STUDENTS' NECESSITIES, LACKS AND WANTS ON ICT-BASED ENGLISH FOR NURSING STUDENTS

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Abstract

This study aims at gathering information about necessities, lacks, and wants of the students on ICT-based English for Nursing Students materials as a part of needs analysis with a descriptive qualitative method. The subject was students of Nursing Department. The data were obtained from primary sources including a questionnaire (both closed-ended and open-ended questionnaire) and secondary sources including an observation. The results of this study showed that (1) students' necessities on ICT-based English for Nursing Students materials were for communication purposes in daily life both written and spoken; (2) the lacks of ICT knowledge were the abilities to operate the media and technology applications in the learning process; of language skill were a communication skill and an understanding for the language used on website or application, (3) students' wants on ICT based English for Nursing Students materials were proper internet facilities in campus, supporting teaching and learning facilities, Web and online-based learning activities, and online-based assessments and grades. All shows that students are welcome to the use of ICT-based learning materials in the classroom at a moderate level.

Keywords: *English for Nursing Students, ICT-based material, lacks, necessities, wants*

INTRODUCTION

The establishment of ASEAN Economic Community a few years ago causes liberalization in the field of trade in goods, services, skilled workers, where Indonesia openly accepts foreign workers from several professions. It could mean that it opens opportunities as well as threats to Indonesia's local workforce. One of the eight professions affected by the AEC is a nurse. Nurses must not only be professional and skilled in their fields, but must also be proficient in English. Without mastering English, Indonesian nurses will be less competitive than those from surrounding countries.

One of the reasons for nurses' lack of English mastery is inadequacy of the English materials they got in their lectures. English which is a part of English for Specific Purposes (ESP) has a small portion compared to other subjects. The ESP

teaching method itself is limited in space and time so there is a need for new innovations to improve the nursing students' language skills as the future nurses. One solution to overcome the limitations of space and time in learning is to use ICT (Information and Communication Technology). The use of ICT in learning is to help the process of teaching and learning directly. It also benefits to reach some objectives such as sources of knowledge, teaching and learning tools, educational facilities, competency standards, administrative support facilities, school management support facilities, and educational infrastructure (Faridi, 2009).

To provide good teaching material for students English development, it can be used several things including identifying learning objectives, analyzing learning, analyzing learners and context, analyzing basic competencies/specific teaching objectives, developing assessment instruments, developing learning strategies, developing and conducting formative evaluations, making revisions, and compiling and conducting summative evaluations. The first three are related to needs analysis Dick, Carey, and Carey in Uzun & Senturk (Uzun & Senturk, 2008).

The first stage to prepare teaching materials is by conducting a needs analysis. Hutchinson argues that the suitability of students' needs with English teaching materials can increase students' motivation in learning. Nunan in Sukarni (Sukarni, 2018) states that needs analysis is the process of gathering information related to learners' needs. The needs analysis itself will be related to the target needs (what students need to communicate in the target situation) and learning needs (what students need to learn). Target needs themselves are divided into necessities, lacks, and wants. Necessities are abilities that are deemed necessary to be mastered. Lacks are what abilities are not mastered yet while wants are what abilities to be mastered (Hutchinson & Waters, 1987).

Based on the problem above, the problem of the study was formulated as: "What are nursing students' necessities, lacks, and wants on ICT-based English material?"

ICT-based Materials in Teaching and Learning Process

ICT or Information and Communication Technology is defined as a device and technological resource used for communication tools, creating, disseminating, storing, and processing information (Jung, 2006). Richards states that the term ICT comes from the development of IT (Information Technology) or also called information technology (Jung, 2006). Meanwhile, ICT-based teaching materials are teaching materials that are compiled and developed using ICT tools in the processing data such as processing, collecting, compiling, storing, and utilizing data carried out in several ways to produce quality data (Direktorat Pembinaan SMA, 2010).

According to Ammanni and Aparanjani (Ammanni & Aparanjani, 2016), there are several types of learning using ICT or ICT, namely (1) Computer Assisted Language Learning (CALL), (2) Internet, (3) e-books, (4) audio books, (5) online learning, (6) webinars, (7) mobile apps, (8) overhead projectors.

Atkinson and Davies in Hunt, et al. (Hunt, Marilyn; Neill, Sean; Barnes, 2007) stated several examples of the application of the use of ICT in language learning such as (1) interactive exercises and tests in computers, (2) the use of computers to make lecture assignments, (3) marking on-screen on students' writing assignments, (4) the use of spreadsheets or data bases to store students' grades, (5) the use of e-mails for sending assignments, giving grades or feedback, using Web pages to create exercises for students and to provide mentoring supports, and (6) the use of software to detect plagiarism. The types of tests that can be given through ICT tools can be matching, multiple-choice, cloze test, sentence reordering/ jumbled words, text reconstruction, true or false, crosswords, word search, text entry quiz, etc.

Needs Analysis

Nunan, quoted by Puspitasari (Puspitasari, 2013) defines a needs analysis as a procedure for gathering information about learners' needs. There are several lists of the needs compiled by Masuhara (Masuhara, 2013) related to needs analysis, namely: (1) students' needs including personal needs, learning needs, and future

professional needs; (2) teacher needs including personal and professional needs; and (3) organizers' needs including institutional needs.

Hutchinson and Waters classify needs into target needs and learning needs. Target needs are divided into three that are necessities (what aspects of language do students need to be able to function effectively as targeted), lacks (what students have not mastered), and wants (what students want to learn) (Hutchinson & Waters, 1987).

With the use of ICT which is quite massive in everyday life, ICT should also be used to support the teaching and learning process, especially in English. Therefore, it is necessary to arrange ICT-based teaching materials (in this case nursing English) to improve students' English skills. The preparation of the teaching material itself requires a series of preliminary processes, one of which is a needs analysis. With needs analysis, it is expected that the target needs (students) consisting of necessities, lacks, and wants can be read which are then formulated properly as a basis in preparing a teaching material. Analysis of the target needs will thoroughly explore the needs of students related to the mastery of English and ICT-based teaching materials, what students have not mastered related to learning English and to the use of ICT in learning, and what is desired by students in improving English language skills through the use of ICT.

METHODOLOGY

The study emphasized the needs analysis which used a qualitative descriptive method as a part of the initial research describing the collected findings. They were then analyzed and concluded in accordance with the desired research objectives.

The research population in this study was nursing students taking English for Nursing Students class in academic year 2018/2019 in Nursing Department of Health Sciences College (STIKES) Surya Global located in Bantul, Yogyakarta. The number of samples of students as research subjects was 125 students of third semester and fifth semester. The sampling technique used was Probability Sampling method with Simple Random Sampling.

The writers used two techniques in data collection including a questionnaire and an observation. The questionnaire was prepared using closed-questions and open-questions with adjustments and references from *Information and Communication Technology Use and Skills (ICTUS) for Learning English* compiled by Jung (Jung, 2006) and questionnaire compiled by Sihong (Sihong, 2007) with various modifications and adjustments. Adjustments were made because this study gathered respondents' information regarding their needs for ICT-based English language teaching materials.

In addition, observations were made to obtain a picture of the real conditions seen in the field. There were several points observed in providing data support in this study, namely (1) the number of students per class, (2) lecturers supporting nursing English lectures, (3) syllabus of lectures, (4) lecture systems, (5) grading systems, (6) the use of information technology.

After the data were collected, the writers then performed the next few steps, which were sorting and classifying data, doing data editing, and data coding, conducting data confirmation that requires data verification, and conducting data analysis. For the questionnaire, the writers gave questions both closed and open questions. For closed questions, the writers used a Likert Scale with several options such as "strongly agree", "agree", "neutral", "disagree", and "strongly disagree". Here this study also used descriptive scale options such as "Very Important", "Important", and "Not Important", according to the needs of the questions in the questionnaire.

For closed questions, the writers first conducted an item validity test using Microsoft Excel. While for the open-ended questions, the writers provided a code (coding) to provide a classification/category of each respondent's answer. Data analysis was done descriptively with intervals for Likert scale and percentage as follows:

$$\text{Index } \% = \frac{100}{5} = 20\%$$

Table 1. Likert Scale Data Index

Scale	Means Value Interval	Category

1	0%-19.99%	Strongly Disagree
2	20%-39.99%	Disagree
3	40%-59.99%	Neutral
4	60%-79.99%	Agree
5	80%-100%	Strongly Agree

RESULTS/FINDINGS

The results of analyzing questionnaire are presented from table 2 through 12 as follows.

Table 2. Students' Self Evaluation on English Skills Mastery

	List	Sp	Read	Writ	Gram	Voc
Basic	74	57	44	56	81	70
Intermediate	32	41	67	49	21	34
Advance	2	4	7	2	0	3
NA	17	23	7	18	23	18
Total	125	125	125	125	125	125

Based on the table above, most students positioned their English language skills at the Basic level for all language skills. At the Advance level only 2 respondents gave the assessment on Listening ability, 4 respondents at Speaking ability, 7 respondents at Reading ability, 3 respondents at Vocabulary ability, and no respondent gave Advance assessment on grammar ability. Meanwhile, from 125 respondents, there were respondents who did not give an assessment, including Listening (17), Speaking (23), Reading (7), Writing (18), Grammar (23), and Vocabulary (18).

Table 3. Reasons for Learning English

Questions	Respondents' Answers
What are your goals for learning English?	Respondents choose answers that they learn English to be able to communicate using English with people from other countries (88 respondents), get high TOEFL scores (52 respondents), get high college grades (47 respondents) easy to learn lecture material English (77), work in an international hospital (62 respondents),

	broaden their horizons and know the culture of the community / native speaker (53 respondents), understand sources of English-language libraries (31 respondents), continue their study abroad (56 respondents). A total of 12 respondents chose all the options.
Why do you need to learn Reading?	The purposes of studying reading according to the respondents' choice are understanding in reading magazine articles, newspapers, or English news (37 respondents), understanding in reading English lecture books (41 respondents), understanding in reading texts, novels, English stories (48 respondents). A total of 53 respondents choose all answers as the purpose of studying reading.
Why do you need to learn Writing?	The objectives of studying Writing are to write notes, memos, emails in English (54 respondents), write papers/reports in English (28 respondents), and write official and informal letters in English (21 respondents). A total of 48 respondents chose these three points as the purpose of studying Writing.
What do you want to master in Writing?	Respondents want to master some skills related to Writing, such as writing opinions / arguments (34 respondents), writing and connecting sentences (48 respondents), writing and developing paragraphs (49 respondents), and compiling good information (40 respondents). As many as 35 respondents want to master the four abilities.
Why do you need to learn Speaking?	The purpose of learning speaking is to be able to communicate well (54 respondents), and give English presentations (5 respondents). A total of 66 respondents chose both options as the purpose of learning speaking.
Why do you need to learn Listening?	The purpose of studying Listening is to understand English presentations and seminars (28 respondents), understand English recorded material (55 respondents), understand and follow instructions (25 respondents). A total of 57 respondents chose all options as the goal of learning Listening, and some added other objectives such as learning TOEFL, understanding songs and films in English.

From the table above, the most answers related to reasons in learning English were about to make communication with others in English for daily life both spoken and written.

Table 4. Technology-based Activities in Learning English

Activities	Very Important (%)	Important (%)	Not Important (%)	Total (%)
Memorizing English vocabulary list	65	35	0	100

Learning English tenses	53	46	2	100
Practicing pronunciation, word stress, and intonation in English	64	36	0	100
Reading and practicing dialog in the text book/ lecture materials	44	54	2	100
Watching English films	26	66	9	100
Watching English video on you tube or website	22	70	9	100
Imitate the pronunciation of English language videos/films.	30	63	6	100
Listening and singing songs in English	29	64	7	100
Writing diary in English	16	51	33	100
Writing email in English	13	68	19	100
Chatting with friends in English	29	63	8	100
Talking to English speakers when there is any opportunity	26	66	8	100
Reading English literature/book/article in the form of print media	27	66	7	100
Reading English literature/ e-books/ article through internet	25	66	10	100
Downloading online English learning application.	34	57	9	100

The table above shows that there was a number of activities in which respondents considered very important in learning English such as memorizing English vocabulary lists (65%), learning English tenses (53%), and practicing pronunciation, word stress, and intonation in English (64%). It can be seen that almost all of the activities above were considered important in learning English by more than 50% respondents.

Table 5. Experience in Using Technology in English Class

Activities	SA	A	N	D	SD	Total Score	Index %	Category
I am more interested in attending classes that require me to use technology	14	61	43	6	1	456	73	Agree

Overall, English lecturers often use information technology in lectures in class	15	65	38	4	1	458	73	Agree
The use of technology by lecturers in lectures makes me happier to attend lectures	16	66	36	6	3	467	75	Agree
I use information technology in lectures to improve my presentation skills	26	76	18	3	1	495	79	Agree
The campus/ lecturer should more often provide training on information technology needed in class	51	50	18	5	2	521	83	Strongly Agree

It can be seen that almost all respondents agreed that they were more participating in lectures requiring them to use technology. Respondents also agreed that English lecturers often used information technology in lectures, and the use of technology by these lecturers made respondents happier to attend lectures. Respondents also agreed that they used information technology to improve their presentation skills. Respondents strongly agreed on the campus/lecturers to provide training/ outreach more often about information technology needed in class. Related to how much they need to use technology in the classroom, it will be explained in the following table.

Table 6. Students' Expectation in Using Technology in Learning English

Statements	Number of Respondents
Using 100% information technology in lectures without direct meeting	2%
Using information technology in lectures more often	30%
Using information technology in lectures sometimes (moderate)	56%
Using information technology in lectures rarely	11%
Never using information technology in lectures	2%
Total Respondents	100%

Most of respondents (56%) chose to use information technology in moderate/average English classes, not very often, and not rarely. There were only 2% of respondents who chose statements for English lectures using information technology 100% without direct meeting.
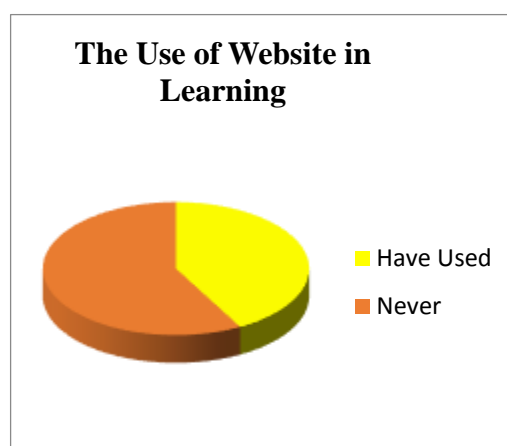

Figure 1. The Use of Website in Lecture

Figure 1 shows that as many as 42% of respondents (53 respondents) had participated in lectures using website while 58% of students had never experienced the same. Furthermore, activities that are considered necessary in lectures using the website can be seen in the table below.

Table 7. Learning Activities Considered Necessary on Website

Activities	Number of Resp.
Delivering syllabus online	19
Online reading text	18
Online discussion (commenting, questioning, responding)	14
Access to join online task and quizzes about subject learned	39
Doing examination and quizzes online to take score	31
Online Submission of assignment	31
Getting feedback from lecturer about assignments submitted	24
Sharing learning materials	34
Displaying history of examination and task grades of each student	27

In the table above, from 53 respondents attending lecture on website, the most activities considered necessary in lecture using website (the percentage of more than 50%) were doing tasks and quizzes to take scores (74%), sharing lecture material through the website (64%), taking exams online (58%), and submitting assignments through online (58%). As many as 51% students also felt the need to display a history of grades on assignments and examinations for each student on the website.

Table 8. Overview of English Lectures Using Information Technology

Description of Activities	Number of Respondents
Quizzes and exercises using technology & online (kahoot, edmodo, online games)	14
Teaching with technological facilities (online, computer equipment and complete sound)	14
The use of website and you tube	11
The use of audiovisual media (play way, audio books, video, film)	25
Unnecessary excessive online classes	3

The table above shows students' answers in the form of open questions. Not all students wrote the answers for the question. Only 67 of those filled the answers. There are varieties of answers that were filled by respondents regarding the description of English lectures using information technology that they expected. However, due to the variety of answers, the writers made several categories to facilitate coding, namely (1) quizzes and exercises using technology and online, (2) teaching with technological facilities, (3) website and you tube use, (4) audiovisual use, (5) unnecessary excessive online classes. The details are explain in the following table.

Table 9. Respondents' Statements on English Lectures Using Information Technology

Category	Examples of Respondents' Statement	Resp. Code Number
Quizzes and exercises using technology	Using *application to support learning, quizzes on web*	**(R.106)**

and online		
Teaching with technological facilities	… *by using sound, computer with good lecture standard* to reach better and fast learning and understanding'	**(R.114)**
Website and you tube use,	… *to use online in lecturing* to always update English	**(R.07)**
	I expect that when learning English, we use technology, for example *by watching You Tube* about subject taught in English	**(R.60)**
	It is better to invite the students *to often use internet such as You Tube* to show examples, then the students can practice	**(R108**)
Audiovisual use	*Using audio, video,* to practice English pronunciation and as the examples of when the sentence can be used in English	**(R.75)**
	To show material *through audio books*	**(R.103)**
	To convey learning materials *by sometimes playing English films using modern devices*	**(R.23)**
Unnecessary excessive online classes	In English learning, it is better *not to always use information technology. White board is better to use* to support students' ability	**(R.53)**
	To use technology, but not very often. The lecture also needs to have direct communication with students.	**(R.57)**
	I expect lecturers who are wise to use technology, but that *does not mean by (always) using online quizzes*	**(R.61)**

Table 10. Barriers in Using Information Technology Devices in Learning

Types of Barriers	Number of Respondents
Internet network (Slow institution internet network/Wi Fi, problem in signal)	53
No data connection	24
Lacks of knowledge (about how to use technology device, names of website to learning, how to use application, lack of English skill)	21
Lacks of learning facilities (audio speaker, monitor, computer devices)	14
Inconvenient classroom (no Air Conditioner, less attractive room interior design)	4
Error in application (the device does not support)	2
Smartphone storage capacity	2

Limited time to learn technology	1

The writers divided respondents' barriers into several categories, including (1) internet network, (2) internet data connection, (3) lack of knowledge, (4) inadequate facilities, (5) inconvenient classroom, (6) error in applications, (7) smartphone storage capacity; (8) limited time to learn technology.

It can be seen that the highest percentage of barriers experienced by respondents was related to the internet network (42.4%), followed by the barrier of not having an internet data connection of 19.2%. The following table is explaining details:

Table 11. Respondents' Statements of Barriers in Using Information Technology Devices in Learning

Category	Examples of Respondents' Statement	Resp. Code Number
Internet network	*Internet connection is not available* in all spots in STIKES Surya Global.	**(R.114)**
Internet data connection	(I) *don't have data connection* and *Wi Fi needs longtime to load*	**(R.100)**
Lack of knowledge	I sometimes *misunderstand about what (explained)* in application	**(R.4)**
	The barrier (is that) *I lack of knowledge* to use information technology devices	**(R.86)**
	The website *has no (Indonesian) subtitles*	**(R.43)**
Inadequate facilities	(The sound) *of audio/speaker is unclear*. It affects listening quality. It is also better if one student gets one computer sets with monitor	**(R.55)** **(R.5)**
Inconvenient classroom	... (*The classroom) is very narrow* and has *no modern technology devices* as audio speaker, monitor, and it is inconvenient	**(R.122)**
	... (*It is bad) in sound facility/ speaker*. The room interior design is boring. It needs to redecorate	
Error in applications	Not all features of technology can be understood easily. We (often) *find any error in application*	**(R.56)**
Smartphone storage capacity	We have *less sophisticated smartphone*. The internal storage capacity is very limited	**(R.23)**.
Limited time to learn	...We have *very tight schedule…*	**(R.11)**

technology

The previous is the result of questionnaire, meanwhile the result of observation is seen as follow:

Table 12. Result of Observation

Points Observed	Note
Number of Students per class	There were 35-42 students in each female class and 10-15 students in a male class.
Lecturers	There were three English Lecturers teaching English for Nursing Students who were responsible to teach 5-8 classes each.
Class Syllabus	Class syllabus is ESP (English for Specific Purpose), particularly English for Nursing Students about basic materials (Parts of Body, Common Health Complaints, Bad Habits, Nursing Instruction, Admission in Hospital, Taking History, and TOEFL)
Lecturing System	The classes were held in class with direct meeting (face to face) in 14 meetings (not including mid and final exams) and there was no online meeting. Online learning is only held occasionally.
Grading System	Beside mid and final exams, there were oral quizzes held per two meetings individually, in pairs, or in group. The quizzes were scored both directly and recorded and shared through You Tube as projects.
The Use of Information Technology	The use of IT in English learning was limited because of limited facilities such as internet network, classrooms which were not soundproof, limited computer device, sound, and less facility of English lab. The students' lack of knowledge in operating IT device became one of barrier in implementing technology in English class. The use of IT in English class was about the use of You Tube, Listening for TOEFL, online quiz, email and chat application for submitting assignments. There was no official e-learning web in the college.

DISCUSSION

Based on the findings above, it can be seen that students' reasons in learning English are about to make communication with others in English for daily life both spoken and written. The students also considered that some activities are very

important in learning English such as memorizing English vocabulary lists, learning English tenses, and practicing pronunciation, word stress, and intonation English. Related to the use of technology in English class, all students agreed that they were more participating in lectures requiring them to use technology and that they were happier to attend lectures and they expected to get training/ outreach more often about information technology needed in class from institution or lecturers. However, most of students chose to use information technology in moderate/average English classes, not very often, and not rarely. About activities in lecture using website considered necessary by students, they were doing tasks and quizzes to take scores, sharing lecture materials through the website, taking exams online, and submitting assignments through online. The students also required each student's history of grades on assignments or examinations to display on the website.

Although the students' needs and wants of ICT-based English class were very high, there were some barriers (lacks) mostly experienced by respondents. They were related to the internet network, internet data connection, and lack of knowledge both in operating the IT devices and in understanding the language on website or application.

CONCLUSION

The findings show that most of the participants learn English to have a good communication both spoken and written. They are welcome to the use of ICT-based English for Nursing Students materials since it is able to make them happier in attending the lecture. The students also expect to have English class with the use of ICT in moderate level including web-based and online-based learning activities as online quizzes and exams, online sharing materials, online tasks submission, and others. However, they still need guidance about how to operate the technology device, to understand the language used on website, and to get more facilities supporting ICT-based English class.

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