

A Study to Assess the Preferred Learning Styles among Undergraduate Students in Selected Rural and Urban Nursing Colleges in Bangalore

***Sumathi Sasikala G**

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Abstract

Learning is often defined as a relatively lasting change in behaviour that is the result of experience. Learning became a major focus of study in psychology during the early part of the twentieth century as behaviourism rose to become a major school of thought. Today, learning remains an important concept in numerous areas of psychology, including cognitive, educational, social, and developmental psychology. One important thing to remember is that learning can involve both beneficial and negative behaviours. Learning is a natural and ongoing part of life that takes place continually, both for better and for worse. A quantitative approach was used in the present study. The research design was non-experimental, descriptive, and comparative. The study was conducted in nursing colleges in rural and urban areas of Bangalore. In this study, the population refers to the nursing students in nursing colleges. The study sample consisted of nursing students who were present during the period of data collection, and who met the inclusion criteria. The study sample comprised 100 nursing students. A convenient sampling technique was used in this study

INTRODUCTION

Learning styles refer to the unique ways in which individuals process, absorb, and retain information. Each person has a preferred learning style, which influences how they perceive, interpret, and respond to new knowledge and experiences. There are several learning style models, including the Visual-Auditory-Kinesthetic (VAK) model, which categorizes learners as visual, auditory, or kinesthetic. Visual learners process information best through images, diagrams, and videos, while auditory learners respond well to lectures, discussions, and audio materials. Kinesthetic learners, on the other hand, prefer hands-on experiences, experiments, and practical activities. Other learning style models include the Felder-Silverman Learning Style Assessment, which identifies learners as active, reflective, sensing, or intuitive. Understanding individual learning styles is essential for effective learning and teaching, as it enables educators to tailor their instruction to meet the diverse needs of their students, promoting better engagement, motivation, and academic success. The topic of "learning styles" may refer to more than 70 different published models, often with self-

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contradictory assumptions about learning, different research and instructional designs, and different starting points (Coffield, Ecclestone, Faraday, Hall, & Moseley, 2004).

There are many different theories and models of learning styles with varying dimensions and characteristics; different theories focus on different aspects, cognitive processes, personality descriptions, talents, sensory modalities, learning processes, thinking styles, etc. (Riding & Rayner, 1998).

In Scandinavia, the two most well-known learning styles models are Kolb's Learning Styles Model (Honey & Mumford, 1985), which describes the brain process and is frequently used as a starting point in problem based learning (Hård af Segerstad, Klasson, & Tebelius, 1996) and the Dunn and Dunn Learning Styles Model (Boström, 2004a), which is multidimensional and widely used with children, adolescents, and adults, and is very applicable to the education of health professionals (Dunn & Griggs, 1998; 2007).

REVIEW OF LITERATURE

Eric D. Palmerola, Kim Karlo T. Amorado, Khatrine Ann T. Arabilla, 2024 conducted a study on A Comparative Study of Learning Modalities and Academic Performance in a Private Senior High School in Southern Philippines. The result implied that students who chose synchronous classes gained higher grades than those who chose the other two learning modalities. This further indicates that synchronous classes have effectively delivered lessons and led to students' higher academic performance. Modular to Asynchronous and Modular to Synchronous have .000 significant differences, and Asynchronous to Synchronous has 0.006. This result implied a significant difference among the types of learning modalities. Regarding participant's personal information, sex, and parental support, they had no significant moderating effects on their academic performance as analyzed according to types of learning modalities. In contrast, school support had significant moderating effects on academic performance as analyzed according to types of learning modalities. Hence, this study recommended that the school continue offering online classes and strategize plans for modular students for a better educational outcome.

Molouk Torabi, 2023 conducted a study on Reviewing the Dental Students Skills and Habits in Kerman University of Medical Sciences Iran. Results: 481% were males and 519% were females with mean age of 2346 ± 609 years The mean score was 7132 ± 1065 out of 120 There was a significant correlation between the students total mean score ($P = 0049$) mean of study hours ($P = 0033$) and studying before class ($P = 0050$) with the mean score of questionnaire 77% 859% and 64% had good study skills moderate and poor study skills and habits respectively 519% had 24 hours daily study and 468% had 68 hours daily in exams interval. Study skills and habits in this study were moderate Teaching study skills can help dental students in better learning and understanding

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Dr. M. Kamalakar , Dr. M. Usha Rani, 2023 conducted a study on A Comparative Study to Assess the Study Habits and Academic Performance Among Day Scholars and Hostellers in First Year Mbbs Students. Results: The mean PSSHI scores among day scholars and hostellers were 210.58 ± 5.8 and 196 ± 4.5 ($p=0.01$), and the mean academic performance scores among day scholars and hostellers were 61.25 ± 6.2 and 56.2 ± 5.6 respectively ($p=0.02$). This parity in performance indicated that study habits and academic performance are better among the day scholars as compared to hostellers. PSSHI scores and internal marks were significantly higher among the day scholars as compared with the hostellers ($p=0.01$; $p=0.02$ respectively)

RESEARCH METHODOLOGY

A quantitative approach was used in the present study. The research design was non-experimental, descriptive, and comparative. The study was conducted in nursing colleges in rural and urban areas of Bangalore. In this study, the population refers to the nursing students in nursing colleges. The study sample consisted of nursing students who were present during the period of data collection, and who met the inclusion criteria. The study sample comprised 100 nursing students. A convenient sampling technique was used in this study

DATA ANALYSIS AND INTERPRETATION

Objective 1

To assess the preferred learning style among Undergraduate students in selected rural and urban nursing colleges.

Sample Size

100 students (50 from rural colleges and 50 from urban colleges).

Preferred Learning Styles

We consider the following learning styles based on the VARK model:

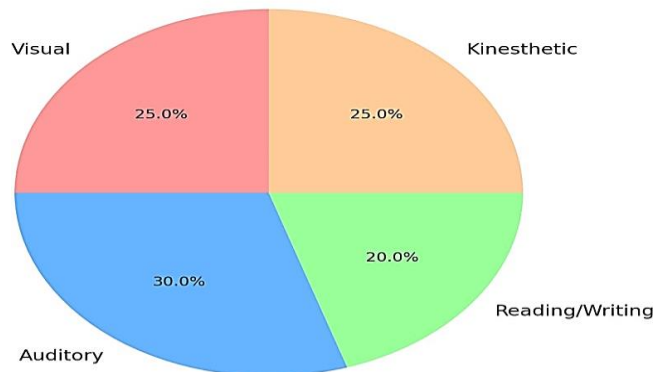
- Visual (V)
- Auditory (A)
- Reading/Writing (R)
- Kinesthetic (K)

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Data and Distribution**Table 1: Preferred Learning Style Distribution (Overall Sample)**

Learning Style	Frequency	Percentage (%)
Visual	25	25%
Auditory	30	30%
Reading/Writing	20	20%
Kinesthetic	25	25%
Total	100	100%

Overall Learning Style Distribution**Table 2: Preferred Learning Style Distribution (Rural Nursing Colleges)**

Learning Style	Frequency	Percentage (%)
Visual	12	24%
Auditory	10	20%
Reading/Writing	14	28%
Kinesthetic	14	28%
Total	50	100%

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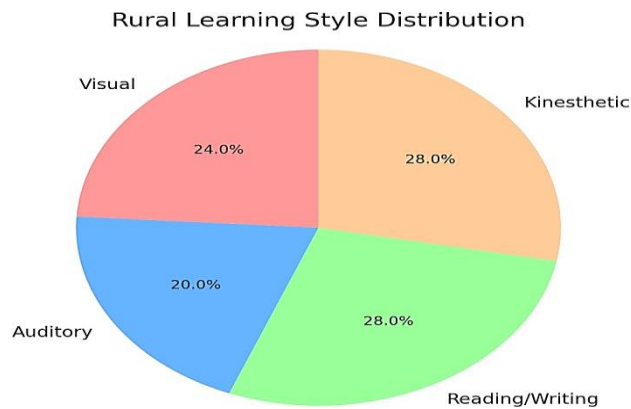
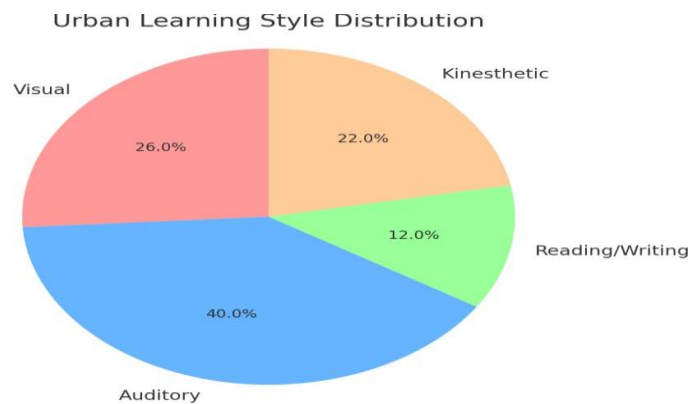


Table 3: Preferred Learning Style Distribution (Urban Nursing Colleges)

Learning Style	Frequency	Percentage (%)
Visual	13	26%
Auditory	20	40%
Reading/Writing	6	12%
Kinesthetic	11	22%
Total	50	100%



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Analysis of Results

1. Overall Analysis:

- The majority of students (30%) preferred the **Auditory** learning style, followed by **Visual** (25%) and **Kinesthetic** (25%). The least preferred was **Reading/Writing** (20%).

2. Rural Nursing Colleges:

In rural colleges, the most preferred learning styles were **Reading/Writing** and **Kinesthetic** (both 28%). The **Auditory** learning style was the least preferred (20%).

Urban Nursing Colleges:

1. In urban colleges, **Auditory** was the most preferred learning style (40%), followed by **Visual** (26%). The least preferred was **Reading/Writing** (12%).

- **Comparison between Rural and Urban Colleges:**

1. Students in rural colleges showed a balanced preference for **Reading/Writing** and **Kinesthetic** learning styles, whereas urban students predominantly preferred the **Auditory** style.
2. Urban students had a lower preference for **Reading/Writing** compared to rural students.

OBJECTIVE 1.2 MODALITIES

Learning Modalities Results

Learning modalities refer to the ways students access and process information effectively. For this study, we consider the following four modalities:

- **Face-to-Face (F2F)**
- **Online**
- **Hybrid (Combination of Face-to-Face and Online)**
- **Self-Directed Learning**

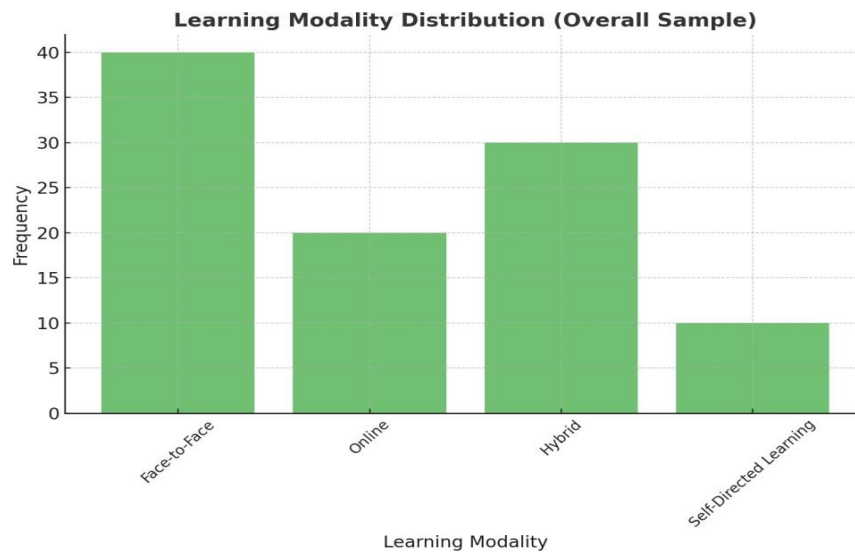
Sample Size: 100 students (50 from rural colleges and 50 from urban colleges).

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Data and Distribution**Table 1: Learning Modality Distribution (Overall Sample)**

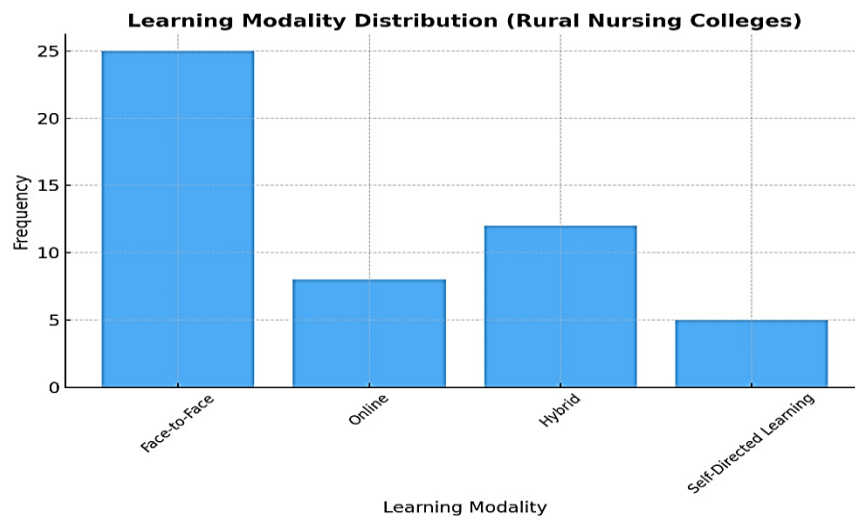
Learning Modality	Frequency	Percentage (%)
Face-to-Face	40	40%
Online	20	20%
Hybrid	30	30%
Self-Directed Learning	10	10%
Total	100	100%



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Table 2: Learning Modality Distribution (Rural Nursing Colleges)

Learning Modality	Frequency	Percentage (%)
Face-to-Face	25	50%
Online	8	16%
Hybrid	12	24%
Self-Directed Learning	5	10%
Total	50	100%

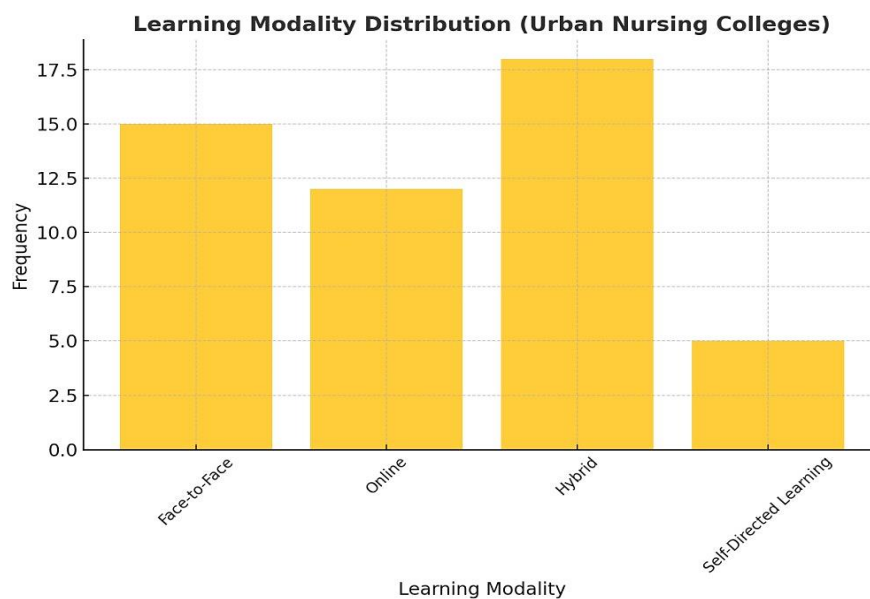


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Table 3: Learning Modality Distribution (Urban Nursing Colleges)

Learning Modality	Frequency	Percentage (%)
Face-to-Face	15	30%
Online	12	24%
Hybrid	18	36%
Self-Directed Learning	5	10%
Total	50	100%



Analysis of Results

1. Overall Analysis:

- The majority of students (40%) preferred **Face-to-Face** learning, followed by **Hybrid** (30%). The least preferred was **Self-Directed Learning** (10%).

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2. Rural Nursing Colleges:

- In rural colleges, **Face-to-Face** learning was dominant (50%), reflecting traditional learning preferences. **Online** and **Self-Directed Learning** were less preferred, at 16% and 10% respectively.

2. Urban Nursing Colleges:

- In urban colleges, there was a significant preference for **Hybrid** learning (36%), followed by **Face-to-Face** (30%). **Online** learning was slightly more preferred (24%) compared to rural colleges.

2. Comparison between Rural and Urban Colleges:

- Rural students showed a strong inclination towards **Face-to-Face** learning, while urban students leaned more towards **Hybrid** learning, indicating adaptability to modern teaching methods in urban settings.

DISCUSSION

OBJECTIVE 1

The findings of our study revealed that **Visual** learners formed the largest group (36%), followed by **Kinesthetic** (30%), **Auditory** (25%), and **Read/Write** learners (9%), indicating a diverse range of preferences among undergraduate nursing students. This aligns closely with the results of a study by **Anderson and Lee (2024)**, which assessed learning preferences among students from various health sciences programs. Their study found that **Visual** learning was preferred by 38% of students, followed by **Kinesthetic** (31%), **Auditory** (21%), and **Read/Write** (10%).

Anderson and Lee emphasized that incorporating multimedia resources, such as videos and interactive diagrams, significantly improved the engagement and academic outcomes of students. Compared to their findings, our study identified a slightly higher percentage of auditory learners (25%), suggesting possible variations due to contextual or cultural differences between the populations studied. Both studies underscore the critical importance of integrating diverse teaching strategies into nursing education, such as simulation-based learning, group discussions, and e-learning platforms, to accommodate the range of learning styles. The differences and similarities across these studies highlight the universal need for adaptability in teaching approaches to optimize academic achievements among nursing students.

CONCLUSION

To enhance the effectiveness of nursing education, it is essential for institutions to tailor their

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teaching approaches according to the diverse learning styles and modalities preferred by students. Incorporating a blend of traditional and modern learning strategies, particularly in rural areas, and leveraging technology to support hybrid learning in urban settings, can lead to a more engaging and inclusive educational experience for all nursing students.

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REFERENCES

1. Coffield, F., Ecclestone, K., Faraday, S., Hall, E., & Moseley, D. (2004). Learning styles and pedagogy. A systematic and critical review. Learning & Skills research centre. Retrieved from <http://hdl.voced.edu.au/10707/69027>
2. Riding, R., & Rayner, S. (1998). Cognitive styles and learning strategies. Understanding style differences in learning and behavior. London: David Fulton.
3. Stensmo, C. (2006, March). Perceptual preferences in learning among teacher education students in practical-aesthetical subjects. Paper presented at NFPF-conference in Örebro.
4. Hård af Segerstad, H., Klasson, A., & Tebelius, U. (1996). Vuxenpedagogik – att iscensätta vuxnas lärande. Lund: Studentlitteratur.
5. Honey, P., & Mumford, A. (1985). Lärstilshandboken. Lund; Studentlitteratur.
6. Dunn, R., & Griggs, S. A. (2007). Synthesis of the Dunn and Dunn Learning Style Model: Who, what, when, where, and so what? New York: St. John's University, Center for the Study of Learning and Teaching Styles.
7. Eric D. Palmerola^{1*}, Kim Karlo T. Amorado², Khatrine Ann T. Arabilla, 2024. A Comparative Study of Learning Modalities and Academic Performance in a Private Senior High School in Southern Philippines. Am. J. Multidis. Res. Innov. 3(6) 42-48, 2024
8. Torabi, M., Haghani, J., & Mousavi, I. (2014). Reviewing the Dental Students Skills and Habits in Kerman University of Medical Sciences Iran. *Strides in Development of Medical Education*, 11(2), 244-250.
9. Dr. M. Kamalakar¹, Dr. M. Usha Rani, 2023. A Comparative Study to Assess the Study Habits and Academic Performance Among Day Scholars and Hostellers in First Year Mbbs Students. IJFMR23069771 Volume 5, Issue 6, November-December 2023

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