

Improving nurses' ESP communicative competence by digital storytelling method



Anita Purba^{a,1}, Semaria Eva Elita Girsang^{a,2}, Tiodora Fransiska Silalahi^{a,3},
Erikson Saragih^{b,3,*}

^a Universitas Simalungun, Jalan Sisingamangaraja Barat., Pematangsiantar 21142, Indonesia

^b Universitas Prima Indonesia, Jalan Sekip No. 1 Simpang Sikambing, Medan 20117, Indonesia

¹ anitapurba555@gmail.com; ² semariagirsang@yahoo.com; ³ tiodorasilalahi@gmail.com; ⁴ erikson.saragih@gmail.com*

* corresponding author

ARTICLE INFO

Received 2021-12-11

Revised 2022-01-07

Accepted 2022-01-15

Published 2022-04-15

Keywords

Nurses

ESP

Communicative

Competence

Digital Storytelling

Method

ABSTRACT

The quality of Indonesian nurses promoted to work abroad is greatly affected by their ability to communicate in medical English. Some previous studies have explored the effectiveness of using digital storytelling in the foreign language learning process. However, research on the application of this method to improve communication competence in ESP nursing is still very limited. The objectives of the study are to test whether or not the digital storytelling method can improve nursing students' English communicative competence and to describe their perceptions on the benefits of using the digital storytelling method. Using mix method approach by the classroom action research design, with 125 nurses' samples, the study proves that nurses' communication skills (grammatical competence, strategic competence, and sociolinguistic competence) improve significantly by using this method. In addition, the majority of the students responded positively and showed some benefits of using the method; learning interests, confidence in communicating in English, and opportunity to practice their English. Considering the advantages of applying this method, medical English teachers are expected to use this method in their teaching practice. other language skills in the medical field should be investigated by future researchers



This is an open access article under the [CC-BY-SA](#) license.



1. Introduction

The low competitiveness of Indonesian nurses abroad is frequently attributed to their lack of communication English skills and cultural differences [1]. This situation provides an opportunity and a challenge for nursing education institutions in Indonesia to raise the quality of their alumni, particularly the quality of student soft skills concerning communicative competence. This enhanced language proficiency is expected to broaden potentials for Indonesian nurses to contend with nurse nursing professionals from Southeast Asian countries such as Malaysia, the Philippines, Thailand, and Vietnam, as well as increased demand for Indonesian nurses from developed countries like Japan, Korea, countries in Europe, and North America [2], [3]. In general, Indonesian nurses have good clinical skills but are weak in oral communication skills, especially those related to nursing medical communication. Language literacy, in its largest context, encompasses not only traditional skills and knowledge such as reading and writing elements from print texts but also the needs of the students who choose to live and learn in a virtualized environment [4]. A nurse's role in carrying out treatment actions on patients is very strategic, which necessitates good communication skills. The ability to use spoken language effectively in a way that society understands and accepts as a means of communication is referred to as communicative competence [5]. Good communication for nurses would include the ability to articulate nursing skills, prescription medications, illnesses, related diseases, clinical actions, and other topics. To illustrate a nurse-patient relationship, nurses who work

in hospitals or medical health centers should be able to work evidently. Education and strategies of the company are required to enhance emergency room (ER) nurses' language skills. The ESP material properties directly address a nurse's ability to converse about medical issues [6]. The English nursing curriculum outlines the critical aspects of ESP information exchange, such as grammatical competence, strategic competence, and sociolinguistic competence. Grammatical ability is the understanding of how grammar is used in communication. This competency has three components: knowledge of grammar rules, vocabulary, pronunciation, spelling, and so on. Sociolinguistic competence is made up of two sets of rules - sociocultural rules and rules of discourse. Sociocultural rules specify how to use language appropriately in a given situation: they address style, register, politeness, and so on. This competence focuses on specific cohesion devices (grammatical links) and coherence rules (acceptable combination of discourse) to arrange forms and meanings. Strategic competence is the ability to effectively communicate one's meaning to communicative partners, particularly when problems occur during the communication process.

In Indonesia, nursing educational establishments have used a range of techniques to optimize English communication skills, particularly English for Specific Purposes (ESP) [7]. However, these methods and approaches have not been successful in improving students' oral communication skills substantially. According to preliminary research undertaken by some English teachers in nursing education institutions in Indonesia, most of them proceeded to use conventional methods in the process of teaching ESP [8]. The ESP teachers simply modified traditional methods for improving nursing students' communication abilities, such as role-playing, simulation, and direct methods [9]. These learning methods [10-12], however, have not been able to stimulate and improve nursing students' English communication skills. So far, learning methods have only focused on how to speak perfect English, rather than how to use English to meet the communication needs of nurses. Furthermore, rather than oral communication, the material taught emphasizes mastery of written communication. Increasing nursing communicative competence in English is one of the goals of nursing education institutions in Indonesia today [13]. Several efforts have been made to improve students' English communication skills, including the updating of the Nursing English ESP curriculum and the implementation of various language learning methods. However, this effort has not resulted in the expected level of language learning. As a result, developing communication skills should emphasize the practice of using language in context. With the spread of new media in all forms of technology, foreign language teachers in Indonesia have incorporated digitally mediated and collaborative learning chances to advance nursing communicative competence. Foreign language learning has inevitably moved online that digital communication can support future expertise as well as new spaces for increased ease with a broader set of communicators [14].

Understanding language and using language effectively and acceptably in society are referred to as communicative competence [5]. The term coined by Dell Hymes which was evolved into a linguistic concept coined by Noam Chomsky. Most academics now consider linguistic competence to be a component of communicative competence. In Savignon [5], Berns digested norms in the learning of English as an international language, emphasizing that the concept of language learning suitable for learners necessarily requires a comprehension of the socially constructed aspects of language use. Furthermore, using a methodology for developing communicative competence requires a comprehension of differences in learning styles. Educational innovation is best advanced through the creation of local materials, which, in turn, rely on classroom teachers' cooperation. For nurses, communicative competence refers to the understanding of effective and appropriate medical communication patterns, as well as the ability to apply and adapt that understanding in a variety of contexts [15]. Nurses, particularly in medical settings, should have cognitive knowledge of communication based on observation and instruction. Furthermore, Liyanage et,al [16] argue that the most recent achievement in TESOL has been the increased emphasis on a communicative approach in language teaching. Everybody agrees on the significance of using language in the classroom for real communication. Canale and Swain were among the first to identify the elements of communicative competence [17]. First, there is grammatical competence, which provides a summary of phonology, pronunciation, lexicon, language structures, and sentence formation. Second, understanding socially constructed usage rules is required for linguistic knowledge. It is involved with learners' comprehension of various sociocultural contexts such as configurations, topics, and communicative functions. It also addresses the use of acceptable grammatical forms for various communicative features in a variety of sociolinguistic contexts. Third, students' abilities to speak and understand texts in the modes of listening, speaking, reading, and writing are linked to their discourse

competence. It is involved with the devices and networks of various types of texts. Fourth, strategic competence focuses on cognitive grindstones used in the face of grammatical, contextual, or discourse difficulties, such as the use of relevant sources, grammar paraphrase, requests for rehearsal, explanation, slower speech, difficulties addressing strangers when unsure of their social status, or problems locating acceptable cohesion devices. It is also implicated in performance indicators such as communicating with background music.

DST method is one of the cutting-edge online education methods available to be used in the classroom. It is an audio-visual innovation that consists of still images and videos segments with background music or sound and a voice-over storyline [18]. This method necessitates the creation of a short definitive movie with multiple digital materials to achieve an appealing demonstration. Furthermore, Barber [19] defines digital storytelling as a personal story told through the use of image sensors, computers, and non-linear composing tools to create short audio-visual stories. Personal narratives, storylines that examine historical events, and stories that are primarily used to inform or instruct are the three types of digital narratives [20]. DST method is lovely as well as the lively relationship of storyline and innovation that is attempting to prove to be a powerful force in the teaching process. In recent years, there has been a rise in involvement in the various advantages of digital storytelling. Some works have also investigated how digital storytelling is used in a variety of settings, such as K-12 education, higher education, health care, aging, involvement, and others. The previous researchers have found several benefits to using digital storytelling learning methods. Students' comprehension of content knowledge can be improved through digital storytelling works, and teachers are prepared to change their teaching methods and curriculum to also include digital storytelling [21]. Students' mobile learning stories show that they were motivated to think more carefully about the interpretation of the subject matter or story, customize their experience, and explain what they knew about the topic before and during the process of creating and conversing with their stories.

The University of Houston was surveyed to evaluate the various advantages and applications of digital storytelling [22]. One hundred fifty-five comments from people all over the world revealed widespread agreement in the areas of subject expertise, reflection skills, higher thinking skills, social skills, and creative expression. Digital storytelling had numerous applications in numerous settings. In the language class, stories had also found a home. The previous experiences that students bring to a group of students are a great point of discussion as well as a good start for students to write about. When students do not yet have the necessary words to interact exclusively in writing, the language of pictures and music can assist them to share information. This is particularly true for relatively low learners. As a result, it is critical to fully comprehend what digital storytelling involves and how to apply it in reality. Aside from the benefits discovered by using this method, some researchers [23][24] have discovered some drawbacks. First, they demonstrated that this method is only appropriate for lengthy communication training. Furthermore, this method is difficult to implement because it incorporates several literacy concepts that students do not yet understand, such as time constraints, difficult narratives, and limited expertise in the use of digital media. Second, because there are no real assessment criteria for the assessment parameters used, assessing learning outcomes is often subjective. Digital Storytelling is defined as the act of telling narratives in digital form [25]. This activity entails blending two or more of the ones that follow, either created by them or by others: Photos Playback Video Clip Text Screenshots, such as those from video games and webpages, as well as other visuals and digital technology. Furthermore, [26] found that the concept of creating a digital story consists of two steps: selecting a topic, gathering information on the chosen topic, composing a script, constructing a storyboard, capturing audio-visual items, making and publicizing the digital story. They can create a speech video, a webpage, an audio interview, or merely textual content with a 'twist,' such as browsing text or shifting colors to offer various moods. Students could write a memoir or a narrative in any genre you specify. Furthermore, Cetin [27] found that the concept of creating a digital story consists of two steps: selecting a topic, gathering information on the chosen topic, composing a script, constructing a storyboard, capturing audio-visual items, making and publicizing the digital story. They can create a speech video, a webpage, an audio interview, or merely textual content with a 'twist,' such as browsing text or shifting colors to offer various moods. Students could write a memoir or a story in any genre they specify. Some scholars have debated the usefulness of this method in the frame of reference of ESP. This method, according to [28], can greatly enhance students' verbal and non-linguistic abilities.

Moreover, Pealver and Urbietta [29] demonstrated the same thing in terms of using this methodology to generate new literacies in interpersonal communication that they could presumably apply in their future jobs. Based on the existing researches, the digital storytelling method is very effective in improving students' communication skills, not only in English for academic purposes but also in English for specific purposes. In this regard, this study focuses on the use of this method to improve nursing students' oral language proficiency. Based upon phenomenology research conducted by Bullington [30] nurses commonly have difficulty prioritizing dialogue with patients, due to lack of time, organizational and cultural factors. Like other health care professionals, nurses may also have difficulties communicating with patients due to personal fears and shortcomings. The parameters applied for the nurses' communication competence include interaction, professional vocabulary, language quality, fluency, pronunciation, and presentation. There are two methods used for assessing speaking skills by nurses [31]. Firstly, in the observational approach, the student's behavior is observed and assessed unobtrusively. In the structured approach, the student is asked to perform one or more specific oral communication tasks. His or her performance on the task is then evaluated. The task can be administered in a one-on-one setting with the test administrator and one student or a group or class setting. In either setting, students should feel that they are communicating meaningful content to a real audience. Tasks should focus on topics that all students can easily talk about, or, if they do not include such a focus, students should be allowed to collect information on the topic.

The Centre for Digital Storytelling (2010) divided the creative process into 8 stages to classify the main components of a digital story. This method, dubbed "The Seven Elements of Digital Storytelling," consists of the following elements: (1) Point of View reveals the story's objective and the author's viewpoint; (2) A Intense Question piques the audience's interest and will be answered by the conclusion of the narrative; (3) Emotional Information immerses the viewers in the story; and (4) The Gift of Voice assists the viewers in knowing the story through customization of the storytelling, (5) The Influence of Theme music offers specific music to facilitate the narrative, (6) Economy tries to avoid overburdening the audience with increased use of visual effects and/or sound, and (7) Storytelling offers a pattern to the story and interacts with how steadily or quickly the decision is made. In addition to the aforementioned phenomenon, some institutions that have attempted to improve nurses' communication competence in some nursing education programs have met with setbacks. Some of them are an absence of opportunity to practice communication skills in hospital situations, the inadequate time assigned for ESP in Nursing English, an incompatibility between source material and curriculum, and the possibility of meeting interaction competence-based targets [32]. This argument is in line with [33] who argue that due to time constraints, organizational constraints, and cultural factors, nurses have difficulty prioritizing dialogue with patients. This research proposes a learning approach solution based on information about the deficiencies of ESP teaching methods for nurses in Indonesia, particularly regarding the use of digital storytelling (DST).

Even though the fact that some researchers have evidenced the efficacy of using this teaching method in various aspects and elements of language learning in general, studies on its application in teaching ESP received little attention. Some nurse education investigations have demonstrated the utility of using digital stories, such as the effect of using digital stories in promoting a deeper understanding of primary healthcare concepts in nursing students [34][35]. Furthermore, several studies in the field of nursing have investigated the soft skills that nurses must possess and were conducted by some researchers involving communication aspects [36] [37]; however, there has never been any research on the use of the DST method in ESP learning, particularly to improve nurses' English communication competence. The study's findings are expected to make a significant contribution to the advancement of medical effective communication among Indonesian nurses seeking international employment. Furthermore, the study's findings can be used as guidelines for nursing academic institutions and nursing English ESP educators to continue providing students with high English proficiency. Furthermore, this study advances our understanding of how to create authentic and developmental learning contexts that can be used in a variety of educational settings. In summary, the goal of this study is to assess the effects of digital storytelling on nurses' English language proficiency as well as students' perceptions of the use of storytelling in their educational approaches.

2. Method

The purpose of this study, as previously stated, was to test the efficacy of using the digital storytelling method to improve nurses' communication competence using English ESP. To accomplish this goal, this study employed a classroom action research design that incorporates both primary quantitative and qualitative data. This study's quantitative data were the scores of speaking skills obtained by using standard speaking rubrics that are commonly used to measure speaking skills. The assessment of speaking skills focuses on mastering the previously mentioned grammatical competence, sociolinguistic competence, and strategic competence. The three parameters of communication skills in nursing ESP, as well as the range of scores for each competency, have been integrated and adapted into speaking rubrics. While the qualitative data in this study were obtained through questions in the form of a survey applying google form. This research was conducted at the Faculty of Nursing and Midwifery, Universitas Prima Indonesia, from July to August 2021. The 125 students as the subjects of the study were derived from 3 classes of the 7-th semester students taking medical English classes, drawn using a cluster sampling technique. The subject selection was based on the availability of the subjects for the three classes. The study used three speaking tests in the pattern of a speech in three topics concerning disease explanations, drug use characterizations, and medical services topic-related preselected by student nurses to collect quantitative data for this study. The themes adhere to the ESP Nursing English course of study as established by the study program. Every topic has a five-minute time limit for students. Speaking competency assessment grading rubric was used as evaluation criteria. The study identified students' communicative competence via digital video using the Association of American Colleges and Universities' Oral Communication Value Rubric on the nurses' communication skills, key messages, delivery techniques, language, organization, and supporting materials The ten-item questionnaire has been used to evaluate nursing students' attitudes of the use of digital storytelling; the advantages and disadvantages of this method are to continue improving nursing students' medical competence. This study's qualitative data were gathered through a questionnaire survey using a Google form device to investigate students' perspectives of the use of digital storytelling in enhancing nursing students' speaking skills. In this study, quantitative data in the form of scores were analyzed using descriptive statistical analysis with SPSS version 22 to test the effectiveness of the digital storytelling method's application. Meanwhile, qualitative data from survey results in the form of a Google form were analyzed using qualitative data analysis techniques such as collecting data, reducing data, categorizing data, analyzing data, interpreting data, and concluding data. Briefly, the classroom action research design in [Figure 1](#).

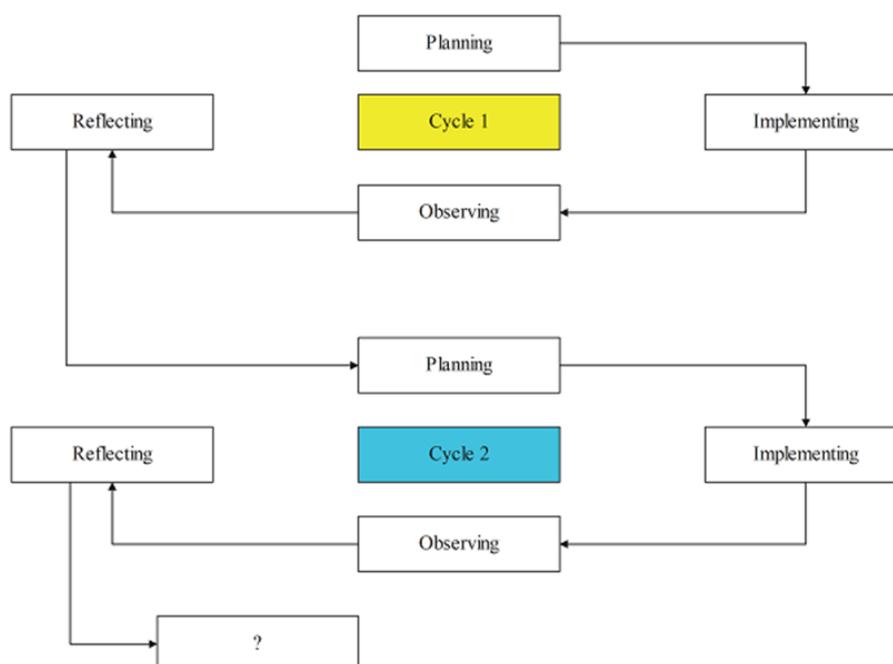


Fig. 1. The Research Cycle

Figure 1 shows how the steps of this research were conducted. Before the treatment was carried out in the first cycle, the communication skills of nursing students were assessed to get an overview of their communication competence in the medical field. After that treatment (digital storytelling method) was applied in cycles 1 and 2 where their communication skills were also measured in this cycle. The next step taken is to analyze and compare the pretest scores, cycle 1 values, and cycle values 2. While the qualitative data in this study were analyzed by qualitative data analysis. The method of classroom action research selected was based on the solution to a problem, which would be to evaluate the efficiency of using digital storytelling to enhance nurses' communication skills in English. Teachers who act as investigators can highlight the potential learning process and the use of this digital storytelling method by employing this method. The use of such a method is preferable to the use of numerous different methods, which typically do not investigate the learning process and instead concentrate purely on research findings. This implementation is expected to generate credible research outcomes that can be used to establish this method as a basic method for improving nursing students' speaking proficiencies. Even though the number of nurses using this method remains limited, the results are expected to provide a characterization of how beneficial this digital storytelling method is, not only within the topic of scholarly speaking but also in the issue of English for specific purposes.

3. Results and Discussion

1) The Improvement of Students' Communicative Competence using DST

The Description of Nurses' Communicative Competence Improvement Using the DST Method was based on the input and reflection of the student's video results from the first cycle, in which each student was assigned to make a video with a different topic from the video they chose earlier from the three selected topics. The second cycle was also two weeks long, as was the first. At this point, students were asked to be more careful in expressing their ideas and communicating their feelings so that the video viewers could understand what they were saying. After two weeks, the returned student videos were collected and assessed for a week by the instructor team. After this stage, the instructor team and students reconvened to discuss the videos created by students using the digital storytelling method; content, background music, image quality, information content, and so on. The research team surveyed students' perceptions of the use of digital storytelling to increase students' communicative competence at the end of this activity. Table 1 shows that the lowest score from the pre-test was 54, while the highest score from test cycle 1 was 65.

Table 1. Nursing Students' Communicative Competence on Cycle 1

Cycle	N	Range	Minimum	Maximum	Mean		Standard Deviation	Variance
					Value	SE		
Pre-test	125	22	54	76	63.71	.556	6.211	38.578
Cycle 1	125	17	61	82	74.50	.412	4.601	21.171

The highest pre-test score was 76, while the highest test cycle 1 score was 82. This table also shows that there is an improvement in the communication competence of nursing students after using the digital storytelling method, as evidenced by the comparison of pre-test and post-test scores (63.71) and cycle 1 of the score test (74.50). The variance value indicates that the distribution of student scores is also very diverse. Table 2 below contains a description of the second cycle of nurses' communicative competence improvement using the DST method. Table 2 shows that the lowest score from cycle 1 was 65, while the highest score from cycle 2 was 68. The highest score from cycle 1 was 82, while the highest score from cycle 2 was 87.

Table 2. Nursing Students' Communicative Competence on Cycle 2

Cycle	N	Range	Minimum	Maximum	Mean		Standard Deviation	Variance
					Value	SE		
Cycle 1	125	17	65	82	74.5	.142	4.601	21.171
Cycle 2	125	19	68	87	79.6	.318	3.557	12.649

Table 2 also shows that after the second cycle of using the digital storytelling method, nursing students' communication competence improves, which can be seen by comparing the test score on cycle 1 (74.50) to the test score on cycle 2 (79.58). The variance value indicates that the distribution of student scores is also very diverse.

2) Students' perception of the Use of DST Method Students Positive Perception

In this study, the result of the survey to the respondents about the benefits and drawbacks of using the digital storytelling method in an attempt to acquire a picture of nursing students' perceptions of its use is displayed in Table 3. The three positive benefits of the digital storytelling method that are placed in the highest frequency the options; making English learning interesting 90 (72%), having self-confidence in practicing English 88 (70.4), and having great opportunity to practice English 84 (67.2). After clarifying with numerous responders their motivations for choosing this digital storytelling style, they disclosed that learning medical English had been a new and extremely exciting experience for them. Because they felt well equipped to speak English, their self-confidence grew dramatically. They also mentioned that they have more opportunities to practice their English in circumstances that are tailored just for them. In addition, they can develop their skills by reflecting on their skills through the video content they produce.

Table 3. The student perception of the use of the Digital Storytelling Method

Perception	Total	Percentage (%)
having great opportunity to practice English	84	67.2
having good preparation for making English narration	78	62.4
improving writing competence	67	53.6
making English learning interesting	90	72.0
making self-reflection on their competence	83	66.4
having own experience on making their movies	74	59.2
increasing learning efficacy	68	54.4
having unique and interesting activities	73	58.4
having the opportunity to correct their English	75	60.0
feeling challenged to increase medical vocabularies	54	43.2
feeling challenged to comprehend stories deeply through literature	62	49.6
having self-confidence in practicing English	88	70.4

3) Students' negative perception

The research reveals, as stated previously, that seventeen participants have a negative perception about the use of digital storytelling methods in improving nurses' English language proficiency. The data on negative perceptions were coded and calculated from the seventeen respondents as follows; (1) eight students complained that the assigned topic was too difficult. They enjoy doing the activity in general; however, they had never been assigned such activities before, so they found it difficult to complete the tasks. Apart from exploring the advantages of the use of the digital storytelling method, the research team also surveyed the disadvantages of digital storytelling for nursing students; (2) seven respondents stated that the time allotted to complete the digital storytelling task was extremely limited, whereas the time required to prepare this digital video had to be extensive. Third, ten respondents complained about their inability to complete the tasks assigned to them due to their limitations in communicating the story's content in English. Fourth, four student respondents expressed concern about their lack of computer literacy, while the success of the digital storytelling method was also determined by nursing students studying medical English's understanding of computer literacy. The bandwidth level of negative attitudes of the application of this digital storytelling method is associated with their weakness in the use of nursing English, the choice of topics that are unfamiliar to them and too difficult, and the limited time allocated to execute the program, according to the four negative reviews obtained from interview data.

Based on the findings of this study, using the digital storytelling method had a significant effect on increasing ESP English communication competence. The results of the descriptive analysis of the result section support this finding. According to the findings, the majority of students gave a positive response, with the main reason being the excellent opportunity to practice English, having good preparation for making English narration, improving writing competence making English learning interesting, making self-reflection on their competence, having own experience on making their movies, increasing learning efficacy, having unique and interesting activities, having the opportunity to correct their English, feeling challenged to increase medical vocabularies, feeling challenged to comprehend stories deeply through literature, and having self-confidence in practicing English. These findings are consistent with previous researches on the use of digital storytelling in foreign language learning [38][19][39]. Aside from the benefits of using this method, the results of the survey distributed to respondents show dissatisfaction with the level of difficulty, lack of mastery of digital

technology, lack of mastery of the material discussed, and the consistency of English teachers in using this method to improve students' speaking competence [23]. Student nurses were motivated to investigate more deeply the elaboration of their medical theme or narrative, customize their knowledge of medicine, and describe specifically what they comprehended about the content areas while producing and communicating about their medical important subjects based on the research results of the assessment of student-produced stories. Some fascinating points of view, unique information, and diverse resources revealed that nursing students were designed to illustrate their ideas and involvement with the source material visibly and audibly, rather than simply reviewing concepts and theories related to the topic [35]. Given the distracting visual technology and the lack of processing and presentation of voice and images in homework assignments, it is assumed that students enjoy the concept of piecing together their ideas and integrating them in whatever way they wanted using themes, sound, storylines, directions, transitions, and another individual possesses effects [40].

These findings also indicated that digital storytelling should be given more attention because it facilitates communication with a unique ability to learn new effective teaching and IT skills such as acquiring and formatting digital pictures, recognizing types of files, taking photographs while using audio, searching for images and text, and using Image Story to adjust, set up, and save a series of stories [41]. These results support the work of Alcalde-Peñalver and Santamaría-Urbieto [29]. Besides that, digital storytelling provided a practical way for learners to study how to use time productively, especially if significant inventions resources, and functional editing tools were made available to motivate them to produce successful stories. This effort demonstrates how recognizing student nurses' accepted needs can help them store, access, share and reuse quality stories [11], [42]. This study reflects the implementation of the digital storytelling method for improving nursing student communication competence in discussing medical topics such as drug description, disease description, and nursing action description. This method was successfully applied to student nurses. According to the findings of this study, this method should be used as frequently as possible to improve the communication skills of education in the field of medical nursing services. Even though this method is still relatively new in nursing education institutions, this study demonstrates that it is very relevant and significant for improving nurses' communication competence. Almost every study found that digital storytelling improved academic communication skills [43][33] [44]. It is particularly suited to use in technological innovations for some reasons. First, students who have discovered an authentic way of expressing themselves should be given a voice. Second, it places technology in the hands of the learner, allowing him or her to control how it is used within the parameters set by the teacher. If previous research has only focused on general English mastery using this method, this study shows that it is also very relevant for improving students' communication competence in ESP for nursing students. The findings of this study can also be used to bridge the gap between school and student expectations for obtaining healthcare communication through this method. Although the findings of this study are similar to and confirm the findings of previous studies [45];[46];[47] on the application of the digital storytelling method, the findings of this study are distinct in that the method used is a mixed research design that incorporates quantitative and qualitative data. Another distinguishing feature is that the use of the digital storytelling method is limited to ESP English nursing, which focuses on technical vocabularies related to nursing activities. The findings of this study are expected to add to the literature on nursing English ESP learning, particularly in terms of improving communication competence.

This study also uncovered several unexpected facts. Learning to speak, which previously relied on traditional methods and media, was less appealing to student nurses. The use of this digital storytelling method offers an excellent opportunity for student nurses to investigate their capacity to communicate what they had observed, learned, studied, and practiced in the form of video media [48]. Furthermore, the learning outcomes they create can be converted to social media platforms such as YouTube media, allowing their works of art to be stored and viewed by many people. This is one of the primary motivations that other research findings have not identified. Although the application of digital storytelling in this study was able to significantly improve nurses' communication competence in general, there are some limitations of the study that need to be supplemented by future research. First, this limitation pertains to the number of topics chosen as well as the modes of communication. Future studies are expected to investigate the dialogue mode, which was not covered in this study. The findings of this study show that the digital storytelling method is not only effective in improving student communication in an academic context but also in a professional and work context, as in English ESP learning [49]. This method can be used and developed by English teachers by applying

it to other fields. The application and development of the course must be based on an analysis of student needs, which is the foundation of nursing English ESP learning [50]. Aside from the method's effectiveness, the favorable response offered by nursing students as study subjects is a significant factor to consider when using this method to improve students' communication abilities in general, and medical communication.

4. Conclusion

The results of the study reveal the digital storytelling method has a significant impact on the English language proficiency of student nurses. By these findings, the digital storytelling method is not only efficient in enhancing communication abilities in academic achievement in a broad sense, but also career-related fields such as Nursing English ESP. Furthermore, this study found that this blended learning has some positive effects on student nurses' motivation to learn English, target-based learning, expanding digital literacy skills, and, most importantly, mastering content materials. The findings of this study are highly beneficial to both teachers and nursing students. This method can be used by ESP English teachers to inspire and enable nursing learners to achieve their communicative competence, particularly in the mastery of medical English. Using this method, students can take advantage of technological capabilities in their tools to practice medical communication skills, which are highly valued in the nursing field. More studies are expected to support the use of such a method in foreign language learning in Indonesia, such as looking into how this method can be applied to many other language skills aimed at enhancing medical communication in general. In addition, the findings of this study can be added to the literature on the use of digital storytelling methods to improve the competency of Indonesian nurses' English communication skills, which can be used as a reference for future studies on the subject. Whereas most previous research findings have disclosed the success of using this method, neither any study has explored the efficacy of using such an approach to enhance ESP English communication skills, especially in the nursing field. This study's findings provide a different dimension of impactful methods for improving communication skills in the healthcare profession, which is a critical need for Indonesian nurses. Aside from the numerous benefits of using this method to improve the oral communication competence of nursing students related to their field, this research should be continued by other researchers, such as those related to the general field communication function that has not been touched by this study. Weaknesses in topic selection, time allocation, and computer literacy must also be addressed before this method is used.

Acknowledgment

The authors would like to thank the research center of Universitas Simalungun, Pematangsiantar, and Universitas Prima Indonesia Medan, which funded the research. Their thanks also go to the editorial board and anonymous reviewers for their insightful comments and critics of the manuscript.

Declarations

- Author contribution** : AP, SEG, TFS, and ES: Conceptualization, methodology, writing, reviewing, and editing.
- Funding statement** : No funding was made available for this research.
- Conflict of interest** : The authors declare no conflict of interest.
- Additional information** : No additional information is available for this paper.

References

- [1] F. Efendi, C. M. Chen, N. Nursalam, R. Indarwati, and E. Ulfiana, "Lived experience of Indonesian nurses in Japan: A phenomenological study," *Japan J. Nurs. Sci.*, vol. 13, no. 2, pp. 284–293, 2016, doi: [10.1111/jjns.12108](https://doi.org/10.1111/jjns.12108).
- [2] Nelwati, K. L. Abdullah, M. C. Chong, and L. McKenna, "The effect of peer learning on professional competence development among Indonesian undergraduate nursing students: A quasi-experimental study," *J. Prof. Nurs.*, vol. 36, no. 6, pp. 477–483, 2020, doi: [10.1016/j.profnurs.2020.03.008](https://doi.org/10.1016/j.profnurs.2020.03.008).
- [3] E. Vuopala, P. Hyvönen, and S. Järvelä, "Interaction forms in successful collaborative learning in virtual learning environments," *Act. Learn. High. Educ.*, vol. 17, no. 1, pp. 25–38, 2016, doi: [10.1177/1469787415616730](https://doi.org/10.1177/1469787415616730).

- [4] I. R. Beiler, "Negotiating Multilingual Resources in English Writing Instruction for Recent Immigrants to Norway," *TESOL Q.*, 2019, doi: [10.1002/tesq.535](https://doi.org/10.1002/tesq.535).
- [5] S. J. Savignon, "Communicative Competence," *TESOL Encycl. English Lang. Teach.*, pp. 1–7, 2017, doi: [10.1002/9781118784235.eelt0047](https://doi.org/10.1002/9781118784235.eelt0047).
- [6] D. Gablasova, "Learning technical words through L1 and L2: Completeness and accuracy of word meanings," *English Specif. Purp.*, vol. 39, pp. 62–74, 2015, doi: [10.1016/j.esp.2015.04.002](https://doi.org/10.1016/j.esp.2015.04.002).
- [7] J. Gunawan, Y. Aunguroch, M. L. Fisher, and A. M. McDaniel, "Development and Psychometric Properties of Managerial Competence Scale for First-Line Nurse Managers in Indonesia," *SAGE Open Nurs.*, vol. 5, pp. 1–12, 2019, doi: [10.1177/2377960819831468](https://doi.org/10.1177/2377960819831468).
- [8] A. J. Triana, R. E. Gusdorf, K. P. Shah, and S. N. Horst, "Technology literacy as a barrier to telehealth during COVID-19," *Telemed. e-Health*, vol. 26, no. 9, pp. 1118–1119, 2020, doi: [10.1089/tmj.2020.0155](https://doi.org/10.1089/tmj.2020.0155).
- [9] N. Qomariyah, T. Savitri, T. Hadianto, and M. Claramita, "Formulating Employability Skills for Graduates of Public Health Study Program," *Int. J. Eval. Res. Educ.*, vol. 5, no. 1, p. 22, 2016, doi: [10.11591/ijere.v5i1.4518](https://doi.org/10.11591/ijere.v5i1.4518).
- [10] A. A. M. H. Al-Ahdal, "Code Mixing in Arabic conversations of college students: A Sociolinguistic study of attitudes to switching to English," *Asian ESP J.*, vol. 16, no. 11, pp. 6–19, 2020. Available at: [Google Scholar](https://scholar.google.com/).
- [11] E. Saragih, "Designing ESP Materials for Nursing Students Based On Needs Analysis," *Int. J. Linguist.*, vol. 6, no. 4, p. 59, 2014, doi: [10.5296/ijl.v6i4.5983](https://doi.org/10.5296/ijl.v6i4.5983).
- [12] E. Pelzl, E. F. Lau, T. Guo, and R. DeKeyser, "Advanced second language learners' perception of lexical tone contrasts," *Stud. Second Lang. Acquis.*, vol. 41, no. 1, pp. 59–86, Mar. 2019, doi: [10.1017/S0272263117000444](https://doi.org/10.1017/S0272263117000444).
- [13] D. Poedjiastutie and R. Oliver, "English Learning Needs of Esp Learners: Exploring Stakeholder Perceptions At an Indonesian University," *TEFLIN J. - A Publ. Teach. Learn. English*, vol. 28, no. 1, p. 1, 2017, doi: [10.15639/teflinjournal.v28i1/1-21](https://doi.org/10.15639/teflinjournal.v28i1/1-21).
- [14] G. A. Hull and A. Stornaiuolo, "Cosmopolitan literacies, social networks, and 'proper distance': Striving to understand in a global world," *Curric. Inq.*, vol. 44, no. 1, pp. 15–44, 2014, doi: [10.1111/curi.12035](https://doi.org/10.1111/curi.12035).
- [15] W. T. Tseng, H. J. Liou, and H. C. Chu, "Vocabulary learning in virtual environments: Learner autonomy and collaboration," *System*, vol. 88, Feb. 2020, doi: [10.1016/j.system.2019.102190](https://doi.org/10.1016/j.system.2019.102190).
- [16] I. Liyanage, T. Walker, and P. Singh, "TESOL professional standards in the 'Asian century': dilemmas facing Australian TESOL teacher education," *Asia Pacific J. Educ.*, vol. 35, no. 4, pp. 485–497, 2015, doi: [10.1080/02188791.2013.876388](https://doi.org/10.1080/02188791.2013.876388).
- [17] C. T. Mart, "From Communicative Competence to Language Development," *Int. J. English Linguist.*, vol. 8, no. 2, p. 163, 2017, doi: [10.5539/ijel.v8n2p163](https://doi.org/10.5539/ijel.v8n2p163).
- [18] J. Rodríguez-Almagro, M. del C. Prado-Laguna, A. Hernández-Martínez, A. Monzón-Ferrer, J. C. Muñoz-Camargo, and M. Martín-Lopez, "The impact on nursing students of creating audiovisual material through digital storytelling as a teaching method," *Int. J. Environ. Res. Public Health*, vol. 18, no. 2, pp. 1–10, 2021, doi: [10.3390/ijerph18020694](https://doi.org/10.3390/ijerph18020694).
- [19] J. F. Barber, "Digital storytelling: New opportunities for humanities scholarship and pedagogy," *Cogent Arts Humanit.*, 2016, doi: [10.1080/23311983.2016.1181037](https://doi.org/10.1080/23311983.2016.1181037).
- [20] B. R. Robin, "Digital storytelling: A powerful technology tool for the 21st century classroom," *Theory Pract.*, 2008, doi: [10.1080/00405840802153916](https://doi.org/10.1080/00405840802153916).
- [21] A. Sadik, "Digital storytelling: A meaningful technology-integrated approach for engaged student learning," *Educational Technology Research and Development*. 2008, doi: [10.1007/s11423-008-9091-8](https://doi.org/10.1007/s11423-008-9091-8).
- [22] M. Leshchenko, L. Ruban, and L. Tymchuk, "Digital Storytelling in a foreign language classroom of higher educational establishments," *CEUR Workshop Proc.*, vol. 1844, pp. 428–439, 2017. Available at: [Google Scholar](https://scholar.google.com/).
- [23] C. Banditvilai and R. Cullen, "Problems and Obstacles in Learning English as a Foreign Language," *Int. J. Soc. Sci. Humanit.*, vol. 2, no. 185, pp. 289–294, 2018, doi: [10.18178/ijssh.2018.v9.977](https://doi.org/10.18178/ijssh.2018.v9.977).

- [24] C. A. T. Publishing, J. Condy, A. Chigona, and N. Tunjera, "Digital storytelling as a tool for teaching: Perceptions of pre-service teachers," *J. Transdiscipl. Res. South. Africa*, vol. 11, no. 3, Dec. 2015, doi: [10.4102/td.v11i3.83](https://doi.org/10.4102/td.v11i3.83).
- [25] H. McLellan, "Digital storytelling in higher education," *J. Comput. High. Educ.*, 2007, doi: [10.1007/BF03033420](https://doi.org/10.1007/BF03033420).
- [26] D. shin Shin, T. Cimasko, and Y. Yi, "Development of metalanguage for multimodal composing: A case study of an L2 writer's design of multimedia texts," *J. Second Lang. Writ.*, vol. 47, Mar. 2020, doi: [10.1016/j.jslw.2020.100714](https://doi.org/10.1016/j.jslw.2020.100714).
- [27] E. Çetin, "Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers," *Think. Ski. Creat.*, vol. 39, p. 100760, 2021, doi: [10.1016/j.tsc.2020.100760](https://doi.org/10.1016/j.tsc.2020.100760).
- [28] R. Zhang, "Language Teaching And Technology Forum Exploring blended learning experiences through the community of inquiry framework," vol. 24, pp. 38–53, 2008. Available at: [Google Scholar](https://scholar.google.com/).
- [29] E. Alcalde-Peñalver and A. Santamaría-Urbieta, "Digital storytelling in ESP: Towards a new literacy in hybrid language learning," *Aula Abierta*, vol. 50, no. 2, pp. 567–576, 2021, doi: [10.17811/RIFIE.50.2.2021.567-576](https://doi.org/10.17811/RIFIE.50.2.2021.567-576).
- [30] J. Bullington, M. Söderlund, E. Bos Sparén, Å. Kneck, P. Omérov, and A. Cronqvist, "Communication skills in nursing: A phenomenologically-based communication training approach," *Nurse Educ. Pract.*, vol. 39, no. June, pp. 136–141, 2019, doi: [10.1016/j.nepr.2019.08.011](https://doi.org/10.1016/j.nepr.2019.08.011).
- [31] R. B. Rubin, "Assessing Speaking and Listening Competence at the College Level: The Communication Competency Assessment Instrument," *Commun. Educ.*, vol. 31, no. 1, pp. 19–32, 1982, doi: [10.1080/03634528209384656](https://doi.org/10.1080/03634528209384656).
- [32] S. Anggoro, "Assessing Thai Nursing College Students' Speaking Ability through the Perspectives of Their Indonesian Counterparts," *VELES Voices English Lang. Educ. Soc.*, vol. 4, no. 1, pp. 1–10, 2020, doi: [10.29408/veles.v4i1.1894](https://doi.org/10.29408/veles.v4i1.1894).
- [33] J. Bullington, M. Söderlund, E. Bos Sparén, Å. Kneck, P. Omérov, and A. Cronqvist, "Communication skills in nursing: A phenomenologically-based communication training approach," *Nurse Educ. Pract.*, vol. 39, no. May 2018, pp. 136–141, 2019, doi: [10.1016/j.nepr.2019.08.011](https://doi.org/10.1016/j.nepr.2019.08.011).
- [34] A. Cunsolo Willox, S. L. Harper, and V. L. Edge, "Storytelling in a digital age: Digital storytelling as an emerging narrative method for preserving and promoting indigenous oral wisdom," *Qual. Res.*, 2013, doi: [10.1177/1468794112446105](https://doi.org/10.1177/1468794112446105).
- [35] D. M. Price, L. Strodman, E. Brough, S. Lonn, and A. Luo, "Digital storytelling," *Nurse Educ.*, 2015, doi: [10.1097/NNE.0000000000000094](https://doi.org/10.1097/NNE.0000000000000094).
- [36] B. L. M. Morrell, H. N. Eukel, and L. E. Santurri, "Soft skills and implications for future professional practice: Qualitative findings of a nursing education escape room," *Nurse Educ. Today*, vol. 93, no. March, p. 104462, 2020, doi: [10.1016/j.nedt.2020.104462](https://doi.org/10.1016/j.nedt.2020.104462).
- [37] J. D. Ray and A. S. Overman, "Hard facts about soft skills," *Am. J. Nurs.*, vol. 114, no. 2, pp. 64–68, 2014, doi: [10.1097/01.NAJ.0000443784.75162.b7](https://doi.org/10.1097/01.NAJ.0000443784.75162.b7).
- [38] J. S. Fu, S. H. Yang, and H. C. Yeh, "Exploring the impacts of digital storytelling on English as a foreign language learners' speaking competence," *J. Res. Technol. Educ.*, vol. 0, no. 0, pp. 1–16, 2021, doi: [10.1080/15391523.2021.1911008](https://doi.org/10.1080/15391523.2021.1911008).
- [39] M. Razmi, S. Pourali, and S. Nozad, "Digital Storytelling in EFL Classroom (Oral Presentation of the Story): A Pathway to Improve Oral Production," *Procedia - Soc. Behav. Sci.*, vol. 98, no. 2011, pp. 1541–1544, 2014, doi: [10.1016/j.sbspro.2014.03.576](https://doi.org/10.1016/j.sbspro.2014.03.576).
- [40] T. A. Campbell, "Digital Storytelling in an Elementary Classroom: Going Beyond Entertainment," *Procedia - Soc. Behav. Sci.*, vol. 69, no. Iceepsy, pp. 385–393, 2012, doi: [10.1016/j.sbspro.2012.11.424](https://doi.org/10.1016/j.sbspro.2012.11.424).
- [41] R. Zhang, "Exploring blended learning experiences through the community of inquiry framework," *Lang. Learn. Technol.*, vol. 24, no. 1, pp. 38–53, 2020. Available at: handle.net

- [42] A. Sadik, "Factors influencing teachers' attitudes toward personal use and school use of computers: New evidence from a developing nation," *Eval. Rev.*, vol. 30, no. 1, pp. 86–113, 2006, doi: [10.1177/0193841X05276688](https://doi.org/10.1177/0193841X05276688).
- [43] B. Gray, A. Young, and T. Blomfield, "Altered Lives: Assessing the effectiveness of digital storytelling as a form of communication design," *Continuum (N. Y.)*, vol. 29, no. 4, pp. 635–649, 2015, doi: [10.1080/10304312.2015.1025359](https://doi.org/10.1080/10304312.2015.1025359).
- [44] F. M. van der Kleij, "Comparison of teacher and student perceptions of formative assessment feedback practices and association with individual student characteristics," *Teach. Teach. Educ.*, vol. 85, no. 1, pp. 175–189, 2019. doi: [10.1016/j.tate.2019.06.010](https://doi.org/10.1016/j.tate.2019.06.010)
- [45] D. Adams, M. Tan Hwee Joo, B. Sumintono, and O. Siew Pei, "Blended learning engagement in higher education institutions: a differential item functioning analysis of students' backgrounds 1," 2020. doi: [10.32890/mjli2020.17.1.6](https://doi.org/10.32890/mjli2020.17.1.6)
- [46] B. M. Gladstone and E. Stasiulis, "Digital Storytelling Method," in *Handbook of Research Methods in Health Social Sciences*, Springer Singapore, 2017, pp. 1–17. doi: [10.1007/978-981-10-2779-6_11-1](https://doi.org/10.1007/978-981-10-2779-6_11-1)
- [47] T. L. Ellison and H. Wang, "Resisting and redirecting: Agentive practices within an African American parent–child dyad during digital storytelling," *J. Lit. Res.*, vol. 50, no. 1, pp. 52–73, 2018, doi: [10.1177/1086296X17751172](https://doi.org/10.1177/1086296X17751172).
- [48] V. M. Bhana, "Interpersonal skills development in Generation Y student nurses: A literature review," *Nurse Educ. Today*, vol. 34, no. 12, pp. 1430–1434, 2014, doi: [10.1016/j.nedt.2014.05.002](https://doi.org/10.1016/j.nedt.2014.05.002).
- [49] K. Ratheeswari, "Information Communication Technology in Education," *J. Appl. Adv. Res.*, vol. 3, pp. S45–S47, 2018, doi: [10.21839/jaar.2018.v3is1.169](https://doi.org/10.21839/jaar.2018.v3is1.169).
- [50] T. Nababan and E. Saragih, "Designing training module to improve nursing clinical competence based on needs analysis: A developmental study," *Asian J. Sci. Res.*, vol. 11, no. 3, 2018, doi: [10.3923/ajsr.2018.319.328](https://doi.org/10.3923/ajsr.2018.319.328).