in extract 6, the instructor still asked the students what the term "Chief complaint" meant and provided a brief definition: "chief complaint" refers to the reason why the patient is sick or came to the hospital. In almost all their discourse, the instructors were disappointed at the presenter(s) for not using appropriate medical terms. Again, in extract 6, the instructor asked the student how he diagnosed preeclampsia. Then, the students replied with blood pressure. The instructor guided the students, saying, "Okay, raise your BP." Here, the instructor added the verb "rise," while the student replied with the phrase "blood pressure" without indicating the action. The student did not explain situations using verb tenses, did not describe examination processes using medical terminology, and did not express temporal occurrences of the patient's case using frequency adverbs. This appears to be consistent with the findings of Ibrahim (2020), who reported that medical students experienced challenges at the faculty, such as a lack of basic skills, particularly listening and speaking abilities. The findings of Chatsungnoen (2015) also revealed that the majority of the undergraduate students showed low levels of English competency in all categories.

According to the findings of the interviews with health professionals, it was difficult to grasp cases from the patient's profile or from the patient's referral slip because the written clinical findings were written in non-sense English, and the new doctor was compelled to re-ask the patient or re-take the case history. English is clearly in great demand, not only for learning but also for pursuing a medical profession (Wahyuni, 2021). Although students scored very high in their English courses, they demonstrated big failures in applying their

knowledge in the workplace due to a lack of professional language to deliver their message (Hans & Hans, 2015). Fluency in written and spoken English is seen as crucial for success as a medical practitioner (Alfehaid, 2011).

Consequently, the results of this study will help educators and policymakers to design effective English language courses that can improve the communication skills of health science students. The study is also intended to help the students to do activities effectively in their field of study regardless of language barriers and function and communicate efficiently in their future profession. Besides, it can enhance learners' interest in attending English language courses and help them improve their English language skills. These can provide health sciences students with insights into the skills they require in their future profession which help them equip themselves with the necessary English language backgrounds before they join the real health profession in a hospital or healthcare.

## **6. Conclusions and Recommendations**

### **6.1 Conclusions**

As indicated earlier, all of the data collected through observations, document analysis, and interviews were carefully analyzed, and the results were presented and discussed to draw conclusions. Based on the findings and discussions, the following conclusions were drawn:

The health science lesson is full of medical terms written in English. From the findings, it can be concluded that Samara University health science students need all the basic skills and sub-skills that are predominantly related to medical English. Thus, as can be inferred from these findings, students could not come up with these highly technical medical English words unless the courses incorporating these terms were designed. The results of the study also revealed that the health science departments (public health officer, nursing, and midwifery) needed almost identical English. Based on the findings, the study concluded that the English language is as important as health science major subject area courses because diseases, their pathophysiology, etiology, diagnosis, signs and symptoms, differential diagnosis, investigations, management, and prevention are all written in highly technical vocabularies of health-related English. Thus, they could not be managed without appropriate background knowledge of these highly technical medical languages. According to the study, writing skills are the most important in students' future professional lives. It is also critical to understand how to construct a case in a paragraph or an essay. The finding reveals that health science students had difficulty with all Basic English language skills. They fail to do activities in English, and they fail to fully understand the classroom lecture in English. This forced the instructor to use Amharic (code mixing) while delivering the major subject area courses. The results also further revealed that health science students needed English language skills to describe a patient, the case, the diseases, and the medications within medical terms. However, the observation results from the medical wards revealed that the interns' inability to perform these activities as intended was mainly because of a lack of the necessary medical English background. Therefore, the current study can have implications for course design and selection of relevant contents. These can help the Health Science students do activities effectively in their field of study regardless of language barriers and function and communicate efficiently in their future profession.

### **6.2 Recommendations**

As a result, ESP courses that include the English language needs and gaps that enable health science students to do well in both academic studies and their future careers should be designed based on the current data.

English should be taught to health science students not only as a common course but also as a key subject area course. Thus, for health science students, ESP should be developed during the course of all undergraduate degrees, taking into accounts both academic coursework and their future profession. Furthermore, based on the current findings, it is possible to recommend that English language courses that help the Health Science students in their academic field of study in the first three academic years and English language courses that help them during their internship and future professional career in the remaining year should be designed.

This study on health science students' English language needs is a crucial research area that aims to identify the language requirements of students in the health science field. The study is important as it helps to identify the gaps in the current English language curriculum and provides insights into how to improve the curriculum to meet the needs of health science students. However, like any other research, this study has its limitations that need to be acknowledged and addressed. The relevance of the study would have been exceeded if the study had involved medical students. Including medical students' English language needs would have been helpful for the researchers to clearly determine the English language needed in the course material design for overall health students. However, there was no department of medicine at Samara University during this study. Finally, further study concerning Ethiopian higher education institutions' English language needs should be conducted.

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### Authors' contributions

- 1 Tessema Gilo: Collected data, transcribed the interview data, analysed and interpreted the data, and prepared the manuscript.
2. Nuru Mohammed: supervised the project, edited and commented the manuscript.

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### Competing of Interest

The authors declare that there is no conflict of interest.

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