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## **The role of the environment in enhancing or disrupting reading by students nurses of Fako, South West Region, Cameroon**

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### **Abstract**

The education and training of nurses requires both theoretical and practical teaching and learning. The forms of studying to achieve better learning include reading. Reading takes place in various environments which may good be good or problematic. But the reading environment has a direct influence on reading behaviour and consequently on output. The reading environment influences the quality and quantity of reading, which is reading to learn. As

opines, the reading environment is fundamental to effective studying [1]. The choice of the reading environment today is usually seen by many as not being able to produce any good results. Based on these, a survey on preferred reading environments, reasons for the choices, perceived impact of the choices and what is termed a conducive reading environment was conducted on student nurses in Fako Division, Cameroon. The study design was a descriptive cross sectional survey of students from various institutions using a questionnaire as the instrument for data collection and the data were analysed using simple percentages. Results showed that most students will prefer to read at home and particularly in rooms. They were however not interrogated on the non use of libraries which are known worldwide as better reading environments. The results could be useful in encouraging student nurses on the use of libraries, and the use of library be taught during the first days of admission into the nursing establishment.

**Keywords:** Student nurses, studying, reading, reading environment, preferences

## **Introduction**

It has often been said that it is the responsibility of the school authority to provide and ensure a non-threatening environment for both teachers and students in school to enhance learning. However, creating a conducive environment to read to learn, depends on the student's determination and assertiveness. Some reading environments commonly used by students to read include: the classroom, the library and the confines of their rooms in their homes.

A reading environment is not just a space where a student adopts a posture to read, but includes the conditions under which the student is subjected to [2]. It involves both the conditions of the physical environment, the psychological as well as the emotional state of the student. The physical environment is influenced by factors such as:

**Lighting:** The light in the reading area should not be too bright or dull. It should be that which one can read with no strain so as to maximize reading efficiency.

**Ventilation:** Plenty of fresh air is very good to keep the reader alert and balanced. Avoid draught. A stuffy room puts one to sleep and may sometimes cause headaches and dizziness. The room should not also be too warm, for the student is more likely to go to sleep.

**Reading position:** A comfortable position is good for reading. A too comfortable position will rather lure the student to sleep, while a too uncomfortable position may create strain, causing stress and subsequently fatigue.

Other factors include distractions associated with sight and hearing. Reading alongside distractions such as music or a radio causes the reader's attention or concentration to wane off. Noise is a nuisance as well as a stressor and causes a lot of distraction and annoyance. Sitting by an open window or door will cause distraction every time there is, or seems to be a movement. Reading with a television on, creates the worst distraction [2]. According to the author, it is even more so when one is reading to learn and employs reading techniques.

A technique is an art and a special way of doing things especially one in which one has to learn special skills. Reading is a skill that needs to be learnt using identified techniques as devised first by Francis P. Robinson in 1946 as SQR [3] and modified subsequently as SQR Ded [4]. Reading techniques according to Petty [5] follows the SQR according to Ded [6] thus;

**S** = Survey: First skim-read through the chapter content and organisation to develop a mental framework.

**Q** = Question: As you read, pause and ask questions on each heading, ask what is being covered and ask yourself what you want. Is it useful to you in relation to your objective(s)? Note words and concepts not understood and find out their meanings. It is important here to read with dictionaries handy. Such dictionaries could include; advanced learner's dictionary, anatomy and physiology dictionary, nursing dictionary all depending on what is related.

**R1** = Read: Read the text with an intention of understanding and answering questions you formulated. Connect the reading to points highlighted and relate to your reaction, based on your world knowledge or personal knowledge. Read purposefully, intensively or keenly in a directed

manner and quietly too. Re-read and re-read.

**R2** = Record or write down what you have read into short notes per headings or paragraphs. Recording which is writing makes you to be actively involved and alert Hall [7].

**R3** = Recite: This is explaining aloud what you have read and understood. Reciting gives you a feedback or assessment of what you have read. If you cannot recite well, then you have not understood. Give a quick glance or you re-read until you can successfully recite a number of times to your satisfaction. Reciting is active learning and it increases your level of concentration. It enables the storage of information in your brain for subsequent retrieval easier. You can recite to yourself or explain to your friend [8].

**R4** = Review: This is summarising what you have read and learnt. It enables you to receive or recall information from memory and to keep it fresh. It also enables you to easily associate new knowledge to old or previous knowledge (schema) and thus relating your previous knowledge to new information and so embellishing the knowledge and making it part of your own framework of ideas, generating your own new knowledge. This further supports the fact that purposeful intentional reading generates ideas [9].

Students, especially nursing students should be agentic readers and learners. This is reading and learning to bring positive change and professional innovations. They are to be agents of positive change and professional growth.

Simply, reading is teaching without talking or noiseless teaching and noiseless learning [5]. In other words, noiseless self teaching. This is silent reading which [10] enhances understanding. Reading is an active conscious process and understanding what you read is as much what is already in your brain as what is in the text, that is, integrating the reading process into larger theories. The purpose of reading, according to Anderson et al [5], is the construction of meaning, understanding actively and responding to what is read. Reading therefore is the process of constructing meaning through the dynamic interaction of the reader's previous knowledge, the information found in the text and the context of the reading situation. Thus giving reading the importance it deserves in the academic world. Vacca, Vacca & Gove [11].

Once more assert this by viewing reading as a series of things done in order to translate text into meaning through making use of prior knowledge. They further assert that this is initiated by making predictions (educated guesses) about meaning and at the same time decoding graphic; this, they call the interactive models of reading. This further strengthens the fact that, reading excites or ignites mental images that are directly or indirectly related to the text.

The art of reading is initiated by the reader's prior knowledge and experiences as well as the ability to decode graphics and to decipher the text for comprehension, the purpose and the intention.

Some situations where reading is not seen as a method of learning is when the student is unable to decode and decipher such text. One of the teacher's responsibilities is to assist the students to develop skills to that effect. Sometimes, when reading a difficult text, the reader usually out of experience in his reading capabilities can make "educated guesses" which often fit in. Another situation occurs when the unaware students often mistakenly believe that they are reading when they are actually engaged in mindless reading and consequently zero processing [12].

Stronger analytical thinking skills have been built in people through reading. Critical thinking skills are a form of intelligence taught and developed through reading (Lapman & Sternburg), as cited by Ornstein & Levin [13]. These skills, they assert, include understanding concept generalisation, cause-effect relationship analogies, whole part connections and principles of applications to applications to real life situations. Case based learning which is inquiry based learning, is grounded on classroom knowledge acquisition acquired through reading and other learning methods. Reading improves focus on concentration especially if you can understand what you read (metacognition). It is even more so when it is done in a conducive environment void of noise.

### **Problem statement**

Effective nursing practice for better patient outcome entails remembering facts and augmenting the facts. This is easily achieved when student nurses read and choose better reading environments. Reading is central in which the students read notes given in class, and other relevant material from various sources even after the training period. During reading, much subject matter is remembered and new information is registered which may be used in class to ask questions for clarification and later in life translated into practice. To read, retain and remember entails the use of a good reading environment. The preferred environment for reading, reasons for reading, the impact of the environment on reading and the conduciveness and effectiveness of the reading may be unknown to the student nurse, and this underlined the importance of this study.

### **Research Questions**

- 1 What are the preferred reading environments by students of this study site?
- 2 What are the reasons for the choices of the reading environments preferred?
- 3 What in their opinion is the impact of the reading environment on studying?
- 4 What in their opinion is a conducive environment and effective reading?

### **Specific objectives**

- 1 To identify the preferred reading environments by students of this study site.
- 2 To assess reasons for the choices of the reading environments preferred,
- 3 To assess the opinion of student nurses on the impact of the reading environment on studying.
- 4 To assess the opinion student nurses on what is a conducive environment and effective reading.

### **Materials and methods**

The research design used was the descriptive cross sectional survey (non-experimental) as it examined and described the reading environments used by students nurse in training. All nursing schools authorized by the Minister of Public Health according to Decision No D13.316/PR/MPH/CAB- authorising public and private health personnel training schools,

Yaounde, 9<sup>th</sup> May 2014 (www.minsante.cm/www.s), in Fako division which include Saint Francis Schools of Nursing and Midwifery, Buea; State Registered Nursing School Limbe; Maflekumen State Registered Nursing School, Tiko and Redemption State Registered Nursing school Muyuka. Fako division begins from the sea (Atlantic ocean) level at Limbe right up to the foot of Mount Fako, the highest mountain in west Africa with a height of 4100 meters above sea level.

The targeted population was student nurses in nursing schools authorised by the minister of public health in Fako division, making a total of 411 students. A multi-stage sampling technique was used (using the cluster sampling method and simple random sampling technique). The four nursing schools in Fako division are all dispersed over the four sub-divisions which make up the division. They included: Limbe State Registered Nursing School, Maflekumen State Registered Nursing School Tiko, St. Francis School of Nursing and Midwifery Bokoko, Buea and Redemption State Registered Nursing Muyuka.

Each school formed a cluster and students were selected from each school using the simple random sampling. Fifty small ballot papers written 'yes' therein and the rest written 'no', were twisted and presented, and those who met the inclusion criteria and consenting students were allowed to randomly pick a ballot paper each. Those who picked yes were administered the questionnaire to fill. The same process was done in all the four schools to get the sample size of 200 students obtained through a sample size calculation.

### **Calculation of Sample size**

The target population is a finite one and is made up of 411 students. Using the sample size calculation formula below,

$$N = \frac{4(Z_{crit})^2 P(1 - P)}{D^2}$$

**Table I: Showing Nursing Schools in Fako Division & Student Enrolment**

S/N	Name of school	Sub division found	Number of students
1	<b>Limbe State Registered Nursing School</b>	Limbe sub division	153
2	<b>Maflekumen State Registered Nursing School Tiko</b>	Tiko sub division	67
3	<b>St Francis School of Nursing and Midwivery Bokoko, Buea</b>	Buea sub division	111
4	<b>Redemption State Registered Nursing School Muyuka</b>	Muyuka sub division	80

N is the sample size, Zcrit is the value the Z distribution assumed at the 95% confidence limit which was 1.96 and D is the width of the expected confidence limit. Where P was the pre-study estimate.

P was assumed to be 50% (0.5) since the study was a preliminary one.

D was taken to be 10%, that is the width of the confidence interval (CI) is 45-55 giving D to be 10%.

Substituting this information in the above equation gave the sample size, N to be:

$$N = \frac{4(1.96)^2 * 0.5(1 - 0.5)}{(0.1)^2}$$

$$N = 384$$

Since the target population was a finite one, we used the finite population correction



formula to get the sample size for a finite population for the administration of the questionnaire.

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$
$$n = \frac{384}{1 + \left(\frac{384}{411}\right)}$$

n=198. This was approximated to 200

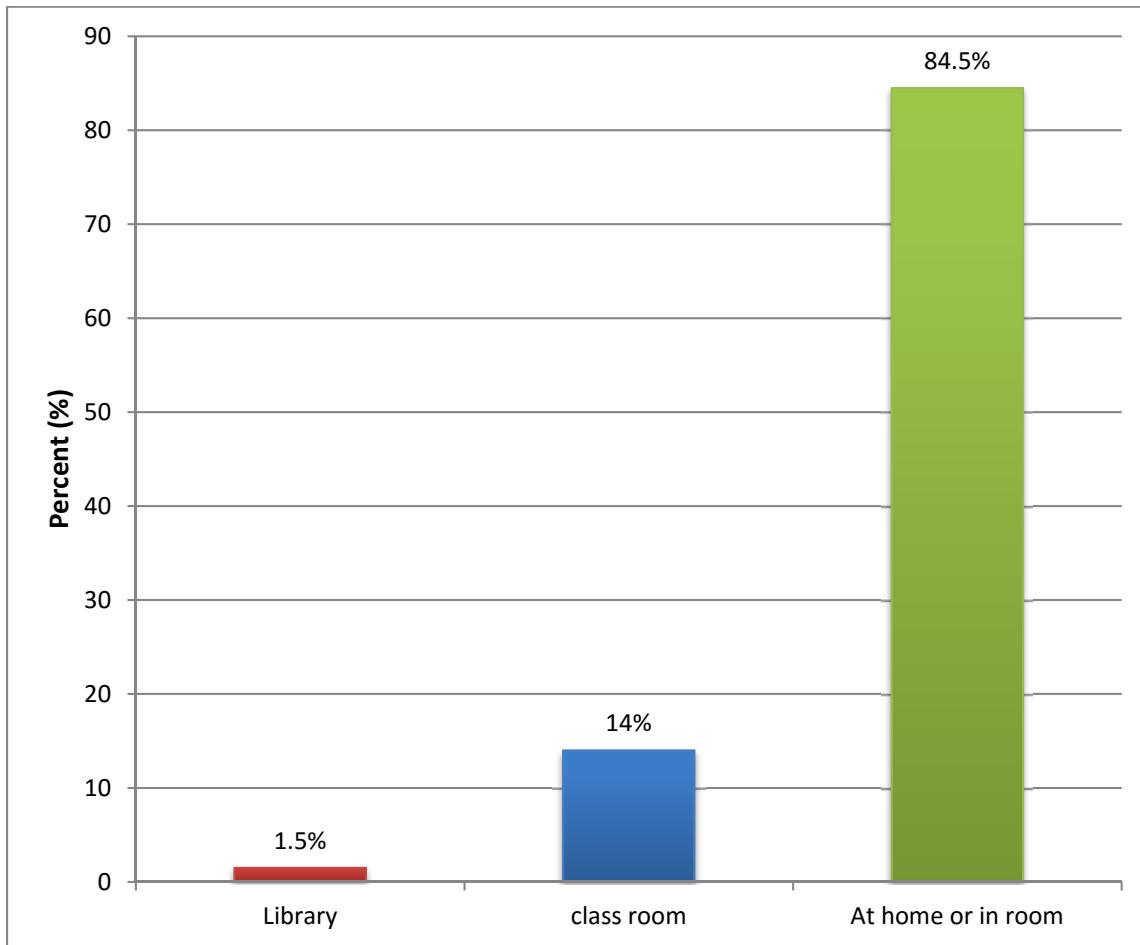
The questionnaire for this study consisted of structured and unstructured questions which were both open-ended and close-ended. The wordage was very simple, avoiding jargon or complicated words. Questions were also non ambiguous, non biased and were not doubled barreled or presumptuous.

After obtaining ethical approval from the Faculty of Health Sciences Institutional Review Board, an authorization from the Faculty of Health Sciences to carry out research and administrative clearances from the Directors of state registered nursing schools in Fako, the questionnaire was pretested (pilot study) and corrections made accordingly before administration. At the end of each day, the number of consent forms were counted and made sure it corresponded to the number of questionnaires. The questionnaires were then checked, validated and then stored for subsequent use for data entering. For the data collection process, questionnaires were administered to the students who were expected to answer the questions averagely within 10 minutes. Study participants were seen during their break and free periods so that it did not interfere with their studies. Before administration, a brief purpose of the research was explained to the students before they took part in the study so that they understood the goal of the study. Permission was sought from each school administration before the questionnaire was administered to the students.

## **Results**

The results have been presented following the research questions and objectives which

both address preferred reading environment, reasons for the choice of environment, impact of the environment and conduciveness and effectiveness. Participants were asked where they usually read. As a response, just 1.5 % said they read in the library while 84.5% read at home in their rooms (fig 1).



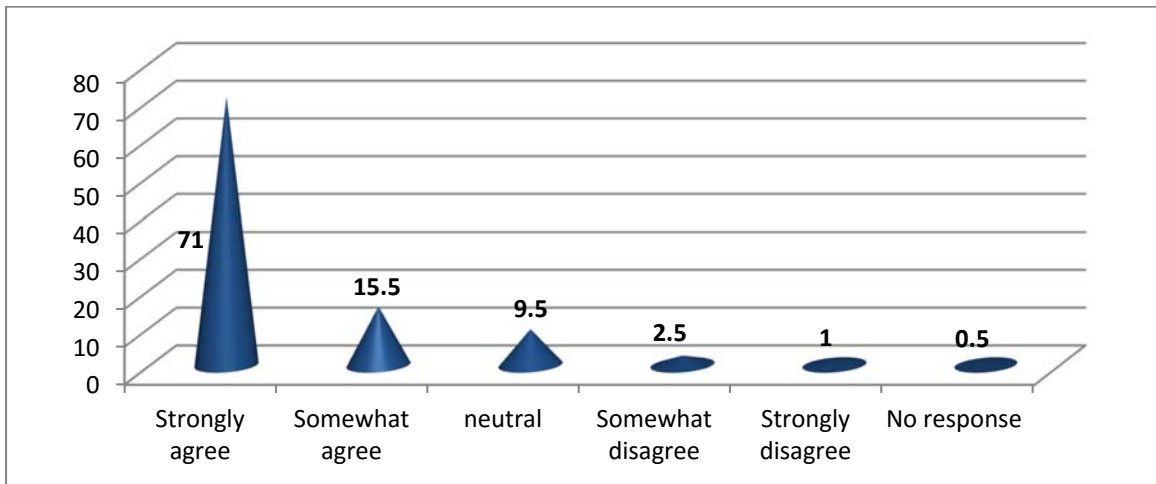
**Figure 1: Distribution of respondents by preferred reading environments**

The reasons for the choices were provided by participants as: whenever an opportunity presents, quiet and conducive environment, other areas not being conducive, depending on the state of the mind among others as below (table 2)

**Table 2: Distribution of respondents by reasons for using various sites**

Various reasons for using various sites to read	Frequency	Percent (%)
Whenever an opportunity presents	3	1.5
Quiet and conducive environment	191	95.5
Other areas are not conducive	1	0.5
Depends on the state of mind	1	0.5
No response	4	2.0
<b>Total</b>	<b>200</b>	<b>100</b>

The impact was assessed by asking respondents to state how much they agree statement that “the reading environment affects the effectiveness of studying”. The responses were given as strongly agree to strongly disagree as shown below (fig 2)



**Figure 2: Distribution of respondents by impact of environment on reading**

As observed above, 71% of all respondents strongly agree that the reading environment affects the effectiveness of reading.

Another majority goes further to claim they strongly agree with the fact that a conducive environment makes reading more effective as a learning method. Just one respondents, representing 0.5% disagreed with the assertion (table 3).

**Table 3: Distribution of respondents by conducive environment and effectiveness of reading**

<b>The more conducive an environment is, the more effective reading becomes as a learning method</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	158	79.0%
Somewhat agree	28	14.0%
Neutral	10	5.0%
Somewhat disagree	0	0.0%
Strongly disagree	1	0.5
No response	3	1.5

### **Discussion**

When students were asked where they usually read, the response (fig 1) was that just (1.5%) three students used the library. Environment has a significant impact as expressed by 15 (79%) who strongly agree to this assertion. A study carried out in Saudi Arabia portrays that most libraries in developing countries are ill-equipped [14]. This is true as most of the libraries in our nursing schools are a single room having little space with a few old books. The libraries cannot accommodate even a handful of students at a time for any meaningful reading. About 14.5% say they read in the classroom. Reading in the classroom especially when this is not controlled is not good for any intentional reading as students constantly move in and out of the classroom, some discussing while others are making or answering phone calls. A majority of

84.5% preferred to read at home in the confines of their rooms because as they say, it is quiet and conducive. Reading is a solitary activity best done in silence without interrupting for best results. Understanding is best achieved when reading is done in a silent calm environment [15,16,17] and such reading is natural reading. Research shows that students or readers who read silently in a calm conducive environment understood more because reading (though an active process) entails, thinking and understanding for cognitive processing. This is in line with what the students said that they understand more when the reading is done in a conducive environment. This is also in concordance with other authors [18]) that there is an enduring opinion that students who read in a noiseless environment comprehend better.

The 71% of the respondents agreed that the reading environment affects the effectiveness of reading. This is in accordance with [17,19,20] who both acknowledge that a student's environment for reading has a direct effect on his/her ability to concentrate.

### **Conclusion**

Majority of the students do acknowledge the importance of reading as a learning method. Some read for personal knowledge acquisition and capacity building, others read because they want to maximize any reading and learning opportunities, others for self-concept and others read to be assertive. These are all positive reasons for reading which could be harnessed and encouraged in nursing schools.

Most students read in their homes in the confines of their rooms because it is conducive and reading is a solitary activity. It is therefore suggested that libraries should be built in these schools so that students can read where there are more text books and internet services and other resources free of charge.

It is clear from the students that a great number of the students do not know the SQ3R<sup>4</sup> reading technique and therefore, do not use the reading technique to read to learn. Reading as any other academic activity has its challenges. Some of these challenges are from the institutions,

some from the students and others from the environment.

In conclusion, orientation should be given to students regarding their responsibilities and expectations each time school resumes. Libraries, students' counseling services, restaurant services and health facilities should be made available at state subsidized rates.

Validating theory in nursing practice and linking nursing theory to evidence-based nursing practice are based on how knowledgeable a nurse is. The more he/she reads the more knowledgeable and professional she/he becomes. The quality and quantity of knowledge possessed by the nurse is directly proportional to the type of services rendered.

### **Recommendations**

Though a majority of the students acknowledged that reading as a learning method is important, a good of the students, still do not read to learn, that is, to acquire knowledge but to pass exams or tests. It is important that all the students should know that being in a professional institution such as nursing, knowledge acquisition and meta-cognition are important in their training. To overcome this, it is recommended that a program of activities be given to the students at the beginning of each semester or term and that no tests or exams should be announced. Both the institution and the students should respect the program for this will make them more matured and be fully responsible for their studies. An orientation should be done clearly spelling out their responsibilities and institutional expectations.

It is also recommended that reading and therefore, studies in a nursing school should be given all the seriousness they deserve. A functional library should be instituted in each nursing school in Fako Division. Four nursing schools in one division are too many. Quality does not always go with quantity. One or two schools in a division and well equipped is standard.

The reading technique should be the first lesson to be taught in the first year at the beginning of the semester and revised at the beginning of each semester in 2<sup>nd</sup> and 3<sup>rd</sup> years. This

will help in inculcating a reading culture in all the students. One ill- equipped nurse in terms of knowledge is a cause for concern. All nurses should be compelled to submit one scientific write-up yearly in nursing magazines. This is mandatory continuing education which should form a component for the renewal of licensure to practice.

It is recommended that students' counseling services, restaurant services and health services that are state subsidized be made available in all the nursing schools in Fako Division.

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### *Authors Column*



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Mary Bi Suh Atanga is author of few books. She has published several research papers in international journals of repute. Presently her focus is on the place of the nurse-midwife in the Cameroonian Health Care Delivery System; violence against women; and workable and adaptable community intervention strategies.