

# Learning Culture from the Perspective of the Successful Indonesian Nurse Competency Examination

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## Abstract

**Background:** The Indonesian Nurse Competency Examination (INCE) is a strategic component that determines the output of nursing graduate students. The varied geographical conditions of the various islands in Indonesia can influence access and quality of education, causing students to have a more inclusive perspective. The learning culture of Indonesian nursing students is unique and generally carries over to higher education, notably nursing profession education.

**Objective:** The purpose of the study is to explain the learning culture model from the perspective of the success of the nurse competency examination and the relationship between learning culture and the success of the nurse competency examination.

**Methods:** A qualitative and quantitative combination research (mixed method) with a sequential-exploratory design was employed. Stage 1 used descriptive qualitative methods. While data collecting used structured interviews, the sampling technique utilized snowball with (n=9), and data analysis used Sandelowski content analysis. Stage 2 was an observational analytical design with a retrospective approach involving 74 nursing students at Wiraraja University who lived in the Indonesian student area. Data analysis then employed the Structural Equation Model (SEM) test to find variables that significantly influence the success of INCE.

**Results:** Stage-1 produced three themes: Theme-1: background of the learning environment concerning facilities utilization and searching strategy for learning resources; Theme-2: learning activities including learning styles, learning motivation, and self-confidence and abilities; Theme-3: learning habits comprising learning methods, concentration, and repeating the learning material. In stage 2, the result revealed that learning environment background (p=0.031), learning activities (p=0.021), and study habits (p=0.028) were significantly related to the success of the INCE on students.

**Conclusion:** The learning culture of Indonesian students from the perspective of success in the INCE is formed starting from the pre-graduate level and continuing at the higher and professional levels.

**Keywords:** learning culture; nurse competency examination; undergraduate student; Indonesian student

## INTRODUCTION

The Indonesian Nurse Competency Examination (INCE) is a reference in determining standards for nurse competencies in Indonesia. Minister of

Education and Culture Regulation Number 2 of 2020 stated that the exit-exam system obliges nursing students to pass the competency assessment through 60% for academic score and 40% of the

INCE score for requisite (Waliulu & Rumakey, 2022). Competency tests are the basis for determining standards for providing registration and licenses to nursing practices in delivering health services. Efforts to provide health services with patient safety principles are the goal in determining competency standardization so that nurses can provide comprehensive nursing services (Kemenristek Dikti, 2016). Completing professional education reflects the future nurse's role with professional skills to serve a secure and high-quality nursing process (Forsman et al., 2020). However, the number of passing INCE is still a problem in Indonesia because the graduation rate has not yet reached expectations.

The number of students passing the exam gives high scores in the institution's accreditation assessment (Serembus, 2016). The exit exam policy, implemented in 2021, is an acceleration strategy to produce nurse graduates ready to be employed in the workforce, ensuring that graduates have adequate knowledge, skills, and behavior or have reached minimum standards. Data from the Ministry of Research and Technology in 2019 states that nursing students who have not received a competent designation are still in the high range, which has an impact on not being issued a registration certificate, which is a requirement for providing a license for nursing practice (Kemenristek Dikti, 2016). Many nursing program students still take the National Nursing Competency Assessment (INCE) and must meet competency standards. As a result, they do not obtain a license to be able to practice nursing (Naafi'a et al., 2020).

Based on data from the Quality Assurance Directorate, the current phenomenon found that the competency assessment participants that graduate still need to be higher, and the graduation percentage from 2016 to 2019 has decreased. This condition results in an accumulation of students with crack status that accumulates every year (Syapitri & Hutajulu, 2020). According to the Indonesian Ministry of Research and Technology for Higher Education statistics for the last three years, in 2018, 46,570 participants participated in INCE. Of this number, 26,208 people successfully passed (56.28%), while 20,362 participants (43.72%) failed. In 2019, the number of participants increased to

50,911, with 29,240 participants passing (57.43%) and 21,671 (42.57%) failing. However, in 2020, the implementation of INCE period XVI was postponed in July due to the COVID-19 pandemic. The number of participants in 2021 was 16,363, and the graduation rate decreased, with 7,335 participants successfully passing (44.83%) and 9,028 participants (55.17%) failing (Palingrunji et al., 2021).

Previous research uncovered that mental readiness, self-readiness, learning readiness, ability to fully understand science and other external factors were significantly related to passing the INCE (Lestari, Tahir, & Sjattar, 2023). The cultural context of learning is quite interesting to discuss regarding its influence on the success of INCE. The learning culture from the perspective of the success of INCE nurses among Indonesian nursing students is unique to be discussed referring to INCE's achievements, which have yet to reach the target, and the high level of human resources for nursing students in the Indonesian student area.

This situation is similar to the competency assessment process for nurses currently enforced in Indonesia. Several aspects impact the percentage of competent status in the competency assessment. Aspects that notably affect students' capability to pass the competency tests include individual, academic, and cognitive factors (Sears et al., 2015). Several factors influence the success of competency assessment from the perspective of student learning preparation, including motivation, reading skills, note-taking, time management, and critical thinking abilities (Farrell et al., 2010).

The large number of incompetent nursing students in INCE has decreased the number of qualified nursing graduates. This situation affects the healthcare sector in terms of reducing the availability of nurses. This condition causes a shortage of nursing staff that is difficult to fulfill and results in a nursing shortage. The World Health Organization in 2016 appraised that there would be a shortage of 7.6 million nursing personnel worldwide in 2030 (Haas et al., 2020). More competent personnel in the health sector will benefit individuals and communities who need to access health services and can help achieve

Sustainable Development Goals (SDGs) (Naafi'a et al., 2020).

The success of INCE from the perspective of student learning preparation involves factors such as motivation, reading skills, note-taking, time management, and the ability to critique competency test material (Farrell et al., 2010). The nursing competency assessment results focused on the USA, such as the NCLEX, emphasize student guidance, anxiety management, and creating strategies for exam improvement programs. In addition, success in the NCLEX also depends on the contributions of students, teachers, and institutions, usually expressed in three nominal terms (Hyland, 2012).

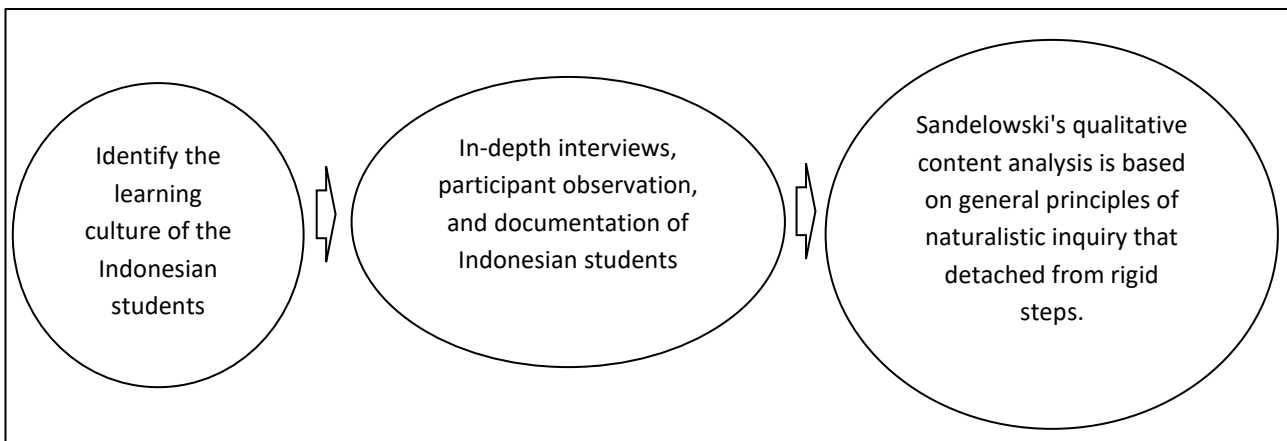
Students learning culture from Indonesian students have unique characteristics in their learning approach. In this case, Sumenep Regency has 126 islands spread out and 48 unpopulated, which is a unique area (Hidayat, Arief & Efendi, 2023). The environmental conditions, activities, and study habits of students from this region face several significant challenges due to the region's geographical location (Hidayat, Arief, Effendi, Hannan, & Huzaimah, 2023). Habits formed in the learning process are not genetic or hereditary but are created through the learning process by

individuals in their social environment. Therefore, this research objective was to qualitatively portray the learning culture of Indonesian nursing students, especially in the context of success in the nurse competency test. This research identifies various problems and assumes that one of the factors that may be the cause of success in nursing competency assessment is the student learning culture, both before and during higher education.

## METHOD

This research combined qualitative and quantitative research (mixed method) by a sequential exploratory design. Sequential explanatory means that this research begins with qualitative research and then quantitative research (Creswell, 2016). Phase I of this research applied a qualitative approach with a descriptive research design. Descriptive qualitative research explains the theme of learning culture, which is the background of a phenomenon in students related to the health sector (Moleong, 2013). This qualitative descriptive research was carried out to describe and explain the problems being researched in depth. This research focuses on a more detailed understanding of an individual, group, or situation. The qualitative research design is arranged as follows:

**Figure 1. The design of qualitative research**



Phase 1 of the research was in the nursing professional study program, which was carried out from May to December 2023. Participants in this research were nursing professional students from the islands of Madura and nursing lecturers at the Faculty of Health Sciences. This research used a non-probability sampling method: snowball sampling. It is a sampling technique where the sample size is initially small and then grows over time (Sugiyono,

2013). The snowball sampling technique was used in this research because it was considered the appropriate method for determining the sample. The steps began with collecting data from key informants and conducting interviews.

The initial step taken in carrying out this research was to select one or two participants as key participants; however, if the data obtained is

considered incomplete, the researchers anticipated other people to complete the data until the data from the participants is complete.

Participants included students and lecturers. Participants were active students from the nursing profession at the Faculty of Health Sciences, Wiraraja University, who met the inclusion criteria: Active students in the 2022/2023 academic year, had never taken academic leave, and came from the islands of Madura. In contrast, the excluded criteria were students who had dropped out. Meanwhile, the nursing lecturer is an active educational staff member in the Nursing Study Program Faculty of Health Sciences, Wiraraja University, with the inclusion criteria: Lecturer with a minimum master's degree, more than five years of teaching experience, and experience as a clinical supervisor for nursing students. In comparison, the exclusion criteria included lecturers on study assignments/permits and non-permanent lecturers.

Data collection began with in-depth interviews using research tools like interview guides, observation sheets, recording equipment, and cameras. Research data was analyzed using a qualitative content analysis approach. Next, data validity tests were carried out, including credibility (internal validity). Data validity used triangulation methods, using several methods or data sources to confirm the findings, a combination of interviews, observation, and documentation. Member checking was done by asking participants to review and comment on findings and data interpretation to ensure accuracy and involve multiple researchers in data collection and analysis to minimize individual bias. Reliability testing used (1) Consistency, namely ensuring that data collection and data analysis procedures were carried out consistently. This can be achieved by using clear guidelines and protocols. (2) Transferability refers to the extent to which research findings can be applied to other contexts or situations. Researchers usually provide a detailed description of the research context so that readers can assess whether the findings can be transferred to other situations. In this research, triangulation of methods and sources was carried out.

The results of phase I research were continued with the preparation of a quantitative questionnaire by

the qualitative data results. The next stage, stage 2 research, involved collecting quantitative data. All nursing professional students of the Faculty of Health Science, Wiraraja University, were the population in this study. The sample was determined purposively, with inclusion criteria as in phase I research and additional criteria, namely having passed the INCE (n=74).

Data collection was carried out using a learning culture questionnaire, which consisted of Learning environment background, learning activities, learning habits, and the success of the INCE. The learning environment background questionnaire included the use of learning facilities and the search strategy for learning resources at the senior high school level, consisting of 12 statement items. The learning activity questionnaire comprised the Kolb Learning Style Inventory, consisting of 22 question items, and learning motivation (8 items), self-confidence (3 items), and self-ability (8 items) questionnaire in facing the Competency Assessment. The third questionnaire is a study habits questionnaire, which encompassed a study methods questionnaire (14 items), concentration (4 items), repeating learning material (4 items), and discussing with friends (3 items). Meanwhile, success in the Competency Assessment was divided into two criteria, namely, first-taker and retaker. Quantitative data analysis used the Structural Equation Model (SEM). This analysis explains the overall relationship among variables in the research. The SEM test results will determine the loading, cross-loading, and composite reliability factors.

## **RESULTS**

The richness of this research lies in the diversity of the actors involved. The survey made it possible to question 13 different profiles of nursing students (Table 1). In this perspective, 200 undergraduate nursing students came from different age groups ranging from 18 to 26 years old. Thus, the predominant age category was between 21-23, representing almost half (43.5%) of all participants. Moreover, the female sex predominated with a percentage of 63% of participants.

### **Phase 1 research Participant Characteristics**

Participants in this research were Indonesian nursing students and nursing lecturers of the Faculty of Health Sciences, Wiraraja University, in the

academic year 2022/2023. The participant's characteristics in this study are demonstrated in Table 1.

**Table 1. The participant's characteristics (n= 9)**

No	Participant's code	Criteria	Sex	Age	Education level
1	NS01	Student	L	24	Bachelor's degree
2	NS02	Student	L	28	Bachelor's degree
3	NS03	Student	L	25	Bachelor's degree
4	NS04	Student	L	27	Bachelor's degree
5	NS05	Student	L	25	Bachelor's degree
6	NS06	Student	P	23	Bachelor's degree
7	DS07	Lecture	P	36	Master's degree
8	DS08	Lecture	P	39	Master's degree
9	DS09	Lecture	L	41	Master's degree

Table 1 details nine participants in this first phase of research, consisting of seven nursing students from the Indonesian student, with the highest age being 28 years and the lowest age being 23 years, and three nursing lecturers who were active as teaching staff at the Faculty of Health Sciences, Wiraraja University.

### Research themes

#### Theme 1: The background of the learning environment

This theme provides an overview of the elements of learning culture in the form of 1). Facilities utilization, and 2). Strategy for finding learning resources.

##### Sub-Theme 1.1: The Facilities Utilization

Based on in-depth interview results, the learning environment background based on learning facilities are as follows:

"There is lighting; it is just on a rotational basis (electricity blackout) ... from the four districts, every two districts take turns turning the electricity on and off" (NS01).

"There is no phone signal, so it is just cell phones. And there is no internet connection, so we usually use the telephone, so we use books to study" (NS02).

"Thank God I bought a laptop; everything is fulfilled, but learning about the internet is difficult" (NS06).

The Indonesian nursing students stated that they needed help using internet access, and laptop facilities were rare; using facilities for learning was not practical for Indonesian nursing students.

##### Sub-Theme 1.2: Strategy for finding learning resources

The following are statements from Indonesian nursing students regarding the search for resources in daily study on the island.

"..... no sir, because the signal is not good here" (NS06).

"There is no library; when I have the task of looking for references, there is no one" (NS04).

The geographic condition of the islands has limited facilities, internet access, and inadequate facilities, impacting the need for more learning facilities for students. The results of interviews with participants mainly stated that it was difficult to find references for learning materials except for books that had been provided or existed previously.

##### Theme 2: Learning activity

This theme provides an overview of the cultural learning activities of Indonesian students in the form of 1). Learning style, 2). Learning motivation, 3). Self-confidence, and 4). Self-ability.

### **Sub-Theme 2.1: Learning style**

The results of in-depth interviews stated that Indonesian nursing students' daily learning activities based on learning styles are as follows:

"Conditioning, sir, when I study to increase my insight, I usually study alone, sir, if I need other people's opinions, then I discuss or share with a group" (NS01).

"I prefer studying in groups because I can share" (NS06).

Most nursing students from island areas stated that they preferred studying in groups by discussing, listening, and exchanging opinions.

### **Sub-Theme 2.2: Motivation to learn**

The results of in-depth interviews regarding Indonesian students' daily learning activities based on learning motivation are as follows:

"I am very supported by my family, with facilities such as a laptop, cellphone, pocket money" (NS03).

"I was more diligent in studying when I was in the profession because I was practicing while I was doing it" (NS05).

The motivation to study for nursing students from the islands received much support from their families and parents, both moral and material support; students also stated that some of them were more motivated to study during their professional nursing education because the students learned while practicing patient care directly in the practice area.

### **Sub-Theme 2.3: Confidence**

The results of the in-depth interviews stated the students' self-confidence in answering the nurse's competency test questions as follows:

"I answered rather calmly because I diligently studied using SINERSI, and the INCE questions were easier than the SINERSI I studied" (NS06).

"At first, I had mixed feelings, stressed, confused because I was afraid I would not pass, but when I answered the INCE questions, I was more optimistic because I had prepared beforehand" (NS05).

Nursing students who came from the islands felt they had strong self-confidence when answering the

Nurse Competency Test questions because they already had the capital to study diligently beforehand. Thus, they are optimistic that they can answer the Competency Test questions.

### **Sub-Theme 2.4: Self-ability**

The results of in-depth interviews regarding students' abilities in answering nurse competency test questions are as follows:

"I learned to use scamming and scanning techniques. So, I read the main question and looked for the answer, sir. "It can automatically answer; sometimes there are cheating questions like that, sir, so just be sure, and I will be able to answer" (NS01).

"They could answer the INCE questions because they had mastered the practice of SINERSI questions" (DS09).

The nursing student's ability to answer INCE questions needed good preparation, including taking part in tutoring on questions, competency test tryouts, and INCE readiness seminars.

### **Theme 3: Study habits**

This theme provides an overview of the study habits of Indonesian nursing students in the form of 1). Learning methods, 2). Study concentration, and 3). Repeat learning material.

#### **Sub-Tema 3.1: Study method**

"I study using online methods through SINERSI and YouTube. I use all of them, while offline, I study INCE question books, competency test seminars, and national and local INCE tryouts" (NS05).

"Learning methods for INCE preparation for nursing students are INCE preparation seminars, online learning using SINERSI, which is facilitated through AIPNI, national and local tryouts, and study guidance that we provide to students" (DS08).

The study method for Indonesian nursing students as a preparation effort for the national Competency Assessment was through four learning stages, including 1). Participating in a seminar on tips for success in taking the competency test, which presenters from East Java Province filled. 2). Joining online learning through the SINERSI Application from the Association of Indonesian Nurse Education Center (AINEC), 3). Attending National and local

INCE Tryouts, and 4). Doing group study tutoring facilitated by lecturers from the Faculty of Health Sciences, Wiraraja University.

### Sub-Theme 3.2: Study Concentration

The results of in-depth interviews stated that students' learning concentration in answering nurse competency test questions is as follows:

"I study more at night; in the morning, I practice at the hospital and vice versa" (NS05).

"I concentrate more on studying INCE questions while studying at the clinic" (NS05).

The results of interviews with nursing students found that most students concentrated more on studying while applying cases to patients by practicing in the hospital.

### Sub-Theme 3.3: Repeat learning material

The results of in-depth interviews stated how to repeat learning materials in studying nursing competency test questions as follows:

"Repeated, like the questions that were given yesterday are repeated" (DS08)

"I study by repeating from 1 question to 20, read again, read after morning prayers, and in the morning, I was ready to go to practice" (NS05)

Nursing students used the method of studying nursing student competency test questions by repeatedly studying the questions until the students understood the flow of the questions and the meaning of each answer choice. As a result, they became optimistic in preparation for the Competency test.

### Phase 2 research

This second research stage was carried out using quantitative methods on several nursing students from the Faculty of Health Sciences, Wiraraja University, for the 2022/2023 academic year (n=74) who had passed the Nurse competency test. The participants' characteristics as presented in Table 2.

**Table 2. The characteristics of the participants (n= 74)**

Demographic data	N	Percentage (%)
<b>Gender</b>		
Man	24	48
Woman	50	52
<b>Age (year)</b>		
Late adolescent (17 - 25)	47	64
Early Adult (26 - 35)	16	22
Late Adult (36 - 45)	9	12
Early Older (46 - 55)	2	3
<b>Educational status</b>		
Senior high school	43	58
Diploma 3	31	42
<b>Employment status</b>		
Unemployed	35	47
Employed	39	53
<b>Competency assessment of graduate status</b>		
Graduated First Taker	59	80
Graduated Retaker	15	20

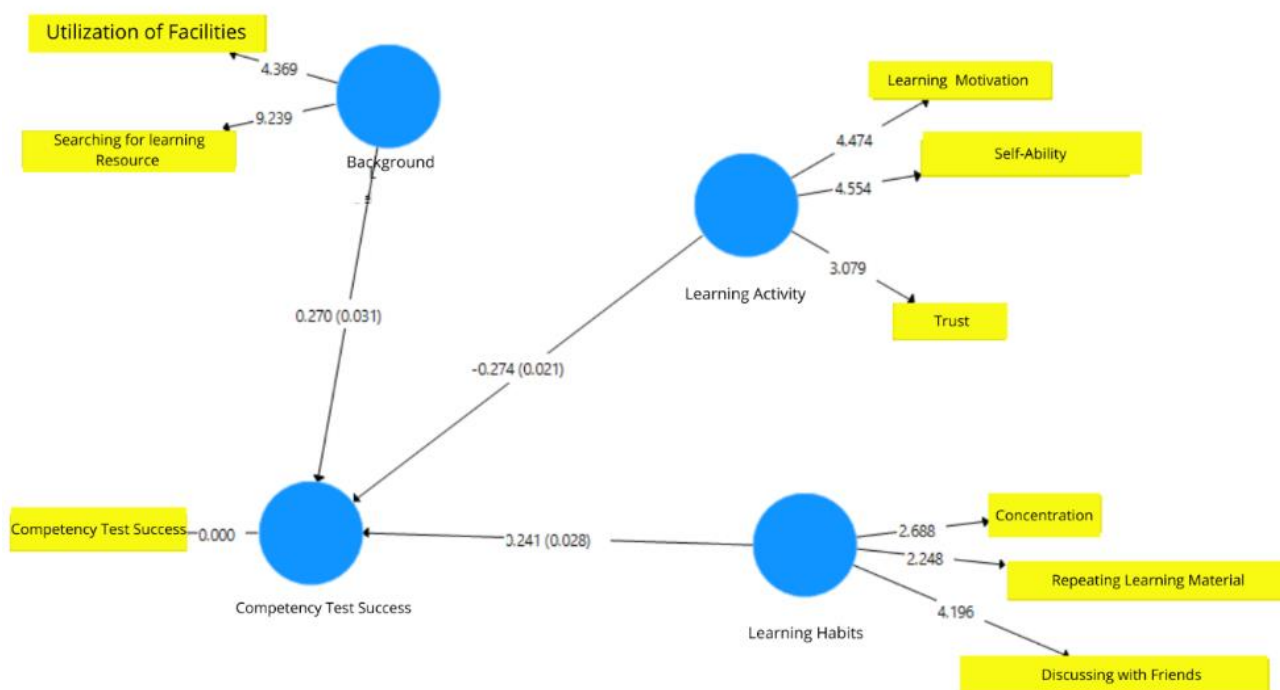
The results of this research on participant characteristics (Table 2) revealed that the majority of participants were female (52%), were in their late teens (64%), had previous education in SMA/SMK/equivalent (58%), and had working status

(53%). Most of INCE's graduation statuses were first takers (80%).

Based on SEM analysis, the output of the concurrent validity test found that three indicators had factor loading values below 0.5, namely learning styles and

learning methods. These results indicate that the learning style and learning methods indicators could not justify the construct, so these two indicators were candidate factors to be discarded. The construct variable reliability test was then carried out until a reliable indicator was found.

The composite reliability results demonstrated that the indicator block measured the construct variables of searching for learning resources, utilization of facilities, learning motivation, self-ability, self-confidence, concentration, repeating learning material, and discussing with friends, which obtained a value of > 0.6, so the construct variable was reliable.



**Figure 2. T-value and p-value model fit**

The results of the significance test in the model analysis (Inner Model) were carried out on indicators that have been proven reliable, namely eight indicators (Figure 1). The t-table value was >1.96, and the p-value was ≤0.05, indicating that these variables influenced the success of INCE. The t-table values for each factor that influenced the success of INCE were searching for learning resources (9.239), utilization of facilities (4.369), motivation to learn (4.474), self-ability (4.554), self-confidence (3.079), concentration (2.688), repeating learning material (2,248), and discussing with friends (4,196). The results of the significance test showed that the three variables, learning environment background (p=0.031), learning activities (p=0.021), and study habits (0.028), significantly affected the success of INCE.

**DISCUSSION**

Learning culture is related to student culture in the form of perceptions/views, customs, and habits. Culture emerges as a result of the habits of a group of people which they view as correct. Culture is acquired through a learning process by a person or group of people in their environment, which can develop into a learning culture, a learning culture that can influence achievement. The success of the INCE is influenced by various factors.

This research discusses learning culture as a factor that influences the success of INCE. Qualitatively, three themes were obtained. First, the use of internet services that are closely related to the learning and guidance process carried out by the



nursing professional study program included working on modules, full-length tests, and final tests with the SINERSI Mobile application, where in the process of working, students must be connected to an internet signal using cellphone or laptop (Simamora et al., 2022). Most of the internet signals have been an obstacle for students when taking tests on the SINERSI mobile application because quite a few of them, when working on questions, sometimes experienced problems when they wanted to send answers so that the answers they have filled in are not recorded. Students must repeat themselves to answer the questions. Internet use is also closely related to online guidance by supervisors via the ZOOM application (Mpungose, 2023). Many Indonesian students need a better internet connection, so they can be more optimal in following INCE's guidance.

Another problem is the limited electricity supply in several places, which affects the battery power of laptops and cellphones, where most students use electronic media in the learning process and guidance on INCE questions.

Moreover, the environment is where students acquire knowledge, function, and develop. The environment includes school, home, classroom, peers, and individual development, including social, psychological, and physical needs (Akem, 2008). Most experts argue that the learning environment influences students' academic performance, including exam performance (Ajayi et al., 2010; Olorundare, 2011). Student performance or academic achievement can be further enhanced by encouraging a supportive and healthy environment both at home and school. Several protective factors included parental care and support at home, positive relationships between parents and teachers, a protective and supportive learning environment at home, and a good learning environment at school positively influencing the children's educational achievements during the school period (Epstein & Sheldon, 2006; Gutman & Midgley, 2000; Henderson & Mapp, 2002). The learning environment in the home is predominantly essential for the child's educational accomplishment and social advancement in the learning process at each stage. The school learning environment impacts a child's learning goals and achievement. The school learning environment directly influences the students' learning, engagement in receiving

lessons, sense of well-being, motivational level, belonging, and interaction with the teacher. For instance, a learning environment with educational materials and encouraging physical facilities will likely benefit learning (Mallick, 2016). Schools' physical facilities availability and utilization considerably impact student performance and outcomes. School facilities are essential for students to learn; inappropriate environments cause ineffective learning environments (Amanullah & Adeeb, 2014).

The research results revealed that the Indonesian nursing students' learning motivation received much support from their families and parents, both moral and material. Most students stated that they were motivated to learn during their professional nursing education because students could learn and practice simultaneously with the patients directly in the clinical practice area. Students were enthusiastic about self-confidence and ability because they attended various training sessions, workshops, and tryouts so they could confidently answer the INCE questions. They already have the capital to study diligently beforehand and are optimistic about answering the INCE's questions. Several studies found a relationship between motivation and the level of passing the Nurse competency test (Khasanah et al., 2017). Previous research conducted in the United States from a nursing higher education institution also reported that financial difficulties and limited study time for the competency test impacted them, so they had to wait 4 to 6 months after graduating to complete the test (Carr, 2011). Factors such as gender, competency test completion time, ethnicity, anxiety, critical thinking skills, and course grades were all investigated as reasons for first-time test failure.

Additionally, motivation is directly linked to the learning process. Motivation drives students to increase interest, desire, and enthusiasm in learning and show perseverance to achieve specific goals. Motivation plays a critical role in deciding the quality of learning outcomes obtained by students. Previous research found a significant relationship between the learning process motivation level and the achievement level completed by students (Widyastuti & Widodo, 2018). Therefore, increasing motivation to learn is essential to improve learning outcomes. This situation can be achieved by optimizing the application of learning principles,

magnifying dynamic elements in the teaching-learning process, optimizing the use of experience and capacity possessed by students, and developing goals and aspirations in the learning process. Some factors precede motivation, such as academic, personal, family, social, and professional factors, which provoke activities based on a goal and induce the inception of results, i.e., academic achievement. Individuals with distinct personalities have various motivations and precedence. In addition, a person's motivation varies according to circumstances. Motivation can be induced both extrinsically and intrinsically (Ryan & Deci, 2000). Internally motivated students have the motivation to study, work, and succeed (Ryan & Deci, 2000).

Many authors emphasize internal motivation because of a higher tendency to overcome academic challenges, a more powerful self-image, greater creativity, and better academic performance (Khalaila, 2015; Ryan & Deci, 2000). Additionally, excessive dependence on external motivation (e.g., grades) risks students' engagement and mortality (Ryan & Deci, 2000). One such primary characteristic of the academic motivation concept based on literature reviews and student interviews is that motivation is the driver and director of a person's academic performance. Many researchers adopted these attributes to provide definitions of the motivation concept and almost have an agreement concerning this description. Motivation leads behavior, directs the behavior in a specific direction, and increases effectiveness.

Many studies define motivation as the key to learning (Abootorabi, 2011; Aktaş & Karabulut, 2016; Hassankhani et al., 2015; Kosgeroglu et al., 2009) and student educational success (Nilsson & Warrén Stomberg, 2008; Rose, 2011; Shakurnia et al., 2015). The social context of the learning environment affects the students' motivation (Ryan & Deci, 2000). For example, the approach to framing instruction can impact the student's learning process and subsequent skills (Vansteenkiste et al., 2004). Therefore, dissimilarities in learning environments affect students' motivation and self-regulated learning (SRL).

Based on research results, Indonesian nursing students used several learning strategies to pass the

INCE. The strategies used included attending the workshops, participating in the SINERSI mobile program, participating in national tryouts, national and local INCE tryouts, and group study guidance facilitated by the Faculty of Health Science, Wiraraja University Nurse lecturers. In line with previous research, INCE graduation correlates with the level of readiness of the examinee (Hartina et al., 2018). The better the preparation performed by the test taker, the higher the possibility of being competent in the INCE. The exam readiness in this study encompassed students' understanding of the competency test structure, including the number and type of questions evaluated and strategies for answering questions based on the material taught to provide a good understanding of the competency test material (Nugroho et al., 2016). Several studies have shown that a lack of knowledge regarding the INCE concept, especially the INCE structure or blueprint, is one of the main obstacles for nursing graduates who fail the INCE (Kholifah & Kusumawati, 2016). Understanding the INCE blueprint is important for INCE participants because it provides an overview of the scope of the material to be tested, which can become a reference in the learning process to focus on more specific and relevant areas (Hartina et al., 2018).

Several studies have also reported that tutoring is associated with an increased rate of passing the first competency test (Almasloukh et al., 2023). Case-based learning increases students' productive discussions, develops critical thinking, and increases mastery of standardized exam content (George & Dellasega, 2011; Kinyon et al., 2021). It is stated that all types of case studies (i.e., clinical, integrative, and open scenarios) can provide experience in conducting clinical assessments because they "allow students to connect classroom learning to clinical practice."

Continuous exposure to competency test questions helps students "think like a nurse" in the classroom and clinical environment (AlShammari et al., 2018). Courses that provide competency testing practice have proven to be an essential strategy for preparing students to succeed on their first competency exam. Simulation has also been shown to be an effective educational strategy by improving students' critical thinking, clinical judgment,

confidence in the clinical environment, and readiness for the RN role (Almasloukh et al., 2023; Brackney et al., 2017). Various educational strategies to prepare nursing students for the nurse competency test have been described in the literature (Almasloukh et al., 2023), which states that the development of several comprehensive teaching strategies will better help students face the nurse competency test and improve their critical thinking skills rather than just focusing on a single teaching strategy."

An effective educator must ensure that students learn well and motivate them to learn (Garwood, 2015). Likewise, self-determination motivation theory is likely positively correlated with the likelihood of passing a competency test. Self-determination theory distinguishes between intrinsic and extrinsic motivation, such as personal interests and values. From the results of a scoping review (n=25), it was stated that the psychological and social dimensions influenced the quality of life of students facing the competency test. Active learning is a strategy that is often found as an aspect related to strategies for dealing with INCE.

Providing intensive supervision before INCE to students is essential. The guidance process provides students with tips and tricks for solving cases that might arise in exam questions. Additionally, intensive supervision also provides insight into how to identify and apply ways to find relevant solutions for each material tested. Understanding various solution search patterns is crucial for students because each material that appears in INCE has a different approach. Improving students' abilities after intensive supervision shows the importance of guiding the national competency assessment. In line with the mandate conveyed by AIPNI, every nursing educational institution is expected to supervise students to prepare their abilities to face competency assessments, either through practice questions or other supervision procedures in preparation for INCE.

Researchers assume that learning culture is seen as a knowledge system that functions as a guide to life that is shared collectively. Learning culture is used to understand and interpret the environment and experiences. Learning culture is seen as a process of human adaptation to the environment, both in the form of the physical environment and the social

environment. Thus, a good learning culture contains determination, regularity in completing assignments and eliminating stimuli that will interfere with learning concentration. All of this will influence the graduation of nursing students in facing.

## CONCLUSION

The Indonesian student's learning culture model from the perspective of the success of the Nurse Competency Test through a qualitative approach explains the background conditions of the learning environment, describing the use of facilities and search for learning resources, learning activities including learning styles, learning motivation and self-confidence and abilities, learning habits by describing methods studying, concentrating, and repeating learning material. Quantitative test results revealed a relationship between background, learning activities, and study habits and the success of the competency test for Indonesian nursing students, but learning style was found not to be reliable as a factor that could explain the relationship with success in the Competency Test (VL=0.353).

The learning culture of Indonesian students from the perspective of success in the INCE was formed starting from the pre-graduate level of education and continuing at the higher and professional levels. Both internal and external motivations influenced the learning culture of Indonesian nursing students. Research from other perspectives related to the learning culture of nursing students is thus needed in the process of self-development and increasing the professionalism of nurses in Indonesia.

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